PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3836087

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P.	10/27/2015

RECEIVING PARTY DATA

Name:	Hewlett Packard Enterprise Development LP
Street Address:	11445 Compaq Center Drive West
City:	Houston
State/Country:	TEXAS
Postal Code:	77070

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15030427

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: (970) 898-7444
Email: hpe.ip.mail@hpe.com
Correspondent Name: HEWLETT PACKARD ENTERPRISE
Address Line 1: 3404 E. HARMONY ROAD MS 79
Address Line 4: FORT COLLINS, COLORADO 80528

ATTORNEY DOCKET NUMBER:	90184440
NAME OF SUBMITTER:	TRACI THOMAS
SIGNATURE:	/Traci Thomas/
DATE SIGNED:	04/19/2016

Total Attachments: 780
source=HPDCtoHPED_Confirmatory#page1.tif
source=HPDCtoHPED_Confirmatory#page2.tif
source=HPDCtoHPED_Confirmatory#page3.tif
source=HPDCtoHPED_Confirmatory#page4.tif
source=HPDCtoHPED_Confirmatory#page5.tif
source=HPDCtoHPED_Confirmatory#page6.tif

source=HPDCtoHPED_Confirmatory#page7.tif
source=HPDCtoHPED_Confirmatory#page8.tif
source=HPDCtoHPED_Confirmatory#page9.tif
source=HPDCtoHPED_Confirmatory#page10.tif
source=HPDCtoHPED_Confirmatory#page11.tif
source=HPDCtoHPED_Confirmatory#page12.tif
source=HPDCtoHPED_Confirmatory#page13.tif
source=HPDCtoHPED_Confirmatory#page14.tif
source=HPDCtoHPED_Confirmatory#page15.tif
source=HPDCtoHPED_Confirmatory#page16.tif
source=HPDCtoHPED_Confirmatory#page17.tif
source=HPDCtoHPED_Confirmatory#page18.tif
source=HPDCtoHPED_Confirmatory#page19.tif
source=HPDCtoHPED_Confirmatory#page20.tif
source=HPDCtoHPED_Confirmatory#page21.tif
source=HPDCtoHPED_Confirmatory#page22.tif
source=HPDCtoHPED_Confirmatory#page23.tif
source=HPDCtoHPED_Confirmatory#page24.tif
source=HPDCtoHPED_Confirmatory#page25.tif
source=HPDCtoHPED_Confirmatory#page26.tif
source=HPDCtoHPED_Confirmatory#page27.tif
source=HPDCtoHPED_Confirmatory#page28.tif
source=HPDCtoHPED_Confirmatory#page29.tif
source=HPDCtoHPED_Confirmatory#page30.tif
source=HPDCtoHPED_Confirmatory#page31.tif
source=HPDCtoHPED_Confirmatory#page32.tif
source=HPDCtoHPED_Confirmatory#page33.tif
source=HPDCtoHPED_Confirmatory#page34.tif
source=HPDCtoHPED_Confirmatory#page35.tif
source=HPDCtoHPED_Confirmatory#page36.tif
source=HPDCtoHPED_Confirmatory#page37.tif
source=HPDCtoHPED_Confirmatory#page38.tif
source=HPDCtoHPED_Confirmatory#page39.tif
source=HPDCtoHPED_Confirmatory#page40.tif
source=HPDCtoHPED_Confirmatory#page41.tif
source=HPDCtoHPED_Confirmatory#page42.tif
source=HPDCtoHPED_Confirmatory#page43.tif
source=HPDCtoHPED_Confirmatory#page44.tif
source=HPDCtoHPED_Confirmatory#page45.tif
source=HPDCtoHPED_Confirmatory#page46.tif
source=HPDCtoHPED_Confirmatory#page47.tif
source=HPDCtoHPED_Confirmatory#page48.tif
source=HPDCtoHPED_Confirmatory#page49.tif
source=HPDCtoHPED_Confirmatory#page50.tif
source=HPDCtoHPED_Confirmatory#page51.tif
source=HPDCtoHPED_Confirmatory#page52.tif
source=HPDCtoHPED_Confirmatory#page53.tif
source=HPDCtoHPED_Confirmatory#page54.tif

source=HPDCtoHPED_Confirmatory#page55.tif
source=HPDCtoHPED_Confirmatory#page56.tif
source=HPDCtoHPED_Confirmatory#page57.tif
source=HPDCtoHPED_Confirmatory#page58.tif
source=HPDCtoHPED_Confirmatory#page59.tif
source=HPDCtoHPED_Confirmatory#page60.tif
source=HPDCtoHPED_Confirmatory#page61.tif
source=HPDCtoHPED_Confirmatory#page62.tif
source=HPDCtoHPED_Confirmatory#page63.tif
source=HPDCtoHPED_Confirmatory#page64.tif
source=HPDCtoHPED_Confirmatory#page65.tif
source=HPDCtoHPED_Confirmatory#page66.tif
source=HPDCtoHPED_Confirmatory#page67.tif
source=HPDCtoHPED_Confirmatory#page68.tif
source=HPDCtoHPED_Confirmatory#page69.tif
source=HPDCtoHPED_Confirmatory#page70.tif
source=HPDCtoHPED_Confirmatory#page71.tif
source=HPDCtoHPED_Confirmatory#page72.tif
source=HPDCtoHPED_Confirmatory#page73.tif
source=HPDCtoHPED_Confirmatory#page74.tif
source=HPDCtoHPED_Confirmatory#page75.tif
source=HPDCtoHPED_Confirmatory#page76.tif
source=HPDCtoHPED_Confirmatory#page77.tif
source=HPDCtoHPED_Confirmatory#page78.tif
source=HPDCtoHPED_Confirmatory#page79.tif
source=HPDCtoHPED_Confirmatory#page80.tif
source=HPDCtoHPED_Confirmatory#page81.tif
source=HPDCtoHPED_Confirmatory#page82.tif
source=HPDCtoHPED_Confirmatory#page83.tif
source=HPDCtoHPED_Confirmatory#page84.tif
source=HPDCtoHPED_Confirmatory#page85.tif
source=HPDCtoHPED_Confirmatory#page86.tif
source=HPDCtoHPED_Confirmatory#page87.tif
source=HPDCtoHPED_Confirmatory#page88.tif
source=HPDCtoHPED_Confirmatory#page89.tif
source=HPDCtoHPED_Confirmatory#page90.tif
source=HPDCtoHPED_Confirmatory#page91.tif
source=HPDCtoHPED_Confirmatory#page92.tif
source=HPDCtoHPED_Confirmatory#page93.tif
source=HPDCtoHPED_Confirmatory#page94.tif
source=HPDCtoHPED_Confirmatory#page95.tif
source=HPDCtoHPED_Confirmatory#page96.tif
source=HPDCtoHPED_Confirmatory#page97.tif
source=HPDCtoHPED_Confirmatory#page98.tif
source=HPDCtoHPED_Confirmatory#page99.tif
source=HPDCtoHPED_Confirmatory#page100.tif
source=HPDCtoHPED_Confirmatory#page101.tif
source=HPDCtoHPED_Confirmatory#page102.tif

source=HPDCtoHPED_Confirmatory#page103.tif
source=HPDCtoHPED_Confirmatory#page104.tif
source=HPDCtoHPED_Confirmatory#page105.tif
source=HPDCtoHPED_Confirmatory#page106.tif
source=HPDCtoHPED_Confirmatory#page107.tif
source=HPDCtoHPED_Confirmatory#page108.tif
source=HPDCtoHPED_Confirmatory#page109.tif
source=HPDCtoHPED_Confirmatory#page110.tif
source=HPDCtoHPED_Confirmatory#page111.tif
source=HPDCtoHPED_Confirmatory#page112.tif
source=HPDCtoHPED_Confirmatory#page113.tif
source=HPDCtoHPED_Confirmatory#page114.tif
source=HPDCtoHPED_Confirmatory#page115.tif
source=HPDCtoHPED_Confirmatory#page116.tif
source=HPDCtoHPED_Confirmatory#page117.tif
source=HPDCtoHPED_Confirmatory#page118.tif
source=HPDCtoHPED_Confirmatory#page119.tif
source=HPDCtoHPED_Confirmatory#page120.tif
source=HPDCtoHPED_Confirmatory#page121.tif
source=HPDCtoHPED_Confirmatory#page122.tif
source=HPDCtoHPED_Confirmatory#page123.tif
source=HPDCtoHPED_Confirmatory#page124.tif
source=HPDCtoHPED_Confirmatory#page125.tif
source=HPDCtoHPED_Confirmatory#page126.tif
source=HPDCtoHPED_Confirmatory#page127.tif
source=HPDCtoHPED_Confirmatory#page128.tif
source=HPDCtoHPED_Confirmatory#page129.tif
source=HPDCtoHPED_Confirmatory#page130.tif
source=HPDCtoHPED_Confirmatory#page131.tif
source=HPDCtoHPED_Confirmatory#page132.tif
source=HPDCtoHPED_Confirmatory#page133.tif
source=HPDCtoHPED_Confirmatory#page134.tif
source=HPDCtoHPED_Confirmatory#page135.tif
source=HPDCtoHPED_Confirmatory#page136.tif
source=HPDCtoHPED_Confirmatory#page137.tif
source=HPDCtoHPED_Confirmatory#page138.tif
source=HPDCtoHPED_Confirmatory#page139.tif
source=HPDCtoHPED_Confirmatory#page140.tif
source=HPDCtoHPED_Confirmatory#page141.tif
source=HPDCtoHPED_Confirmatory#page142.tif
source=HPDCtoHPED_Confirmatory#page143.tif
source=HPDCtoHPED_Confirmatory#page144.tif
source=HPDCtoHPED_Confirmatory#page145.tif
source=HPDCtoHPED_Confirmatory#page146.tif
source=HPDCtoHPED_Confirmatory#page147.tif
source=HPDCtoHPED_Confirmatory#page148.tif
source=HPDCtoHPED_Confirmatory#page149.tif
source=HPDCtoHPED_Confirmatory#page150.tif

source=HPDCtoHPED_Confirmatory#page151.tif
source=HPDCtoHPED_Confirmatory#page152.tif
source=HPDCtoHPED_Confirmatory#page153.tif
source=HPDCtoHPED_Confirmatory#page154.tif
source=HPDCtoHPED_Confirmatory#page155.tif
source=HPDCtoHPED_Confirmatory#page156.tif
source=HPDCtoHPED_Confirmatory#page157.tif
source=HPDCtoHPED_Confirmatory#page158.tif
source=HPDCtoHPED_Confirmatory#page159.tif
source=HPDCtoHPED_Confirmatory#page160.tif
source=HPDCtoHPED_Confirmatory#page161.tif
source=HPDCtoHPED_Confirmatory#page162.tif
source=HPDCtoHPED_Confirmatory#page163.tif
source=HPDCtoHPED_Confirmatory#page164.tif
source=HPDCtoHPED_Confirmatory#page165.tif
source=HPDCtoHPED_Confirmatory#page166.tif
source=HPDCtoHPED_Confirmatory#page167.tif
source=HPDCtoHPED_Confirmatory#page168.tif
source=HPDCtoHPED_Confirmatory#page169.tif
source=HPDCtoHPED_Confirmatory#page170.tif
source=HPDCtoHPED_Confirmatory#page171.tif
source=HPDCtoHPED_Confirmatory#page172.tif
source=HPDCtoHPED_Confirmatory#page173.tif
source=HPDCtoHPED_Confirmatory#page174.tif
source=HPDCtoHPED_Confirmatory#page175.tif
source=HPDCtoHPED_Confirmatory#page176.tif
source=HPDCtoHPED_Confirmatory#page177.tif
source=HPDCtoHPED_Confirmatory#page178.tif
source=HPDCtoHPED_Confirmatory#page179.tif
source=HPDCtoHPED_Confirmatory#page180.tif
source=HPDCtoHPED_Confirmatory#page181.tif
source=HPDCtoHPED_Confirmatory#page182.tif
source=HPDCtoHPED_Confirmatory#page183.tif
source=HPDCtoHPED_Confirmatory#page184.tif
source=HPDCtoHPED_Confirmatory#page185.tif
source=HPDCtoHPED_Confirmatory#page186.tif
source=HPDCtoHPED_Confirmatory#page187.tif
source=HPDCtoHPED_Confirmatory#page188.tif
source=HPDCtoHPED_Confirmatory#page189.tif
source=HPDCtoHPED_Confirmatory#page190.tif
source=HPDCtoHPED_Confirmatory#page191.tif
source=HPDCtoHPED_Confirmatory#page192.tif
source=HPDCtoHPED_Confirmatory#page193.tif
source=HPDCtoHPED_Confirmatory#page194.tif
source=HPDCtoHPED_Confirmatory#page195.tif
source=HPDCtoHPED_Confirmatory#page196.tif
source=HPDCtoHPED_Confirmatory#page197.tif
source=HPDCtoHPED_Confirmatory#page198.tif

source=HPDCtoHPED_Confirmatory#page199.tif
source=HPDCtoHPED_Confirmatory#page200.tif
source=HPDCtoHPED_Confirmatory#page201.tif
source=HPDCtoHPED_Confirmatory#page202.tif
source=HPDCtoHPED_Confirmatory#page203.tif
source=HPDCtoHPED_Confirmatory#page204.tif
source=HPDCtoHPED_Confirmatory#page205.tif
source=HPDCtoHPED_Confirmatory#page206.tif
source=HPDCtoHPED_Confirmatory#page207.tif
source=HPDCtoHPED_Confirmatory#page208.tif
source=HPDCtoHPED_Confirmatory#page209.tif
source=HPDCtoHPED_Confirmatory#page210.tif
source=HPDCtoHPED_Confirmatory#page211.tif
source=HPDCtoHPED_Confirmatory#page212.tif
source=HPDCtoHPED_Confirmatory#page213.tif
source=HPDCtoHPED_Confirmatory#page214.tif
source=HPDCtoHPED_Confirmatory#page215.tif
source=HPDCtoHPED_Confirmatory#page216.tif
source=HPDCtoHPED_Confirmatory#page217.tif
source=HPDCtoHPED_Confirmatory#page218.tif
source=HPDCtoHPED_Confirmatory#page219.tif
source=HPDCtoHPED_Confirmatory#page220.tif
source=HPDCtoHPED_Confirmatory#page221.tif
source=HPDCtoHPED_Confirmatory#page222.tif
source=HPDCtoHPED_Confirmatory#page223.tif
source=HPDCtoHPED_Confirmatory#page224.tif
source=HPDCtoHPED_Confirmatory#page225.tif
source=HPDCtoHPED_Confirmatory#page226.tif
source=HPDCtoHPED_Confirmatory#page227.tif
source=HPDCtoHPED_Confirmatory#page228.tif
source=HPDCtoHPED_Confirmatory#page229.tif
source=HPDCtoHPED_Confirmatory#page230.tif
source=HPDCtoHPED_Confirmatory#page231.tif
source=HPDCtoHPED_Confirmatory#page232.tif
source=HPDCtoHPED_Confirmatory#page233.tif
source=HPDCtoHPED_Confirmatory#page234.tif
source=HPDCtoHPED_Confirmatory#page235.tif
source=HPDCtoHPED_Confirmatory#page236.tif
source=HPDCtoHPED_Confirmatory#page237.tif
source=HPDCtoHPED_Confirmatory#page238.tif
source=HPDCtoHPED_Confirmatory#page239.tif
source=HPDCtoHPED_Confirmatory#page240.tif
source=HPDCtoHPED_Confirmatory#page241.tif
source=HPDCtoHPED_Confirmatory#page242.tif
source=HPDCtoHPED_Confirmatory#page243.tif
source=HPDCtoHPED_Confirmatory#page244.tif
source=HPDCtoHPED_Confirmatory#page245.tif
source=HPDCtoHPED_Confirmatory#page246.tif

source=HPDCtoHPED_Confirmatory#page247.tif
source=HPDCtoHPED_Confirmatory#page248.tif
source=HPDCtoHPED_Confirmatory#page249.tif
source=HPDCtoHPED_Confirmatory#page250.tif
source=HPDCtoHPED_Confirmatory#page251.tif
source=HPDCtoHPED_Confirmatory#page252.tif
source=HPDCtoHPED_Confirmatory#page253.tif
source=HPDCtoHPED_Confirmatory#page254.tif
source=HPDCtoHPED_Confirmatory#page255.tif
source=HPDCtoHPED_Confirmatory#page256.tif
source=HPDCtoHPED_Confirmatory#page257.tif
source=HPDCtoHPED_Confirmatory#page258.tif
source=HPDCtoHPED_Confirmatory#page259.tif
source=HPDCtoHPED_Confirmatory#page260.tif
source=HPDCtoHPED_Confirmatory#page261.tif
source=HPDCtoHPED_Confirmatory#page262.tif
source=HPDCtoHPED_Confirmatory#page263.tif
source=HPDCtoHPED_Confirmatory#page264.tif
source=HPDCtoHPED_Confirmatory#page265.tif
source=HPDCtoHPED_Confirmatory#page266.tif
source=HPDCtoHPED_Confirmatory#page267.tif
source=HPDCtoHPED_Confirmatory#page268.tif
source=HPDCtoHPED_Confirmatory#page269.tif
source=HPDCtoHPED_Confirmatory#page270.tif
source=HPDCtoHPED_Confirmatory#page271.tif
source=HPDCtoHPED_Confirmatory#page272.tif
source=HPDCtoHPED_Confirmatory#page273.tif
source=HPDCtoHPED_Confirmatory#page274.tif
source=HPDCtoHPED_Confirmatory#page275.tif
source=HPDCtoHPED_Confirmatory#page276.tif
source=HPDCtoHPED_Confirmatory#page277.tif
source=HPDCtoHPED_Confirmatory#page278.tif
source=HPDCtoHPED_Confirmatory#page279.tif
source=HPDCtoHPED_Confirmatory#page280.tif
source=HPDCtoHPED_Confirmatory#page281.tif
source=HPDCtoHPED_Confirmatory#page282.tif
source=HPDCtoHPED_Confirmatory#page283.tif
source=HPDCtoHPED_Confirmatory#page284.tif
source=HPDCtoHPED_Confirmatory#page285.tif
source=HPDCtoHPED_Confirmatory#page286.tif
source=HPDCtoHPED_Confirmatory#page287.tif
source=HPDCtoHPED_Confirmatory#page288.tif
source=HPDCtoHPED_Confirmatory#page289.tif
source=HPDCtoHPED_Confirmatory#page290.tif
source=HPDCtoHPED_Confirmatory#page291.tif
source=HPDCtoHPED_Confirmatory#page292.tif
source=HPDCtoHPED_Confirmatory#page293.tif
source=HPDCtoHPED_Confirmatory#page294.tif

source=HPDCtoHPED_Confirmatory#page295.tif
source=HPDCtoHPED_Confirmatory#page296.tif
source=HPDCtoHPED_Confirmatory#page297.tif
source=HPDCtoHPED_Confirmatory#page298.tif
source=HPDCtoHPED_Confirmatory#page299.tif
source=HPDCtoHPED_Confirmatory#page300.tif
source=HPDCtoHPED_Confirmatory#page301.tif
source=HPDCtoHPED_Confirmatory#page302.tif
source=HPDCtoHPED_Confirmatory#page303.tif
source=HPDCtoHPED_Confirmatory#page304.tif
source=HPDCtoHPED_Confirmatory#page305.tif
source=HPDCtoHPED_Confirmatory#page306.tif
source=HPDCtoHPED_Confirmatory#page307.tif
source=HPDCtoHPED_Confirmatory#page308.tif
source=HPDCtoHPED_Confirmatory#page309.tif
source=HPDCtoHPED_Confirmatory#page310.tif
source=HPDCtoHPED_Confirmatory#page311.tif
source=HPDCtoHPED_Confirmatory#page312.tif
source=HPDCtoHPED_Confirmatory#page313.tif
source=HPDCtoHPED_Confirmatory#page314.tif
source=HPDCtoHPED_Confirmatory#page315.tif
source=HPDCtoHPED_Confirmatory#page316.tif
source=HPDCtoHPED_Confirmatory#page317.tif
source=HPDCtoHPED_Confirmatory#page318.tif
source=HPDCtoHPED_Confirmatory#page319.tif
source=HPDCtoHPED_Confirmatory#page320.tif
source=HPDCtoHPED_Confirmatory#page321.tif
source=HPDCtoHPED_Confirmatory#page322.tif
source=HPDCtoHPED_Confirmatory#page323.tif
source=HPDCtoHPED_Confirmatory#page324.tif
source=HPDCtoHPED_Confirmatory#page325.tif
source=HPDCtoHPED_Confirmatory#page326.tif
source=HPDCtoHPED_Confirmatory#page327.tif
source=HPDCtoHPED_Confirmatory#page328.tif
source=HPDCtoHPED_Confirmatory#page329.tif
source=HPDCtoHPED_Confirmatory#page330.tif
source=HPDCtoHPED_Confirmatory#page331.tif
source=HPDCtoHPED_Confirmatory#page332.tif
source=HPDCtoHPED_Confirmatory#page333.tif
source=HPDCtoHPED_Confirmatory#page334.tif
source=HPDCtoHPED_Confirmatory#page335.tif
source=HPDCtoHPED_Confirmatory#page336.tif
source=HPDCtoHPED_Confirmatory#page337.tif
source=HPDCtoHPED_Confirmatory#page338.tif
source=HPDCtoHPED_Confirmatory#page339.tif
source=HPDCtoHPED_Confirmatory#page340.tif
source=HPDCtoHPED_Confirmatory#page341.tif
source=HPDCtoHPED_Confirmatory#page342.tif

source=HPDCtoHPED_Confirmatory#page343.tif
source=HPDCtoHPED_Confirmatory#page344.tif
source=HPDCtoHPED_Confirmatory#page345.tif
source=HPDCtoHPED_Confirmatory#page346.tif
source=HPDCtoHPED_Confirmatory#page347.tif
source=HPDCtoHPED_Confirmatory#page348.tif
source=HPDCtoHPED_Confirmatory#page349.tif
source=HPDCtoHPED_Confirmatory#page350.tif
source=HPDCtoHPED_Confirmatory#page351.tif
source=HPDCtoHPED_Confirmatory#page352.tif
source=HPDCtoHPED_Confirmatory#page353.tif
source=HPDCtoHPED_Confirmatory#page354.tif
source=HPDCtoHPED_Confirmatory#page355.tif
source=HPDCtoHPED_Confirmatory#page356.tif
source=HPDCtoHPED_Confirmatory#page357.tif
source=HPDCtoHPED_Confirmatory#page358.tif
source=HPDCtoHPED_Confirmatory#page359.tif
source=HPDCtoHPED_Confirmatory#page360.tif
source=HPDCtoHPED_Confirmatory#page361.tif
source=HPDCtoHPED_Confirmatory#page362.tif
source=HPDCtoHPED_Confirmatory#page363.tif
source=HPDCtoHPED_Confirmatory#page364.tif
source=HPDCtoHPED_Confirmatory#page365.tif
source=HPDCtoHPED_Confirmatory#page366.tif
source=HPDCtoHPED_Confirmatory#page367.tif
source=HPDCtoHPED_Confirmatory#page368.tif
source=HPDCtoHPED_Confirmatory#page369.tif
source=HPDCtoHPED_Confirmatory#page370.tif
source=HPDCtoHPED_Confirmatory#page371.tif
source=HPDCtoHPED_Confirmatory#page372.tif
source=HPDCtoHPED_Confirmatory#page373.tif
source=HPDCtoHPED_Confirmatory#page374.tif
source=HPDCtoHPED_Confirmatory#page375.tif
source=HPDCtoHPED_Confirmatory#page376.tif
source=HPDCtoHPED_Confirmatory#page377.tif
source=HPDCtoHPED_Confirmatory#page378.tif
source=HPDCtoHPED_Confirmatory#page379.tif
source=HPDCtoHPED_Confirmatory#page380.tif
source=HPDCtoHPED_Confirmatory#page381.tif
source=HPDCtoHPED_Confirmatory#page382.tif
source=HPDCtoHPED_Confirmatory#page383.tif
source=HPDCtoHPED_Confirmatory#page384.tif
source=HPDCtoHPED_Confirmatory#page385.tif
source=HPDCtoHPED_Confirmatory#page386.tif
source=HPDCtoHPED_Confirmatory#page387.tif
source=HPDCtoHPED_Confirmatory#page388.tif
source=HPDCtoHPED_Confirmatory#page389.tif
source=HPDCtoHPED_Confirmatory#page390.tif

source=HPDCtoHPED_Confirmatory#page391.tif
source=HPDCtoHPED_Confirmatory#page392.tif
source=HPDCtoHPED_Confirmatory#page393.tif
source=HPDCtoHPED_Confirmatory#page394.tif
source=HPDCtoHPED_Confirmatory#page395.tif
source=HPDCtoHPED_Confirmatory#page396.tif
source=HPDCtoHPED_Confirmatory#page397.tif
source=HPDCtoHPED_Confirmatory#page398.tif
source=HPDCtoHPED_Confirmatory#page399.tif
source=HPDCtoHPED_Confirmatory#page400.tif
source=HPDCtoHPED_Confirmatory#page401.tif
source=HPDCtoHPED_Confirmatory#page402.tif
source=HPDCtoHPED_Confirmatory#page403.tif
source=HPDCtoHPED_Confirmatory#page404.tif
source=HPDCtoHPED_Confirmatory#page405.tif
source=HPDCtoHPED_Confirmatory#page406.tif
source=HPDCtoHPED_Confirmatory#page407.tif
source=HPDCtoHPED_Confirmatory#page408.tif
source=HPDCtoHPED_Confirmatory#page409.tif
source=HPDCtoHPED_Confirmatory#page410.tif
source=HPDCtoHPED_Confirmatory#page411.tif
source=HPDCtoHPED_Confirmatory#page412.tif
source=HPDCtoHPED_Confirmatory#page413.tif
source=HPDCtoHPED_Confirmatory#page414.tif
source=HPDCtoHPED_Confirmatory#page415.tif
source=HPDCtoHPED_Confirmatory#page416.tif
source=HPDCtoHPED_Confirmatory#page417.tif
source=HPDCtoHPED_Confirmatory#page418.tif
source=HPDCtoHPED_Confirmatory#page419.tif
source=HPDCtoHPED_Confirmatory#page420.tif
source=HPDCtoHPED_Confirmatory#page421.tif
source=HPDCtoHPED_Confirmatory#page422.tif
source=HPDCtoHPED_Confirmatory#page423.tif
source=HPDCtoHPED_Confirmatory#page424.tif
source=HPDCtoHPED_Confirmatory#page425.tif
source=HPDCtoHPED_Confirmatory#page426.tif
source=HPDCtoHPED_Confirmatory#page427.tif
source=HPDCtoHPED_Confirmatory#page428.tif
source=HPDCtoHPED_Confirmatory#page429.tif
source=HPDCtoHPED_Confirmatory#page430.tif
source=HPDCtoHPED_Confirmatory#page431.tif
source=HPDCtoHPED_Confirmatory#page432.tif
source=HPDCtoHPED_Confirmatory#page433.tif
source=HPDCtoHPED_Confirmatory#page434.tif
source=HPDCtoHPED_Confirmatory#page435.tif
source=HPDCtoHPED_Confirmatory#page436.tif
source=HPDCtoHPED_Confirmatory#page437.tif
source=HPDCtoHPED_Confirmatory#page438.tif

source=HPDCtoHPED_Confirmatory#page439.tif
source=HPDCtoHPED_Confirmatory#page440.tif
source=HPDCtoHPED_Confirmatory#page441.tif
source=HPDCtoHPED_Confirmatory#page442.tif
source=HPDCtoHPED_Confirmatory#page443.tif
source=HPDCtoHPED_Confirmatory#page444.tif
source=HPDCtoHPED_Confirmatory#page445.tif
source=HPDCtoHPED_Confirmatory#page446.tif
source=HPDCtoHPED_Confirmatory#page447.tif
source=HPDCtoHPED_Confirmatory#page448.tif
source=HPDCtoHPED_Confirmatory#page449.tif
source=HPDCtoHPED_Confirmatory#page450.tif
source=HPDCtoHPED_Confirmatory#page451.tif
source=HPDCtoHPED_Confirmatory#page452.tif
source=HPDCtoHPED_Confirmatory#page453.tif
source=HPDCtoHPED_Confirmatory#page454.tif
source=HPDCtoHPED_Confirmatory#page455.tif
source=HPDCtoHPED_Confirmatory#page456.tif
source=HPDCtoHPED_Confirmatory#page457.tif
source=HPDCtoHPED_Confirmatory#page458.tif
source=HPDCtoHPED_Confirmatory#page459.tif
source=HPDCtoHPED_Confirmatory#page460.tif
source=HPDCtoHPED_Confirmatory#page461.tif
source=HPDCtoHPED_Confirmatory#page462.tif
source=HPDCtoHPED_Confirmatory#page463.tif
source=HPDCtoHPED_Confirmatory#page464.tif
source=HPDCtoHPED_Confirmatory#page465.tif
source=HPDCtoHPED_Confirmatory#page466.tif
source=HPDCtoHPED_Confirmatory#page467.tif
source=HPDCtoHPED_Confirmatory#page468.tif
source=HPDCtoHPED_Confirmatory#page469.tif
source=HPDCtoHPED_Confirmatory#page470.tif
source=HPDCtoHPED_Confirmatory#page471.tif
source=HPDCtoHPED_Confirmatory#page472.tif
source=HPDCtoHPED_Confirmatory#page473.tif
source=HPDCtoHPED_Confirmatory#page474.tif
source=HPDCtoHPED_Confirmatory#page475.tif
source=HPDCtoHPED_Confirmatory#page476.tif
source=HPDCtoHPED_Confirmatory#page477.tif
source=HPDCtoHPED_Confirmatory#page478.tif
source=HPDCtoHPED_Confirmatory#page479.tif
source=HPDCtoHPED_Confirmatory#page480.tif
source=HPDCtoHPED_Confirmatory#page481.tif
source=HPDCtoHPED_Confirmatory#page482.tif
source=HPDCtoHPED_Confirmatory#page483.tif
source=HPDCtoHPED_Confirmatory#page484.tif
source=HPDCtoHPED_Confirmatory#page485.tif
source=HPDCtoHPED_Confirmatory#page486.tif

source=HPDCtoHPED_Confirmatory#page487.tif
source=HPDCtoHPED_Confirmatory#page488.tif
source=HPDCtoHPED_Confirmatory#page489.tif
source=HPDCtoHPED_Confirmatory#page490.tif
source=HPDCtoHPED_Confirmatory#page491.tif
source=HPDCtoHPED_Confirmatory#page492.tif
source=HPDCtoHPED_Confirmatory#page493.tif
source=HPDCtoHPED_Confirmatory#page494.tif
source=HPDCtoHPED_Confirmatory#page495.tif
source=HPDCtoHPED_Confirmatory#page496.tif
source=HPDCtoHPED_Confirmatory#page497.tif
source=HPDCtoHPED_Confirmatory#page498.tif
source=HPDCtoHPED_Confirmatory#page499.tif
source=HPDCtoHPED_Confirmatory#page500.tif
source=HPDCtoHPED_Confirmatory#page501.tif
source=HPDCtoHPED_Confirmatory#page502.tif
source=HPDCtoHPED_Confirmatory#page503.tif
source=HPDCtoHPED_Confirmatory#page504.tif
source=HPDCtoHPED_Confirmatory#page505.tif
source=HPDCtoHPED_Confirmatory#page506.tif
source=HPDCtoHPED_Confirmatory#page507.tif
source=HPDCtoHPED_Confirmatory#page508.tif
source=HPDCtoHPED_Confirmatory#page509.tif
source=HPDCtoHPED_Confirmatory#page510.tif
source=HPDCtoHPED_Confirmatory#page511.tif
source=HPDCtoHPED_Confirmatory#page512.tif
source=HPDCtoHPED_Confirmatory#page513.tif
source=HPDCtoHPED_Confirmatory#page514.tif
source=HPDCtoHPED_Confirmatory#page515.tif
source=HPDCtoHPED_Confirmatory#page516.tif
source=HPDCtoHPED_Confirmatory#page517.tif
source=HPDCtoHPED_Confirmatory#page518.tif
source=HPDCtoHPED_Confirmatory#page519.tif
source=HPDCtoHPED_Confirmatory#page520.tif
source=HPDCtoHPED_Confirmatory#page521.tif
source=HPDCtoHPED_Confirmatory#page522.tif
source=HPDCtoHPED_Confirmatory#page523.tif
source=HPDCtoHPED_Confirmatory#page524.tif
source=HPDCtoHPED_Confirmatory#page525.tif
source=HPDCtoHPED_Confirmatory#page526.tif
source=HPDCtoHPED_Confirmatory#page527.tif
source=HPDCtoHPED_Confirmatory#page528.tif
source=HPDCtoHPED_Confirmatory#page529.tif
source=HPDCtoHPED_Confirmatory#page530.tif
source=HPDCtoHPED_Confirmatory#page531.tif
source=HPDCtoHPED_Confirmatory#page532.tif
source=HPDCtoHPED_Confirmatory#page533.tif
source=HPDCtoHPED_Confirmatory#page534.tif

source=HPDCtoHPED_Confirmatory#page535.tif
source=HPDCtoHPED_Confirmatory#page536.tif
source=HPDCtoHPED_Confirmatory#page537.tif
source=HPDCtoHPED_Confirmatory#page538.tif
source=HPDCtoHPED_Confirmatory#page539.tif
source=HPDCtoHPED_Confirmatory#page540.tif
source=HPDCtoHPED_Confirmatory#page541.tif
source=HPDCtoHPED_Confirmatory#page542.tif
source=HPDCtoHPED_Confirmatory#page543.tif
source=HPDCtoHPED_Confirmatory#page544.tif
source=HPDCtoHPED_Confirmatory#page545.tif
source=HPDCtoHPED_Confirmatory#page546.tif
source=HPDCtoHPED_Confirmatory#page547.tif
source=HPDCtoHPED_Confirmatory#page548.tif
source=HPDCtoHPED_Confirmatory#page549.tif
source=HPDCtoHPED_Confirmatory#page550.tif
source=HPDCtoHPED_Confirmatory#page551.tif
source=HPDCtoHPED_Confirmatory#page552.tif
source=HPDCtoHPED_Confirmatory#page553.tif
source=HPDCtoHPED_Confirmatory#page554.tif
source=HPDCtoHPED_Confirmatory#page555.tif
source=HPDCtoHPED_Confirmatory#page556.tif
source=HPDCtoHPED_Confirmatory#page557.tif
source=HPDCtoHPED_Confirmatory#page558.tif
source=HPDCtoHPED_Confirmatory#page559.tif
source=HPDCtoHPED_Confirmatory#page560.tif
source=HPDCtoHPED_Confirmatory#page561.tif
source=HPDCtoHPED_Confirmatory#page562.tif
source=HPDCtoHPED_Confirmatory#page563.tif
source=HPDCtoHPED_Confirmatory#page564.tif
source=HPDCtoHPED_Confirmatory#page565.tif
source=HPDCtoHPED_Confirmatory#page566.tif
source=HPDCtoHPED_Confirmatory#page567.tif
source=HPDCtoHPED_Confirmatory#page568.tif
source=HPDCtoHPED_Confirmatory#page569.tif
source=HPDCtoHPED_Confirmatory#page570.tif
source=HPDCtoHPED_Confirmatory#page571.tif
source=HPDCtoHPED_Confirmatory#page572.tif
source=HPDCtoHPED_Confirmatory#page573.tif
source=HPDCtoHPED_Confirmatory#page574.tif
source=HPDCtoHPED_Confirmatory#page575.tif
source=HPDCtoHPED_Confirmatory#page576.tif
source=HPDCtoHPED_Confirmatory#page577.tif
source=HPDCtoHPED_Confirmatory#page578.tif
source=HPDCtoHPED_Confirmatory#page579.tif
source=HPDCtoHPED_Confirmatory#page580.tif
source=HPDCtoHPED_Confirmatory#page581.tif
source=HPDCtoHPED_Confirmatory#page582.tif

source=HPDCtoHPED_Confirmatory#page583.tif
source=HPDCtoHPED_Confirmatory#page584.tif
source=HPDCtoHPED_Confirmatory#page585.tif
source=HPDCtoHPED_Confirmatory#page586.tif
source=HPDCtoHPED_Confirmatory#page587.tif
source=HPDCtoHPED_Confirmatory#page588.tif
source=HPDCtoHPED_Confirmatory#page589.tif
source=HPDCtoHPED_Confirmatory#page590.tif
source=HPDCtoHPED_Confirmatory#page591.tif
source=HPDCtoHPED_Confirmatory#page592.tif
source=HPDCtoHPED_Confirmatory#page593.tif
source=HPDCtoHPED_Confirmatory#page594.tif
source=HPDCtoHPED_Confirmatory#page595.tif
source=HPDCtoHPED_Confirmatory#page596.tif
source=HPDCtoHPED_Confirmatory#page597.tif
source=HPDCtoHPED_Confirmatory#page598.tif
source=HPDCtoHPED_Confirmatory#page599.tif
source=HPDCtoHPED_Confirmatory#page600.tif
source=HPDCtoHPED_Confirmatory#page601.tif
source=HPDCtoHPED_Confirmatory#page602.tif
source=HPDCtoHPED_Confirmatory#page603.tif
source=HPDCtoHPED_Confirmatory#page604.tif
source=HPDCtoHPED_Confirmatory#page605.tif
source=HPDCtoHPED_Confirmatory#page606.tif
source=HPDCtoHPED_Confirmatory#page607.tif
source=HPDCtoHPED_Confirmatory#page608.tif
source=HPDCtoHPED_Confirmatory#page609.tif
source=HPDCtoHPED_Confirmatory#page610.tif
source=HPDCtoHPED_Confirmatory#page611.tif
source=HPDCtoHPED_Confirmatory#page612.tif
source=HPDCtoHPED_Confirmatory#page613.tif
source=HPDCtoHPED_Confirmatory#page614.tif
source=HPDCtoHPED_Confirmatory#page615.tif
source=HPDCtoHPED_Confirmatory#page616.tif
source=HPDCtoHPED_Confirmatory#page617.tif
source=HPDCtoHPED_Confirmatory#page618.tif
source=HPDCtoHPED_Confirmatory#page619.tif
source=HPDCtoHPED_Confirmatory#page620.tif
source=HPDCtoHPED_Confirmatory#page621.tif
source=HPDCtoHPED_Confirmatory#page622.tif
source=HPDCtoHPED_Confirmatory#page623.tif
source=HPDCtoHPED_Confirmatory#page624.tif
source=HPDCtoHPED_Confirmatory#page625.tif
source=HPDCtoHPED_Confirmatory#page626.tif
source=HPDCtoHPED_Confirmatory#page627.tif
source=HPDCtoHPED_Confirmatory#page628.tif
source=HPDCtoHPED_Confirmatory#page629.tif
source=HPDCtoHPED_Confirmatory#page630.tif

source=HPDCtoHPED_Confirmatory#page631.tif
source=HPDCtoHPED_Confirmatory#page632.tif
source=HPDCtoHPED_Confirmatory#page633.tif
source=HPDCtoHPED_Confirmatory#page634.tif
source=HPDCtoHPED_Confirmatory#page635.tif
source=HPDCtoHPED_Confirmatory#page636.tif
source=HPDCtoHPED_Confirmatory#page637.tif
source=HPDCtoHPED_Confirmatory#page638.tif
source=HPDCtoHPED_Confirmatory#page639.tif
source=HPDCtoHPED_Confirmatory#page640.tif
source=HPDCtoHPED_Confirmatory#page641.tif
source=HPDCtoHPED_Confirmatory#page642.tif
source=HPDCtoHPED_Confirmatory#page643.tif
source=HPDCtoHPED_Confirmatory#page644.tif
source=HPDCtoHPED_Confirmatory#page645.tif
source=HPDCtoHPED_Confirmatory#page646.tif
source=HPDCtoHPED_Confirmatory#page647.tif
source=HPDCtoHPED_Confirmatory#page648.tif
source=HPDCtoHPED_Confirmatory#page649.tif
source=HPDCtoHPED_Confirmatory#page650.tif
source=HPDCtoHPED_Confirmatory#page651.tif
source=HPDCtoHPED_Confirmatory#page652.tif
source=HPDCtoHPED_Confirmatory#page653.tif
source=HPDCtoHPED_Confirmatory#page654.tif
source=HPDCtoHPED_Confirmatory#page655.tif
source=HPDCtoHPED_Confirmatory#page656.tif
source=HPDCtoHPED_Confirmatory#page657.tif
source=HPDCtoHPED_Confirmatory#page658.tif
source=HPDCtoHPED_Confirmatory#page659.tif
source=HPDCtoHPED_Confirmatory#page660.tif
source=HPDCtoHPED_Confirmatory#page661.tif
source=HPDCtoHPED_Confirmatory#page662.tif
source=HPDCtoHPED_Confirmatory#page663.tif
source=HPDCtoHPED_Confirmatory#page664.tif
source=HPDCtoHPED_Confirmatory#page665.tif
source=HPDCtoHPED_Confirmatory#page666.tif
source=HPDCtoHPED_Confirmatory#page667.tif
source=HPDCtoHPED_Confirmatory#page668.tif
source=HPDCtoHPED_Confirmatory#page669.tif
source=HPDCtoHPED_Confirmatory#page670.tif
source=HPDCtoHPED_Confirmatory#page671.tif
source=HPDCtoHPED_Confirmatory#page672.tif
source=HPDCtoHPED_Confirmatory#page673.tif
source=HPDCtoHPED_Confirmatory#page674.tif
source=HPDCtoHPED_Confirmatory#page675.tif
source=HPDCtoHPED_Confirmatory#page676.tif
source=HPDCtoHPED_Confirmatory#page677.tif
source=HPDCtoHPED_Confirmatory#page678.tif

source=HPDCtoHPED_Confirmatory#page679.tif
source=HPDCtoHPED_Confirmatory#page680.tif
source=HPDCtoHPED_Confirmatory#page681.tif
source=HPDCtoHPED_Confirmatory#page682.tif
source=HPDCtoHPED_Confirmatory#page683.tif
source=HPDCtoHPED_Confirmatory#page684.tif
source=HPDCtoHPED_Confirmatory#page685.tif
source=HPDCtoHPED_Confirmatory#page686.tif
source=HPDCtoHPED_Confirmatory#page687.tif
source=HPDCtoHPED_Confirmatory#page688.tif
source=HPDCtoHPED_Confirmatory#page689.tif
source=HPDCtoHPED_Confirmatory#page690.tif
source=HPDCtoHPED_Confirmatory#page691.tif
source=HPDCtoHPED_Confirmatory#page692.tif
source=HPDCtoHPED_Confirmatory#page693.tif
source=HPDCtoHPED_Confirmatory#page694.tif
source=HPDCtoHPED_Confirmatory#page695.tif
source=HPDCtoHPED_Confirmatory#page696.tif
source=HPDCtoHPED_Confirmatory#page697.tif
source=HPDCtoHPED_Confirmatory#page698.tif
source=HPDCtoHPED_Confirmatory#page699.tif
source=HPDCtoHPED_Confirmatory#page700.tif
source=HPDCtoHPED_Confirmatory#page701.tif
source=HPDCtoHPED_Confirmatory#page702.tif
source=HPDCtoHPED_Confirmatory#page703.tif
source=HPDCtoHPED_Confirmatory#page704.tif
source=HPDCtoHPED_Confirmatory#page705.tif
source=HPDCtoHPED_Confirmatory#page706.tif
source=HPDCtoHPED_Confirmatory#page707.tif
source=HPDCtoHPED_Confirmatory#page708.tif
source=HPDCtoHPED_Confirmatory#page709.tif
source=HPDCtoHPED_Confirmatory#page710.tif
source=HPDCtoHPED_Confirmatory#page711.tif
source=HPDCtoHPED_Confirmatory#page712.tif
source=HPDCtoHPED_Confirmatory#page713.tif
source=HPDCtoHPED_Confirmatory#page714.tif
source=HPDCtoHPED_Confirmatory#page715.tif
source=HPDCtoHPED_Confirmatory#page716.tif
source=HPDCtoHPED_Confirmatory#page717.tif
source=HPDCtoHPED_Confirmatory#page718.tif
source=HPDCtoHPED_Confirmatory#page719.tif
source=HPDCtoHPED_Confirmatory#page720.tif
source=HPDCtoHPED_Confirmatory#page721.tif
source=HPDCtoHPED_Confirmatory#page722.tif
source=HPDCtoHPED_Confirmatory#page723.tif
source=HPDCtoHPED_Confirmatory#page724.tif
source=HPDCtoHPED_Confirmatory#page725.tif
source=HPDCtoHPED_Confirmatory#page726.tif

source=HPDCtoHPED_Confirmatory#page727.tif
source=HPDCtoHPED_Confirmatory#page728.tif
source=HPDCtoHPED_Confirmatory#page729.tif
source=HPDCtoHPED_Confirmatory#page730.tif
source=HPDCtoHPED_Confirmatory#page731.tif
source=HPDCtoHPED_Confirmatory#page732.tif
source=HPDCtoHPED_Confirmatory#page733.tif
source=HPDCtoHPED_Confirmatory#page734.tif
source=HPDCtoHPED_Confirmatory#page735.tif
source=HPDCtoHPED_Confirmatory#page736.tif
source=HPDCtoHPED_Confirmatory#page737.tif
source=HPDCtoHPED_Confirmatory#page738.tif
source=HPDCtoHPED_Confirmatory#page739.tif
source=HPDCtoHPED_Confirmatory#page740.tif
source=HPDCtoHPED_Confirmatory#page741.tif
source=HPDCtoHPED_Confirmatory#page742.tif
source=HPDCtoHPED_Confirmatory#page743.tif
source=HPDCtoHPED_Confirmatory#page744.tif
source=HPDCtoHPED_Confirmatory#page745.tif
source=HPDCtoHPED_Confirmatory#page746.tif
source=HPDCtoHPED_Confirmatory#page747.tif
source=HPDCtoHPED_Confirmatory#page748.tif
source=HPDCtoHPED_Confirmatory#page749.tif
source=HPDCtoHPED_Confirmatory#page750.tif
source=HPDCtoHPED_Confirmatory#page751.tif
source=HPDCtoHPED_Confirmatory#page752.tif
source=HPDCtoHPED_Confirmatory#page753.tif
source=HPDCtoHPED_Confirmatory#page754.tif
source=HPDCtoHPED_Confirmatory#page755.tif
source=HPDCtoHPED_Confirmatory#page756.tif
source=HPDCtoHPED_Confirmatory#page757.tif
source=HPDCtoHPED_Confirmatory#page758.tif
source=HPDCtoHPED_Confirmatory#page759.tif
source=HPDCtoHPED_Confirmatory#page760.tif
source=HPDCtoHPED_Confirmatory#page761.tif
source=HPDCtoHPED_Confirmatory#page762.tif
source=HPDCtoHPED_Confirmatory#page763.tif
source=HPDCtoHPED_Confirmatory#page764.tif
source=HPDCtoHPED_Confirmatory#page765.tif
source=HPDCtoHPED_Confirmatory#page766.tif
source=HPDCtoHPED_Confirmatory#page767.tif
source=HPDCtoHPED_Confirmatory#page768.tif
source=HPDCtoHPED_Confirmatory#page769.tif
source=HPDCtoHPED_Confirmatory#page770.tif
source=HPDCtoHPED_Confirmatory#page771.tif
source=HPDCtoHPED_Confirmatory#page772.tif
source=HPDCtoHPED_Confirmatory#page773.tif
source=HPDCtoHPED_Confirmatory#page774.tif

source=HPDCtoHPED_Confirmatory#page775.tif
source=HPDCtoHPED_Confirmatory#page776.tif
source=HPDCtoHPED_Confirmatory#page777.tif
source=HPDCtoHPED_Confirmatory#page778.tif
source=HPDCtoHPED_Confirmatory#page779.tif
source=HPDCtoHPED_Confirmatory#page780.tif

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT ASSIGNMENT

FROM

Hewlett-Packard Development Company, L.P.

TO

Hewlett Packard Enterprise Development LP

This Patent Assignment, together with the attached Schedule A, is effective as of October 2, 2015.

WHEREAS, **Hewlett-Packard Development Company, L.P.**, a limited partnership established under the laws of the State of Texas and having a principal place of business at 11445 Compaq Center Drive West, Houston, Texas 77070, U.S .A. (hereinafter referred to as "Assignor"), is the legal title holder of the patents and patent applications identified in the attached Schedule A (collectively referred to as "Assigned Patents and Patent Applications");

WHEREAS, **Hewlett Packard Enterprise Development LP**, a limited partnership established under the laws of the State of Texas and having a principal place of business at 11445 Compaq Center Drive West, Houston, Texas 77070, U.S .A. (hereinafter referred to as "Assignee") desires to acquire Assignor's entire right, title and interest, including the right of priority, in, to and under the Assigned Patents and Patent Applications; and

NOW THEREFORE, for good and valuable consideration, the adequacy of which is hereby acknowledged, Assignor and Assignee agree as follows:

Assignor hereby assigns, transfers, conveys and delivers to Assignee the entirety of Assignor's right, title and interest, including without limitation the right of priority, in, to and under the Assigned Patents and Patent Applications, and any inventions and improvements set forth therein, and any and all continuations, continuations-in-part (C-I-P's), divisionals, and renewals of and substitutes for any of the Assigned Patents and Patent Applications, and any and all patents and patent applications of the United States and of foreign countries thereto that may be granted thereon or therefor, and any reissues, or reexaminations, or extensions thereof and any goodwill of the business symbolized by the Assigned Patents and Patent Applications, and the registration thereof. Assignee shall have the right to sue, counterclaim and recover for past, present, and future

PATENT
REEL: 038498 FRAME: 0019

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

infringement and collect any royalties to third parties, damages (including past damages), or other income relating to the Assigned Patents and Patent Applications.

In connection with the foregoing, Assignor hereby authorizes the respective patent office or governmental agency in each jurisdiction to record the transfer of the Assigned Patents to Assignee as assignee of Assignor's right, title and interest therein, and to issue any and all patents or certificates of invention or equivalent which may be granted upon any of the Assigned Patents in the name of Assignee, as the assignee to the entire interest therein.

IN WITNESS WHEREOF, Assignor and Assignee have caused this Assignment to be executed by their authorized representatives.

FOR HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P.

By: HPQ Holdings, LLC, its General Partner

DocuSigned by:
By: Robert Wasson
Signature: 3BF673837B481...

Robert D. Wasson
Name

Chief Patent Counsel
Title

October 27, 2015
Date

FOR HEWLETT PACKARD ENTERPRISE DEVELOPMENT LP

By: Enterprise DC Holdings LLC, its General Partner

DocuSigned by:
By: Curtis G. Rose
Signature: 016629078F4D3...

Curtis G. Rose
Name

Chief Intellectual Property Counsel
Title

October 27, 2015
Date

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

Schedule A - Assigned Patents and Patent Applications

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82579292	Granted	1749386	5/4/2005	4/14/2010	5746753.2	AT	Pattern Discovery In A Network Security System
82077266	Granted	730253	7/26/1996	6/14/2001	1996065476	AU	M/A For Operating Secured Resources Under Control Of Security Module
82163990	Granted	698617	8/8/1996	2/18/1999	1996061954	AU	DISTRIBUTED INTERACTIVE MULTIMEDIA SERVICE SYSTEM
82169168	Granted	2003248290	9/22/2003	6/25/2009	2003248290	AU	Apparatus And Method For Telecommunications Services
82579289	Granted	2005240203	5/4/2005	1/27/2011	2005240203	AU	Pattern Discovery In A Network Security System
82579386	Granted	2007308830	10/25/2007	10/4/2012	2007308830	AU	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security
82579541	Granted	2007339801	12/28/2007	3/22/2012	2007339801	AU	Storing Log Data Efficiently While Supporting Querying To Assist in Computer Network Security
82675335	Granted	2009321637	11/13/2009	11/7/2013	2009321637	AU	Data Centre And Apparatus And Method For Data Centre Cooling
84078870	Application		6/8/2012		2012382008	AU	PATIENT INFORMATION INTERFACE
84122534	Application		6/29/2012		2012383493	AU	CAPACITY PLANNING SYSTEM
84208471	Application		9/30/2012		2012391038	AU	ELECTRONIC HEALTH RECORD SYSTEM WITH CUSTOMIZABLE COMPLIANCE POLICIES
84164239	Application		9/19/2012		2012387668	AU	METADATA TREE OF A PATIENT WITH LOCKBOXES
84237761	Application		10/31/2012			AU	Patient oriented hospital care approach and system
82948272	Granted	708217	12/31/1996	7/29/1999	1997020839	AU	EVALUATION OF CONTENT OF A DATA SET USING MULTIPLE AND/OR COMPLEX QUERIES
82947748	Granted	742937	5/8/1998	5/2/2002	1998073757	AU	Method and System for Monitoring Call Center Service Representatives
84162956	Application		8/30/2012		2012387663	AU	ENCRYPTED DATA STORE FOR RECORDS
82579350	Granted	2007234897	4/3/2007	12/17/2009	2007234897	AU	Merging Multi-Line Log Entries
84163262	Application		9/12/2012		2012387666	AU	VALIDATING A METADATA TREE USING A METADATA INTEGRITY VALIDATOR
84164172	Application		9/12/2012		2012387667	AU	METADATA TREE WITH KEY ROTATION INFORMATION
82228736	Published		1/23/2008		PI0806372-9	BR	Methods for providing secure eCommerce transactions
82242539	Application		3/10/2008		PI0821182-5	BR	Two-phase Optical Communication Methods And Optical Bus Systems For Implementing The Same
82257872	Published		7/24/2002		211721	BR	Block Data Storage Within A Computer Network
82257956	Published		5/30/2003		0311390-6	BR	Distributed Network Storage System With Virtualization
82858553	Application		4/28/2010		PI1007611-5	BR	IMPROVEMENTS IN OR RELATING TO COOLING
82879815	Application		10/26/2009		PI0924243-0	BR	Method And Apparatus For Creating Entanglements And Quantum Repeater Utilising The Same
83721312	Application		5/31/2011		1220130308164	BR	AUTOMATED SECURITY TESTING

PATENT
REEL: 038498 FRAME: 0021

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0022

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83984192	Application		1/6/2012		1120140167222	BR	CONNECTOR MODULES HAVING OPTICAL CONNECTORS MOVEABLE BETWEEN A RETRACTED POSITION AND AN EXTENDED POSITION
83991648	Application		4/30/2012		BR 11 2014 018142 0	BR	AUTOMATED EVENT MANAGEMENT
83995811	Application		4/20/2012		1120140181411	BR	VOLTAGE REGULATOR CONTROL SYSTEM
84050557	Application		3/30/2012		1120140237450	BR	DEFINING A PERIMETER TO MONITOR A WIRELESS DEVICE FOR A VIOLATION OF THE PERIMETER
84077693	Application		6/8/2012		BR1120140270864	BR	CHECKPOINTING USING FPGA
84136963	Application		7/31/2012		BR1120150023231	BR	NETWORK TRAFFIC PROCESSING SYSTEM
84141080	Application		9/10/2012		1120150023193	BR	USE OF PRIMARY AND SECONDARY CONNECTION TABLES
84162663	Application		8/29/2012		1120150040357	BR	SECURITY SCAN BASED ON DYNAMIC TAINT
84262619	Application		1/30/2013			BR	CONTROLLING ERROR PROPAGATION DUE TO FAULT IN COMPUTING NODE OF A DISTRIBUTED COMPUTING SYSTEM
84290783	Acknowledged		1/30/2013			BR	NON-VOLATILE MEMORY WRITE MECHANISM
84292909	Acknowledged		1/31/2013			BR	LIQUID COOLING
82676465	Application		10/21/2009		PI0914386-6	BR	DATA CENTER AND DATA CENTER DESIGN
82242569	Published		3/11/2008		PI0821180-9	BR	Optoelectronic Switches Using On-chip Optical Waveguides
84291289	Application		1/15/2013		1120150169538	BR	Dynamic Firmware Updating
83134881	Application		6/16/2010		BR1120120320033	BR	Computer Racks
82675337	Application		11/13/2009		PI0916505-3	BR	Data Centre And Apparatus And Method For Data Centre Cooling
90056359	Acknowledged		4/3/2013			BR	MICROCONTROLLER AT A CARTRIDGE OF A CHASSIS
82850373	Application		4/28/2010		PI1007612-3	BR	IMPROVEMENTS IN OR RELATING TO DATA CENTERS
83784102	Application		10/20/2011		BR1120140051194	BR	SYSTEMS AND METHODS FOR EVALUATION OF EVENTS BASED ON A REFERENCE BASELINE ACCORDING TO TEMPORAL POSITION IN A SEQUENCE OF EVENTS
84022135	Application		2/22/2012		1120140207089	BR	HIDING LOGICAL PROCESSORS FROM AN OPERATING SYSTEM ON A COMPUTER
83992763	Application		4/25/2012		1120140186278	BR	FILE TRANSFER USING XML
83714198	Application		5/31/2011		1120130306602	BR	APPLICATION SECURITY TESTING
83728676	Application		6/16/2011		112013032289.6	BR	SYSTEM AND METHOD FOR POLICY GENERATION
83776047	Application		7/29/2011		1120140021759	BR	CREDENTIAL VALIDATION
82238672	Application		12/20/2007		PI0722218-1	BR	AUTOMATED MODEL GENERATION FOR COMPUTER BASED BUSINESS PROCESS
90051538	Acknowledged		3/29/2013			BR	SHARING FIRMWARE AMONG AGENTS IN A COMPUTING NODE
84182200	Application		9/28/2012		1120150066534	BR	Application Security Testing

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82077137	Granted	2258651	6/17/1997	37985	2258651	CA	System, Method And Article Of Manufacture For Virtual Point Of Sale Processing Utilizing An Extensible, Flexible Architecture
82077260	Granted	2228014	7/26/1996	7/22/2008	2228014	CA	Method And Apparatus For Operating Resources Under Control Of A Security Module Or Other Secure Processor (as Amended)
82947747	Granted	2289508	5/8/1998	8/22/2006	2289508	CA	Method and System for Monitoring Call Center Service Representatives
82948273	Granted	2241873	12/31/1996	3/21/2006	2241873	CA	EVALUATION OF CONTENT OF A DATA SET USING MULTIPLE AND/OR COMPLEX QUERIES
82948643	Granted	2290351	5/22/1998	8/23/2005	2290351	CA	Virtual robot conversing with users in natural language
84162961	Application		8/30/2012		2882349	CA	ENCRYPTED DATA STORE FOR RECORDS
84163267	Application		9/12/2012		2881962	CA	VALIDATING A METADATA TREE USING A METADATA INTEGRITY VALIDATOR
84164177	Application		9/12/2012		2881983	CA	METADATA TREE WITH KEY ROTATION INFORMATION
84208476	Application		9/30/2012		2886577	CA	ELECTRONIC HEALTH RECORD SYSTEM WITH CUSTOMIZABLE COMPLIANCE POLICIES
84237765	Application		10/31/2012		2890071	CA	VISUAL CALL APPARATUS AND METHOD
84078875	Application		6/8/2012		2871845	CA	PATIENT INFORMATION INTERFACE
84122539	Application		6/29/2012		2877940	CA	CAPACITY PLANNING SYSTEM
82271714	Granted	2361895	11/30/2000	40281	2361895	CA	FIFO Based Network Interface Supporting Out-of-Order Processing
82237991	Granted	2460833	9/20/2002	2/26/2013	2460833	CA	SYSTEM AND METHOD FOR IMPLEMENTING JOURNALING IN A MULTI-NODE ENVIRONMENT
84164244	Application		9/19/2012		2881985	CA	METADATA TREE OF A PATIENT WITH LOCKBOXES
82579290	Granted	2565343	5/4/2005	41289	2565343	CA	Pattern Discovery In A Network Security System
82251347	Granted	2572568	12/29/2006	6/17/2014	2572568	CA	Seamless Roaming Across Wireless Subnets Using Source Address Forwarding
82077350	Granted	2252649	4/24/1997	8/6/2002	2252649	CA	A System And Method For Secure Network Electronic Payment And Credit Collection
82579387	Granted	2660054	10/25/2007	3/19/2013	2660054	CA	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security
82579293	Granted	1749386	5/4/2005	4/14/2010	5746753.2	CH	Pattern Discovery In A Network Security System
82274711	Application		11/7/2003		2290/2003	CL	Active Network Defense System and Method
82043042	Granted	ZL98814012.8	12/17/1998	2/2/2005	98814012.8	CN	Tape Leader Pin Asembly And Method For Making The Same
82066838	Granted	97190020.5	1/17/1997	38469	97190020.5	CN	OFDM FEC

PATENT
REEL: 038498 FRAME: 0023

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82092674	Granted	200410074858.9	8/30/2004	9/8/2010	200410074858.9	CN	High Performance Cooling Device With Vapor Chamber
82106546	Granted	200580030087.6	8/30/2005	11/28/2012	200580030087.6	CN	Scalable, Component-accessible, And Highly Interconnected Three-dimensional Component Arrangement Within A System
82133579	Granted	809364.4	6/23/2000	7/14/2004	809364.4	CN	METHOD AND SYSTEM FOR PROVIDING TELECOMMUNICATION SERVICES ACROSS NETWORKS THAT USE DIFFERENT PROTOCOLS
82163993	Granted	96111970.5	8/30/1996	5/26/2004	96111970.5	CN	Distributed Interactive Multimedia Service System
82168916	Granted	200410003586.3	1/30/2004	6/8/2011	200410003586.3	CN	Multiple Protocol Database
82169165	Granted	200310120285.4	12/12/2003	4/29/2009	200310120285.4	CN	Apparatus And Method For Telecommunications Services
82170170	Granted	200410087955.1	10/27/2004	1/27/2010	200410087955.1	CN	Method And Program Product For Avoiding Cache Congestion By Offsetting Addresses While Allocating Memory
82171169	Granted	200680038674.4	7/21/2006	1/16/2013	200680038674.4	CN	Quantum Information Conversion Between Matter And Light Representations
82171679	Granted	200510004156.8	1/12/2005	2/24/2010	200510004156.8	CN	Signaling Gateway Aggregation
82174148	Granted	200580013632	4/28/2005	9/8/2010	200580013632	CN	Quantum Optical State Converter
82176401	Granted	200410064418.5	8/24/2004	5/5/2010	200410064418.5	CN	Interface Module
82178210	Granted	200510071785.2	4/5/2005	4/18/2012	200510071785.2	CN	Key-configured Topology With Connection Management
82179029	Granted	200580011521.6	2/17/2005	2/24/2010	200580011521.6	CN	Airflow Detection System Having An Airflow Indicating Device
82179644	Granted	200510068591.7	4/27/2005	10/1/2008	200510068591.7	CN	System And Method For Interleaving Memory
82182605	Granted	200580009400.8	1/28/2005	5/12/2010	200580009400.8	CN	Determining Location Information For A Node In A Network Using At Least One Local Landmark Node
82184279	Granted	200510089523.9	7/22/2005	1/21/2009	200510089523.9	CN	Programmable SYNC Pulse Generator
82185335	Granted	200580013868.4	4/25/2005	4/29/2009	200580013868.4	CN	Misalignment-tolerant Methods For Fabricating Multiplexing/demultiplexing Architectures
82186010	Granted	200680050237.4	11/1/2006	11/14/2012	200680050237.4	CN	CROSSBAR-ARRAY AND WIRE ADDRESSING METHODS THAT TOLERATE MISALIGNMENT OF ELECTRICAL COMPONENTS AT WIRE OVERLAP POINTS
82186196	Granted	200580015681.8	5/13/2005	5/4/2011	200580015681.8	CN	Improvements In Message-based Communications
82188080	Granted	200510086014	7/20/2005	6/16/2010	200510086014	CN	REDUNDANT PROCESSOR SYSTEM, TIME OF DAY RESPONSE SYSTEM, AND METHOD FOR RESPONDING TO A TIME OF DAY REQUEST
82188089	Granted	200510127159	11/16/2005	12/10/2008	200510127159	CN	Computer System Synchronization Unit Configured For Race Avoidance (as Amended), Per F/A Letter Of 01/19/08.
82188647	Granted	200580013328.6	4/28/2005	9/14/2011	200580013328.6	CN	NON-DEMOLITION PHOTON DETECTOR THAT PRESERVES INPUT STATE CHARACTERISTICS

PATENT
REEL: 038498 FRAME: 0024

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82189259	Granted	200510087497.6	7/19/2005	10/1/2008	200510087497.6	CN	Latent Error Detection
82189406	Granted	200510088110.9	7/29/2005	6/10/2009	200510088110.9	CN	System And Method For Operating Load Balancers For Multiple Instance Applications
82189832	Granted	200510118826.9	10/28/2005	12/8/2010	200510118826.9	CN	Systems And Methods For Presenting Managed Data
82189946	Granted	ZL200510088230.9	7/29/2005	4/22/2015	200510088230.9	CN	Purging Without Write-back Of Cache Lines Containing Spent Data
82190210	Granted	200510088159.4	7/29/2005	5/13/2009	200510088159.4	CN	Run-time Updating Of Prediction Hint Instructions
82195694	Granted	200610003753.3	2/5/2006	8/13/2014	200610003753.3	CN	Selecting A Function Of Components Based On Orientation
82196585	Granted	200610004179.3	2/23/2006	7/27/2011	200610004179.3	CN	Methods And Systems For Managing A Device
82197392	Granted	200510137045.4	12/9/2005	5/18/2011	200510137045.4	CN	Distributed Lock
82197884	Published		5/17/2006		200610084701.3	CN	Controlling Access To Communication Services
82199933	Granted	200610005412.x	1/12/2006	12/2/2009	200610005412.X	CN	Apparatus For Data Retrieval From Computing Systems
82200080	Granted	200580037003.1	10/14/2005	40807	200580037003.1	CN	Nanoscale Latches And Impedance-encoded Logic For Use In Nanoscale State Machines, Nanoscale Pipelines, And In Other Nanoscale Electronic Circuits
82200689	Granted	ZL200580047837.0	10/31/2005	11/6/2013	200580047837	CN	Routing A Service Query In An Overlay Network
82201370	Granted	200510118887.5	11/1/2005	9/17/2008	200510118887.5	CN	Incremental Backup Operations In Storage Networks
82202759	Granted	200610084112.5	5/23/2006	6/2/2010	200610084112.5	CN	Systems And Methods Of Sharing Removable Media Storage Devices In Multi-partitioned Systems
82205870	Granted	200580047845.5	10/31/2005	10/27/2010	200580047845.5	CN	Determining Highest Workloads For Nodes In An Overlay Network
82205885	Granted	200580047830.9	12/6/2005	4/6/2011	200580047830.9	CN	Splitting A Workload Of A Node
82206305	Granted	200680009455.3	3/9/2006	9/29/2010	200680009455.3	CN	Embedded Web-based Management Method
82207013	Granted	ZL200680002826.5	1/19/2006	1/9/2013	200680002826.5	CN	TRANSACTION PROXY IN A TELECOMMUNICATIONS OR MESSAGING SYSTEM AND RELATED METHODS
82209062	Granted	200580000213.3	3/10/2005	2/24/2010	200580000213.3	CN	Server System, Server Device And Method Therefor
82209572	Granted	200780037838.6	10/12/2007	2/13/2013	200780037838.6	CN	Composite Material With Chirped Resonant Cells
82210010	Granted	200680038219.4	8/7/2006	3/14/2012	200680038219.4	CN	Screening Of Calls In A Packet-based Network
82211858	Granted	200680040428.2	7/20/2006	7/25/2012	200680040428.2	CN	Service Chaining
82211876	Granted	200680040321.8	7/20/2006	7/4/2012	200680040321.8	CN	Telephony And Web Services Coordination
82213688	Granted	200710001855.6	1/5/2007	12/1/2010	200710001855.6	CN	DMA Access Systems And Methods
82216115	Granted	200780004162	1/30/2007	9/5/2012	200780004162	CN	Methods And Systems For Avoiding Transmission-channel Disruptions
82217414	Granted	200780026095.2	7/10/2007	7/4/2012	200780026095.2	CN	METHOD OF PROVIDING SERVICES IN A NETWORK, NETWORK ELEMENT
82218863	Published		7/26/2007		200710137000.6	CN	Memory-mapped Buffers For Network Interface Controllers
82219115	Granted	200780028366.8	7/11/2007	1/26/2011	200780028366.8	CN	Compact Systems For Generating Polarization-entangled Photons

PATENT
REEL: 038498 FRAME: 0025

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82219238	Granted	200780035137.9	7/11/2007	41227	200780035137.9	CN	Compact, Single-chip-based, Entangled Polarization-state Photon Sources And Methods For Generating Photons In Entangled Polarization States
82220747	Granted	ZL200780036203.4	7/17/2007	3/6/2013	200780036203.4	CN	SECURE USE OF USER SECRETS ON A COMPUTING PLATFORM
82224158	Granted	200880013724.2	4/25/2008	1/11/2012	200880013724.2	CN	Nanowire-based Opto-electronic Devices
82225670	Granted	200780023368.8	4/20/2007	8/3/2011	200780023368.8	CN	OPTICAL-BASED, SELF-AUTHENTICATING QUANTUM RANDOM NUMBER GENERATORS
82225724	Granted	200780046608.6	10/16/2007	11/16/2011	200780046608.6	CN	PHOTONIC-INTERCONNECT SYSTEMS FOR READING DATA FROM MEMORY CELLS AND WRITING DATA TO MEMORY INTEGRATED CIRCUITS
82226597	Granted	200880013624.X	4/25/2008	5/9/2012	200880013624.X	CN	A MICROCHIP HAVING ACTIVE TEMPERATURE CONTROL AND A METHOD FOR MAKING THE SAME
82226990	Granted	200880002010.1	1/10/2008	9/14/2011	200880002010.1	CN	CAPACITIVELY COUPLING LAYERS OF A MULTILAYER DEVICE
82227032	Granted	200880007016.8	1/3/2008	10/5/2011	200880007016.8	CN	Photonic Systems And Methods For Encoding Data In Carrier Electromagnetic Waves
82227608	Granted	200880019398.6	4/4/2008	10/16/2013	200880019398.6	CN	APPARATUS AND METHODS FOR ADAPTIVE THROTTLING OF TRAFFIC ACROSS MULTIPLE NETWORK NODES
82228733	Published		1/23/2008		200880003313.5	CN	METHODS FOR PROVIDING SECURE Ecommerce TRANSACTIONS
82229591	Granted	ZL200880003529.1	1/29/2008	3/5/2014	200880003529.1	CN	Method And System For Facilitating Multi-point Communications
82229783	Published		1/29/2008		200880003636.4	CN	CONFIGURATION OF MOBILE COMMUNICATION DEVICES
82229975	Granted	200880023685.4	5/21/2008	8/21/2013	200880023685.4	CN	END-TO-END FLOW CONTROL IN A NETWORK BACKGROUND
82230473	Application		10/25/2007		200780101502.1	CN	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82230548	Granted	200880021050	6/16/2008	11/14/2012	200880021050	CN	Optical Interconnect
82231412	Application		8/28/2007		200780100071.7	CN	Method And Apparatus For Multimedia Data Management On Mobile Devices
82231481	Granted	ZL200880114798.5	9/3/2008	1/16/2013	200880114798.5	CN	Sharing Legacy Devices In A Multi-host Environment
82231835	Granted	200880025176.5	5/21/2008	41150	200880025176.5	CN	A Modular High-density Computer System
82232486	Granted	200880101515.3	7/30/2008	7/10/2013	200880101515.3	CN	Photonic Guiding Device
82233023	Granted	ZL200880113939.1	9/19/2008	3/27/2013	200880113939.1	CN	Hardware Device Interface Supporting Transaction Authentication
82233107	Granted	101689070	5/21/2008	12/19/2012	200880022038.1	CN	Dynamic Converter Control For Efficient Operation
82233146	Granted	ZL200880127260.8	2/20/2008	3/20/2013	200880127260.8	CN	Redriver With Two Reference Clocks And Method Of Operation Thereof

PATENT
REEL: 038498 FRAME: 0026

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82233290	Granted	ZL200780101503.6	10/25/2007	6/12/2013	200780101503.6	CN	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82233404	Granted	200810129477.4	7/31/2008	6/27/2012	200810129477.4	CN	Cell Compatibilty In Multiprocessor Systems
82234604	Granted	200880112448.5	10/15/2008	10/30/2013	200880112448.5	CN	METHOD AND SYSTEM OF TRACKING OPTICAL BEAM SHIFT
82234667	Granted	200880022465.X	6/25/2008	4/6/2011	200880022465.X	CN	Nanowire Photodiodes And Methods Of Making Nanowire Photodiodes
82234976	Granted	200880101543.5	7/30/2008	7/25/2012	200880101543.5	CN	Microresonator Systems And Methods Of Fabricating The Same
82235045	Granted	ZL200880122362.0	10/23/2008	12/26/2012	200880122362	CN	All Optical Fast Distributed Arbitration In A Computer System Device
82235162	Granted	200880112331.7	10/15/2008	12/19/2012	200880112331.7	CN	PLASMONIC HIGH-SPEED DEVICES FOR ENHANCING THE PERFORMANCE OF MICROELECTRONIC DEVICES
82235420	Allowed		1/31/2008		200880125960.3	CN	Automated Application Dependency Mapping
82237025	Granted	ZL200780102380.8	12/20/2007	5/29/2013	200780102380.8	CN	MODEL BASED DEPLOYMENT OF COMPUTER BASED BUSINESS PROCESS ON DEDICATED HARDWARE
82237604	Published		3/14/2008		200880128059.1	CN	Blade Server For Increased Processing Capacity
82237847	Granted	200880129886.2	4/19/2008	6/11/2014	200880129886.2	CN	Device And Method For Cooling Fan Control Using Measured Amperage Load.
82238015	Granted	2823098.1	9/20/2002	39141	2823098.1	CN	SYSTEM AND METHOD FOR IMPLEMENTING JOURNALING IN A MULTI-NODE ENVIRONMENT
82238162	Granted	200880128904.5	4/28/2008	6/11/2014	200880128904.5	CN	Adjustable Server-transmission Rates Over Fixed-speed Backplane Connections Within A Multi-server Enclosure
82238201	Granted	200780102031.6	12/21/2007	10/31/2012	200780102031.6	CN	Moisture Content Control System
82238537	Granted	200880126070.4	1/30/2008	2/29/2012	200880126070.4	CN	NANOSTRUCTURES AND METHODS OF MAKING THE SAME
82238648	Granted	200880125785.8	1/28/2008	6/12/2013	200880125785.8	CN	DEPLOYMENT OF BOOT IMAGES IN DISKLESS SERVERS
82239092	Granted	ZL200880128467.7	4/2/2008	4/2/2014	200880128467.7	CN	Disk Drive Data Encryption
82239455	Granted	200880126069.1	1/30/2008	9/18/2013	200880126069.1	CN	PLASMON ENHANCED LIGHT-EMITTING DIODES
82240262	Granted	ZL200880128456.9	3/31/2008	8/6/2014	200880128456.9	CN	Automated Power Topology Discovery
82240574	Published		2/26/2008		200880127555.5	CN	Improved Fan And Cooling Device
82240655	Granted	ZL200880127836.0	3/3/2008	8/21/2013	200880127836	CN	Software-based Power Capping
82240721	Granted	200880129257.X	4/1/2008	41402	200880129257.X	CN	Cooling Provisioning Management In A Three Dimensional Package
82240829	Allowed		4/30/2008		200880128923.8	CN	POWER SUPPLY ASSEMBLY FOR SERVER RACK AND METHOD FOR MOUNTING POWER SUPPLY FOR SERVER RACK
82241459	Granted	ZL200880128466.2	4/2/2008	3/27/2013	200880128466.2	CN	Converting Resets In Shared I/O System

PATENT
REEL: 038498 FRAME: 0027

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82241594	Granted	200880128884.1	4/28/2008	41801	200880128884.1	CN	Virtual-interrupt-mode Interface And Method For Virtualizing An Interrupt Mode
82241885	Granted	200880127845.X	3/4/2008	7/31/2013	200880127845.X	CN	ANGLE SENSOR, SYSTEM AND METHOD EMPLOYING GUIDED-MODE RESONANCE (as amended)
82242092	Published		2/15/2008		200880126794.9	CN	METHOD AND COMPUTER PROGRAM PRODUCT FOR CHANGING AN IT SYSTEM
82242212	Granted	200880128442.7	3/28/2008	3/13/2013	200880128442.7	CN	FLEXIBLE OPTICAL INTERCONNECT
82242413	Granted	ZL200880113950.8	10/14/2008	41542	200880113950.8	CN	QUANTUM KEY DISTRIBUTION SYSTEM USING LDPC CODES WITH A GRAPH HAVING A TOROID STRUCTURE
82242572	Granted	200880129150.5	3/11/2008	3/27/2013	200880129150.5	CN	Optoelectronic Switches Using On-chip Optical Waveguides
82242650	Granted	200880128556.1	4/4/2008	5/7/2014	200880128556.1	CN	BEAMSPLITTERS WITH OFFSET COMPENSATION
82242707	Published		5/1/2008		200880128994.8	CN	Storing Checkpoint Data In Non-volatile Memory
82242905	Published		6/23/2008		200880129914	CN	Spatial Querying In A Data Warehouse
82244900	Granted	ZL200880129888.1	6/19/2008	42123	200880129888.1	CN	Capacity Planning
82245320	Published		5/7/2008		200880129048.5	CN	ARRAYS, SYSTEM AND METHOD FOR BI-DIRECTIONAL DATA TRANSMISSION
82245575	Published		7/3/2008		200880130190.1	CN	Memory Server
82247450	Granted	200880128042.6	9/29/2008	41444	200880128042.6	CN	Neuromorphic Circuit
82247825	Published		5/6/2008		200880129130.8	CN	FABRICATION OF THIN PELLICLE BEAM SPLITTERS
82250324	Granted	ZL201010171578.5	4/28/2010	12/10/2014	201010171578.5	CN	Communicating Confidential Information Between An Application And A Database
82251524	Granted	96192069.6	2/12/1996	40212	96192069.6	CN	System And Method For Electronic Transfer Of Funds Using An Automated Teller Machine To Dispense The Transferred Funds
82257521	Granted	200980112505.4	4/10/2008	4/29/2015	200980112505.4	CN	APPARATUS, AND ASSOCIATED METHOD, FOR ALLOCATING PROCESSING AMONGST DATA CENTERS
82257623	Granted	200980117601.8	7/29/2008	12/17/2014	200980117601.8	CN	SYSTEM AND METHOD FOR A VIRTUALIZATION INFRASTRUCTURE MANAGEMENT ENVIRONMENT
82257749	Granted	200980117583.3	7/24/2008	2/11/2015	200980117583.3	CN	System And Method For Electronic Data Security
82257950	Granted	3815013.1	5/30/2003	9/26/2007	3815013.1	CN	Distributed Network Storage System With Virtualization
82274417	Granted	200410011437.1	12/22/2004	3/21/2012	200410011437.1	CN	Stackable Routers Employing a Routing Protocol
82274735	Granted	200380104709.6	11/7/2003	12/17/2008	200380104709.6	CN	Active Network Defense System and Method
82274813	Published		1/26/2007		200710008176.1	CN	Bi-planar Network Architecture
82274849	Published		2/16/2007		200710084120.4	CN	Network Traffic Redirection in Bi-Planar Networks
82274981	Granted	101826970	1/5/2010	42046	201010002121.1	CN	Intelligent Power Management of an Intermediate Network Device Switching Circuitry and PoE Delivery
82274987	Granted	201010114339.6	2/20/2010	42109	201010114339.6	CN	POWER SHARING WITH STACKABLE SWITCHES
82400880	Granted	200880129889.6	6/19/2008	3/27/2013	200880129889.6	CN	Multi-blade Interconnector
82405520	Granted	200880129455.6	5/28/2008	6/11/2014	200880129455.6	CN	Impedance Correction

PATENT
REEL: 038498 FRAME: 0028

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82405575	Granted	ZL200880130273.0	5/9/2008	4/22/2015	200880130273	CN	Optically Enabled Broadcast Bus
82405604	Granted	ZL200880130271.1	5/8/2008	7/16/2014	200880130271.1	CN	Hierarchical Passive Networks
82408609	Granted	ZL200880129454.1	5/28/2008	12/10/2014	200880129454.1	CN	Providing Object-level Input/output Requests Between Virtual Machines To Access A Storage Subsystem
82559526	Granted	ZL200880130675.0	6/10/2008	4/8/2015	200880130675	CN	Presenting Multi-function Devices Behind A Switch Hierarchy As A Single Function Device
82573372	Granted	200880129869.9	6/17/2008	11/19/2014	200880129869.9	CN	Optical Broadcast Systems And Methods
82573377	Published		6/17/2008		200880129891.3	CN	Infrastructure System Management Based Upon Evaluated Reliability
82576590	Granted	ZL200880130177.6	7/1/2008	10/23/2013	200880130177.6	CN	Remote Computing Services
82576818	Granted	200880130654.9	6/9/2008	41094	200880130654.9	CN	Cylindrical Resonators For Optical Signal Routing
82584155	Granted	ZL200980131239.X	8/4/2009	2/13/2013	200980131239.X	CN	BOOKMARKS FOR FLEXIBLE INTEGRATED ACCESS TO PUBLISHED MATERIAL
82584161	Granted	ZL200980131791.9	8/4/2009	5/21/2014	200980131791.9	CN	APPARATUS, AND ASSOCIATED METHOD, FOR DETECTING FRAUDULENT TEXT MESSAGE
82595662	Granted	ZL200880130434.6	7/14/2008	7/2/2014	200880130434.6	CN	Hybrid Guided-Mode Resonance Filter And Method Employing Distributed Bragg Reflection
82620376	Published		8/8/2008		200880131474.2	CN	Method And Systems For Implementing High-radix Switch Topologies On Relatively Lower-radix Switch Physical Networks
82621147	Granted	ZL200880131469.1	8/8/2008	3/12/2014	200880131469.1	CN	Independently Controlled Virtual Memory Devices In Memory Modules
82629482	Granted	ZL200880131477.6	8/8/2008	42144	200880131477.6	CN	Independently Controllable And Reconfigurable Virtual Memory Devices In Memory Modules That Are Pin-compatible With Standard Memory Modules
82629542	Published		8/13/2008		200880131533.6	CN	Dynamic Utilization Of Power-down Modes In Multi-core Memory Modules
82631729	Granted	ZL200980139998.0	8/4/2009	4/9/2014	200980139998	CN	End-to-end Network Access Analysis
82634144	Granted	ZL200880130883.0	8/26/2008	42221	200880130883	CN	Tunable Nanowire Resonant Cavity For Optical Modulation
82634167	Granted	200880130870.3	8/27/2008	1/28/2015	200880130870.3	CN	Dynamic Impedance Receiver Circuit For Ultrafast Low-power Photodetector
82651064	Published		8/30/2008		200880130894.9	CN	Use Of Hybrid PCB Materials In Printed Circuit Boards
82651130	Granted	ZL200980143332.2	9/23/2009	6/17/2015	200980143332.2	CN	MEMORY MODULE INCLUDING VOLTAGE SENSE MONITORING INTERFACE
82653584	Published		9/22/2009		200980143341.1	CN	DIFFERENTIAL ON-LINE TERMINATION

PATENT
REEL: 038498 FRAME: 0029

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0030

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82654463	Published		8/27/2008		200880131724.2	CN	Performing Zone Based Workload Scheduling According To Environmental Conditions
82660019	Granted	ZL200880132252.2	10/7/2008	42186	200880132252.2	CN	Analyzing Events
82660093	Allowed		10/28/2009		200980145140.5	CN	Distributed Packet Flow Inspection and Processing
82672024	Granted	ZL200880131794.8	10/29/2008	9/17/2014	200880131794.8	CN	Component Installation Guidance
82672072	Granted	ZL200880131478.0	10/8/2008	41990	200880131478	CN	Firmware Storage Medium With Customized Image
82675564	Allowed		10/13/2008		200880131557.1	CN	Trend Determination And Identification
82676603	Published		10/16/2008		200880132377.5	CN	Performance Analysis Of Applications
82691755	Published		9/4/2009		200980144159.8	CN	Storing Log Data Efficiently While Supporting Querying
82716517	Published		10/30/2008		200880131800.X	CN	Redundant Array Of Independent Disks (RAID) Write Cache Sub-assembly
82716724	Granted	ZL200880132583.6	10/31/2008	42116	200880132583.6	CN	Optical Beam Couplers And Splitters
82752233	Granted	ZL200980155140.3	1/23/2009	42060	200980155140.3	CN	System And Methods For Allocating Shared Storage Resources
82790100	Granted	ZL200980157956.X	1/9/2009	5/14/2014	200980157956.X	CN	SYSTEM AND METHODS FOR ROUTING OPTICAL SIGNALS
82808640	Granted	ZL200980158440.7	1/30/2009	4/29/2015	200980158440.7	CN	Dynamically Applying A Contol Policy To A Network
82819008	Granted	200980158448.3	3/31/2009	1/22/2014	200980158448.3	CN	Determiningpower Topology Of Plurality Of Computer Systems
82837339	Published		6/25/2009		200980160063	CN	SWITCHABLE JUNCTION WITH INTRINSIC DIODES WITH DIFFERENT SWITCHING THRESHOLDS
82840834	Application		3/13/2009		200980158747.7	CN	Determining Status Assignments That Optimize Entity Utilization And Resiurce Power Consumption
82849081	Granted	102396030B	4/17/2009	41941	200980158696.8	CN	Method And System For Reducing Trace Length And Capacitance In A Large Memory Footprint Background
82850375	Granted	ZL201080018945.6	4/28/2010	42214	201080018945.6	CN	IMPROVEMENTS IN OR RELATING TO DATA CENTERS
82852387	Published		7/14/2009		200980160657.1	CN	Determining A Seasonal Effect In Temporal Data
82852864	Published		7/31/2009		200980161741.5	CN	Method And System To Recognize And Inventory Applications
82852876	Allowed		10/26/2009		200980161148	CN	Automatic Redundant Logical Connections
82852977	Published		4/13/2009		200980158681.1	CN	Back Drill Verification Feature
82853054	Published		4/27/2009		200980158980.5	CN	Energy-efficient Standby Mode In A Switching Power Supply
82853111	Published		12/18/2009		200980163034.X	CN	Proxy Agents In A Network

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82853970	Granted	ZL200980158787.1	4/17/2009	41801	200980158787.1	CN	Power Capping System And Method
82858555	Granted	ZL201080018933.3	4/28/2010	41983	201080018933.3	CN	IMPROVEMENTS IN OR RELATING TO COOLING
82859766	Granted	ZL200980158981.X	4/27/2009	7/1/2015	200980158981.X	CN	Electric Power Conversion System Having An Adaptable Transformer Turns Ratio For Improved Efficiency
82866201	Granted	ZL200980160427.5	7/10/2009	4/29/2015	200980160427.5	CN	Location Determined Network Access
82873383	Granted	200980160198.7	6/29/2009	9/24/2014	200980160198.7	CN	HYPERVISOR-BASED MANAGEMENT OF LOCAL AND REMOTE VIRTUAL MEMORY PAGES
82879620	Published		4/28/2009		200980159483.7	CN	ANGLED COUPLING FOR OPTICAL FIBERS
82879672	Granted	ZL200980160192.X	4/30/2009	7/15/2015	200980160192.X	CN	OPTICAL APPARATUS, SYSTEM AND METHOD EMPLOYING AN ENDOHEDRAL METALLOFULLERENE
82884775	Published		5/6/2009		200980160336.1	CN	BUS-BASED SCALABLE OPTICAL FABRICS
82884861	Allowed		5/15/2009		200980160442.X	CN	A Method And Apparatus For Policy Enforcement Using A Tag
82885912	Published		6/18/2009		200980159933.2	CN	PROCESSOR TOPOLOGY SWITCHES
82891330	Granted	ZL200980159966.7	6/19/2009	42193	200980159966.7	CN	Drive Carrier With Pivoting Handle
82892224	Published		7/24/2009		200980160604.X	CN	Virtual-machine-based Application-service Provision
82892350	Allowed		6/19/2009		200980159965.2	CN	Enclosure Power Controller
82892392	Published		7/17/2009		200980160522.5	CN	Virtual Hot Inserting Functions In A Shared I/O Evironment
82901630	Granted	ZL200980161182.8	8/31/2009	42109	200980161182.8	CN	SURFACE-MOUNT TECHNOLOGY (SMT) DEVICE CONNECTOR
82901713	Published		2/26/2010		201080064656.X	CN	MIXED-FLOW DUCTED FAN
82904501	Granted	ZL200980161621.5	9/25/2009	11/5/2014	200980161621.5	CN	MAPPING NON-PREFETCHABLE STORAGE LOCATIONS INTO MEMORY MAPPED INPUT/OUTPUT SPACE
82919351	Granted	ZL200980160840.1	8/11/2009	42214	200980160840.1	CN	Online Search Base On Geography Tagged Recommendations
82922734	Allowed		7/17/2009		200980160995.5	CN	NON-PERIODIC GRATING REFLECTORS WITH FOCUSING POWER AND METHODS FOR FABRICATING THE SAME
82923467	Granted	200980160660.3	7/30/2009	3/25/2015	200980160660.3	CN	Constructing A Bayesian Network Based On Received Events Associated With Network Entities
82924268	Published		2/1/2010		201080039078.4	CN	Deep Sleep Mode Management For A Network Switch
82925923	Allowed	201180003837.6	1/27/2011	6/10/2015	201180003837.6	CN	Interface Methods And Apparatus For Memory Devices
82925997	Allowed		7/31/2009		200980160706.1	CN	PHOTONIC QUANTUM SYSTEM ALIGNMENT USING MULTIPLE BEAMS
82926252	Granted	200980160967.3	9/18/2009	12/17/2014	200980160967.3	CN	LIGHT-EMITTING DIODE INCLUDING A METAL-DIELECTRIC-METAL STRUCTURE

PATENT
REEL: 038498 FRAME: 0031

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0032

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82928809	Published		1/29/2010		201080062553.X	CN	Configuration Of Network Links In A Virtual Connection Environment
82929722	Allowed		1/27/2011		201180005519.3	CN	Memory Access Methods And Apparatus
82930494	Granted	200980161291.X	12/21/2009	41738	200980161291.X	CN	CIRCUIT SWITCHED OPTICAL INTERCONNECTION FABRIC
82930500	Granted	201080040116.8	1/6/2010	41794	201080040116.8	CN	OPTICAL INTERCONNECT
82930537	Granted	200980161441.7	9/23/2009	11/26/2014	200980161441.7	CN	OPTICAL DEVICES BASED ON DIFFRACTION GRATINGS
82931281	Granted	ZL200980160839.9	8/9/2009	3/11/2015	200980160839.9	CN	Illuminable Indicator Of Electronic Device Being Enabled Based At Least On User Presence
82931299	Published		10/29/2009		200980162191.9	CN	SWITCH THAT MONITORS FOR FINGERPRINTED PACKETS
82931327	Published		10/29/2009		200980162179.8	CN	NETWORK SWITCH CONNECTED TO A SENSOR
82931336	Granted	ZL200980162264.4	10/31/2009	41990	200980162264.4	CN	MALICIOUS CODE DETECTION
82931430	Granted	ZL201080062644.3	1/29/2010	42165	201080062644.3	CN	VERTICAL-CAVITY SURFACE-EMITTING LASERS WITH NON-PERIODIC GRATINGS
82931442	Published		3/19/2010		201080065594.4	CN	OPTICAL STAR COUPLER
82931448	Published		3/31/2010		201080065887.2	CN	WAVEGUIDE SYSTEM AND METHODS
82933737	Granted	200980162152.9	11/13/2009	41969	200980162152.9	CN	PARALLELIZED CHECK POINTING USING Mats AND THROUGH SILICON Vias (tsvs)
82933815	Allowed		10/28/2009		200980162192.3	CN	METHOD AND APPARATUS FOR VIRUS THROTTLING WITH RATE LIMITING
82934007	Published		1/11/2010		201080061152.2	CN	SYSTEM INCLUDING DRIVER CIRCUIT FOR ELECTRICAL SIGNALING AND OPTICAL SIGNALING
82934073	Allowed		1/31/2010		201080062814.8	CN	METHOD FOR MITIGATING FALSE POWERED DEVICE DETECTION
82937579	Published		3/24/2010		201080065682.4	CN	Power Capping Feedback Normalization
82938229	Granted	ZL201080066361.6	4/22/2010	42032	201080066361.6	CN	System And Method For Balancing Input Current With Parallel Power Supplies
82938252	Published		12/28/2009		200980163213.3	CN	A SYSTEM FOR PROVIDING PHYSICALLY SEPARATED COMPUTE AND I/O RESOURCES IN THE DATACENTER TO ENABLE SPACE AND POWER SAVINGS
82938277	Published		3/22/2010		201080065656.1	CN	MODULAR DATA CENTER
82938291	Allowed		12/2/2009		200980162693.1	CN	SIGNAL SENSING DEVICES AND CIRCUIT BOARDS
82939691	Granted	ZL200980162180.0	10/28/2009	41990	200980162180	CN	Method And Apparatus For Tracing A Multicast Flow
83003344	Published		11/9/2010		201080060959.4	CN	Enabling Full-Text Searching Using A Structured Data Store
83012343	Published		4/14/2010		201080066155.5	CN	Method For Keyword Extraction
83013451	Published		4/27/2010		201080066473.1	CN	Method Of Extracting Named Entity
83034258	Published		5/19/2010		201080066847.X	CN	SYSTEM AND METHOD FOR WEB PAGE SEGMENTATION USING ADAPTIVE THRESHOLD COMPUTATION
83086464	Published		2/11/2010		201080063776.8	CN	EXECUTABLE IDENTITY BASED FILE ACCESS

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83092486	Published		6/18/2010		201080067505.X	CN	Systems And Methods For Determining Electrical Connectivity
83093875	Allowed		3/30/2010		201080065880	CN	SYSTEM AND METHOD FOR OUTER JOINS ON A PARALLEL DATABASE MANAGEMENT SYSTEM
83094375	Published		5/28/2010		201080067092.5	CN	DISABLING A DISPLAY REFRESH PROCESS
83099505	Published		4/19/2010		201080066328.3	CN	NANOSCALE SWITCHING DEVICES WITH PARTIALLY OXIDIZED ELECTRODES
83108493	Published		4/9/2010		201080066078.3	CN	PROJECT CLUSTERING AND RELATIONSHIP VISUALIZATION
83111662	Allowed		6/22/2010		201080067099.7	CN	STORING DATA IN ANY OF A PLURALITY OF BUFFERS IN A MEMORY CONTROLLER
83114195	Published		4/29/2010		201080066505.8	CN	DOCUMENT REGISTRY SYSTEM
83118655	Published		5/26/2010		201080067034.2	CN	GRAPH AUTHORIZATION
83118726	Published		5/12/2010		201080066741.X	CN	METHODS, APPARATUS AND ARTICLES OF MANUFACTURE TO UPDATE VIRTUAL MACHINE TEMPLATES
83127157	Published		6/22/2010		201080067615.6	CN	A METHOD AND SYSTEM FOR DETERMINING A DEPLOYMENT OF APPLICATIONS
83131968	Published		5/20/2011		201180025924.1	CN	SECURITY THREAT DETECTION ASSOCIATED WITH SECURITY EVENTS AND AN ACTOR CATEGORY MODEL
83133018	Allowed		6/1/2010		201080067163.1	CN	MULTIPLEXED SERIAL MEDIA INDEPENDENT INTERFACE
83135097	Published		9/28/2011		201180047258.1	CN	HOST BASED WRITE ORDERING FOR ASYNCHRONOUS REPLICATION
83135701	Published		5/19/2010		201080068126.2	CN	OPTICAL INTERCONNECT FABRICS AND OPTICAL SWITCHES
83136242	Published		6/7/2010		201080067288.4	CN	MODULE AND PORT
83138140	Published		6/9/2010		201080067329.X	CN	DETERMINING SIMILARITY SCORES OF ANOMALIES
83139802	Published		6/30/2010		201080067851.8	CN	SYSTEM AND METHOD FOR COLLABORATIVE INFORMATION SERVICES
83140871	Published		6/30/2010		201080067812.8	CN	SYSTEM AND METHOD FOR A SERIALIZED DATA SERVICE
83159854	Published		9/15/2010		201080069127.9	CN	COMPUTER SYSTEM WITH FABRIC MODULES
83160154	Published		7/30/2010		201080068348.4	CN	METHOD AND SYSTEM OF CONTROLLING POWER CONSUMPTION OF AGGREGATED I/O PORTS
83161099	Published		7/26/2010		201080068233.5	CN	Mitigation Of Detected Patterns In A Network Device
83163733	Published		9/14/2010		201080069101.4	CN	COMPUTER SYSTEM FABRIC SWITCH
83166223	Published		7/22/2010		201080068198.7	CN	SQL Enumerator
83166372	Published		9/13/2010		201080069076.X	CN	POWER RAIL REGULATOR SYSTEM
83184689	Published		7/30/2010		201080069329.3	CN	INFORMATION TECHNOLOGY SERVICE MANAGMENT
83184695	Published		7/30/2010		201080069327.4	CN	SYSTEMS AND METHODS FOR CREDENTIALING
83185156	Published		8/17/2010		201080069664.3	CN	PROVIDING AUTOMATION CODE CONTAINING A REPRESENTATION OF ALTERNATIVE INTERPRETATIONS OF A USER ACTION

PATENT
REEL: 038498 FRAME: 0033

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83193691	Published		9/30/2010		201080069377.2	CN	Virtual Machines
83196410	Published		9/7/2010		201080070017.4	CN	SYSTEM AND METHOD FOR AUTOMATED DEPLOYMENT OF MULTI-COMPONENT COMPUTER ENVIRONMENT
83200404	Published		9/23/2010		201080069066.6	CN	METHODS, APPARATUS AND SYSTEMS FOR MONITORING LOCATIONS OF DATA WITHIN A NETWORK SERVICE
83208802	Published		9/10/2010		201080070096.9	CN	SYSTEM AND METHOD FOR INTERPRETING AND GENERATING INTEGRATION FLOWS
83209074	Application		10/19/2010		201080069685.5	CN	METHODS AND SYSTEMS FOR GENERATION OF AUTHORIZED VIRTUAL APPLIANCES
83210413	Published		12/1/2010		201080069759.5	CN	DISPLAYING SYSTEM PERFORMANCE INFORMATION
83210554	Published		10/29/2010		201080069909.2	CN	Software Application Recognition
83214681	Published		10/11/2010		201080069548.1	CN	SYSTEM AND METHOD FOR QUERYING A DATA STREAM
83215469	Published		9/16/2010		201080070196.1	CN	NANOSCALE SWITCHING DEVICE
83219393	Published		10/8/2010		201080070031.4	CN	OPTICAL MULTIPLEXING USING LASER ARRAYS
83222066	Published		10/27/2010		201080069855.X	CN	PATTERN DETECTION
83222073	Published		11/1/2010		201080069908.8	CN	MANAGING MAC MOVES WITH SECURE PORT GROUPS
83224720	Published		2/24/2011		201180052532.4	CN	SYSTEM AND METHOD FOR ERROR REPORTING IN A NETWORK
83225186	Granted	201080070325.7	10/8/2010	42074	201080070325.7	CN	ELECTRONIC SYSTEM HAVING FANOUT OPTICAL BUSES
83225193	Published		10/8/2010		201080070359.6	CN	OPTICAL POLARIZATION MULTIPLEXING USING LASER ARRAYS
83230336	Published		10/28/2010		201080070998.2	CN	ZONING DATA TO A VIRTUAL MACHINE
83231544	Granted	CN 103270702 B	10/27/2010	42249	201080070946.5	CN	SYSTEMS, METHODS, AND APPARATUS FOR ENABLING AUDIO TRANSMISSION WITHIN A COMMUNICATIONS SESSION
83255654	Published		2/28/2011		201180055753.7	CN	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83256522	Published		1/31/2011		201180059615.6	CN	Method and Circuit for Switching a Memristive Device in an Array
83262516	Published		12/3/2010		201080070493.6	CN	SYSTEMS AND METHODS FOR PERFORMING A NESTED JOIN OPERATION
83262533	Published		12/10/2010		201080070611.3	CN	MANAGING RECORDS DISPLAYED IN A TREE LIST
83262553	Published		1/27/2011		201180062401.4	CN	IMPORTANCE CLASS BASED DATA MANAGEMENT
83262564	Published		1/25/2011		201180060191.5	CN	ANALYTICAL DATA PROCESSING
83263999	Published		11/30/2010		201080071149.9	CN	CHANGE MESSAGE BROADCAST ERROR DETECTION
83265931	Published		2/11/2011		201180067228.7	CN	DETERMINING CHARACTERISTICS OF PARTICIPANTS IN A SOCIAL NETWORK
83265980	Published		12/11/2010		201080070646.7	CN	COMPUTER NETWORK NODE DISCOVERY
83410694	Published		1/9/2011		201180064582.4	CN	COMPUTER NETWORK NODE DISCOVERY SEQUENCING
83416911	Allowed		2/28/2011		201180068623.7	CN	A SPRING LOADED LID

PATENT
REEL: 038498 FRAME: 0034

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83421536	Published		1/20/2011		201180065035.8	CN	CHIP CARRIER SUPPORT SYSTEMS
83421811	Published		6/28/2011		201180070449.X	CN	METHOD OF ASSOCIATING A CLIENT WITH AN ACCESS POINT IN A WIRELESS LOCAL AREA NETWORK
83422018	Allowed		1/20/2011		201180064918.7	CN	COMPOSITE PROCESSORS
83422055	Published		1/31/2011		201180065763.9	CN	CABLE HARNESS SWITCHES
83422183	Published		10/11/2011		201180069576.8	CN	Network Topology Discovery
83498556	Published		3/11/2011		201180068846.3	CN	Sampling Network Traffic
83507393	Published		3/1/2012		201280011984.2	CN	METHODS AND SYSTEMS FOR FULL PATTERN MATCHING IN HARDWARE
83515788	Published		2/1/2011		201180069275.5	CN	NEGATIVE DIFFERENTIAL RESISTANCE DEVICE
83543182	Published		3/3/2011		201180068977.1	CN	TESTING INTEGRATED BUSINESS SYSTEMS
83546339	Published		2/10/2011		201180069227.6	CN	GRATING-BASED POLARIZERS AND OPTICAL ISOLATORS
83584525	Published		3/15/2011		201180069285.9	CN	USABILITY TESTING
83588858	Published		4/19/2011		201180069470.8	CN	Computing A Performance Characteristic Of A Network Device
83593350	Published		6/2/2011		201180069690	CN	NETWORK VIRTUALIZATION
83618370	Published		5/25/2011		201180071111.6	CN	BLADE COMPUTER SYSTEM
83629027	Published		6/27/2011		201180070383.4	CN	COOLING A SECONDARY COMPONENT BY DIVERTING AIRFLOW USING AN AIR CHANNEL ASSOCIATED WITH A THERMAL DISSIPATION DEVICE THAT COOLS A PRIMARY COMPONENT
83640283	Published		4/7/2011		201180069795.6	CN	METHOD AND APPARATUS FOR MOVING A SOFTWARE OBJECT
83663168	Published		4/7/2011		201180069796	CN	GRAPHICAL OBJECT CLASSIFICATION
83681476	Published		3/21/2011		201180070932.8	CN	DATA BACKUP PRIORITIZATION
83691789	Published		3/29/2011		201180070415	CN	DUAL-PLANE MEMORY ARRAY
83696810	Published		6/30/2011		201180071742.8	CN	SYSTEMS AND METHODS FOR MERGING PARTIALLY AGGREGATED QUERY RESULTS
83698837	Application		7/18/2011		201180070805.8	CN	Optical Interconnect
83699836	Published		10/31/2011		201180071254.7	CN	NETWORK ASSET INFORMATION MANAGEMENT
83700257	Application		7/25/2011		201180070824	CN	Transferring a Conference Session Between Conference Servers Due to Failure
83701556	Published		5/3/2011		201180072070.2	CN	AUTOMATIC CLASSIFICATION ADJUSTMENT OF RECORDED ACTIONS FOR AUTOMATION SCRIPT
83701888	Published		2/8/2012		201280035506.5	CN	TRANSITION BETWEEN STATES IN A PROCESSOR
83703540	Published		11/29/2013		201310629658.4	CN	Controlling Access To Communication Services
83713427	Published		5/25/2011		201180071104.6	CN	IMPLEMENTATION OF NETWORK DEVICE COMPONENTS IN NETWORK DEVICES
83714203	Published		5/31/2011		201180071281.4	CN	APPLICATION SECURITY TESTING

PATENT
REEL: 038498 FRAME: 0035

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83719054	Published		5/20/2011		201180071007.7	CN	SYSTEM AND METHOD FOR CONFIGURATION POLICY EXTRACTION
83721272	Published		6/7/2011		201180071448.7	CN	A SCALABLE MULTI-TENANT NETWORK ARCHITECTURE FOR VIRTUALIZED DATACENTERS
83731363	Published		6/14/2011		201180071613.9	CN	DEDUPLICATION IN DISTRIBUTED FILE SYSTEMS
83733017	Published		8/8/2011		201180071455.7	CN	Fabric Chip Having Trunked Links
83747172	Published		7/20/2011		201180072227.1	CN	POWER SUPPLY SYSTEM WITH DYNAMIC FILTERING
83766015	Published		10/31/2011		201180074634.6	CN	IMPLEMENTING AN ENERGY PROPORTIONAL NETWORK ARCHITECTURE FROM DESIRED NETWORK CRITERIA
83769039	Published		6/29/2011		201180071938.7	CN	Application Migration with Dynamic Operating System Containers
83769095	Published		7/11/2011		201180072229	CN	VIRTUAL MACHINE PLACEMENT
83778608	Published		6/24/2011		201180072722.2	CN	HIGH-RELIABILITY HIGH-SPEED MEMRISTOR
83778736	Published		7/1/2011		201180073208	CN	METHOD OF AND SYSTEM FOR MANAGING COMPUTING RESOURCES
83782540	Published		11/4/2011		201180072863.4	CN	Fault Processing in a System
83782563	Published		12/22/2011		201180072367.9	CN	CRYPTOGRAPHIC INFORMATION ASSOCIATION TO MEMORY REGIONS
83783388	Published		7/27/2011		201180072603.7	CN	MAINTAINING AND UTILIZING A REPORT KNOWLEDGEBASE
83783989	Published		7/12/2011		201180073393.3	CN	AUDIO SAMPLE
83784160	Published		1/31/2012		201280035799.7	CN	Access to Memory Region Including Confidential Information
83786516	Published		7/22/2011		201180073145.9	CN	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83786680	Granted	ZL201430045350.0	3/10/2014	42137	201430045350	CN	FRONT BEZEL FOR AN UNINTERRUPTIBLE POWER SYSTEMS (UPS) RACK AND TOWER
83787656	Published		8/1/2012		201280048361.2	CN	ASSET MODEL IMPORT CONNECTOR
83791151	Published		7/29/2011		201180073163.7	CN	OPTICAL POWER SPLITTERS
83793378	Published		10/25/2011		201180074418.1	CN	DRIVE CARRIER LIGHT SOURCE CONTROL
83793403	Published		9/28/2011		201180073139.3	CN	IMPLEMENTING A SWITCH FABRIC RESPONSIVE TO AN UNAVAILABLE PATH
83806236	Published		9/7/2012		201280043582	CN	VISUAL COMPONENT AND DRILL DOWN MAPPING
83807335	Published		8/3/2011		201180073607.7	CN	NITRIDE-BASED MEMRISTORS
83810404	Published		8/17/2011		201180072892	CN	TRACING DATA BLOCK OPERATIONS
83815227	Published		8/26/2011		201180073670	CN	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83817961	Published		11/18/2011		201180074933.X	CN	QUERY SUMMARY GENERATION USING ROW-COLUMN DATA STORAGE

PATENT
REEL: 038498 FRAME: 0036

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83821204	Published		8/31/2011		201180073826.5	CN	MULTIMODE FIBER FOR MODULATABLE SOURCE
83834197	Published		9/2/2011		201180074045.8	CN	APPARATUS TO STORE DATA AND METHODS TO READ MEMORY CELLS
83835837	Published		9/15/2011		201180074568.2	CN	VERTICAL-CAVITY SURFACE-EMITTING LASERS
83852047	Published		9/30/2011		201180073895.6	CN	OPTICAL POWER SPLITTER INCLUDING A ZIG-ZAG
83853741	Published		10/25/2011		201180074417.7	CN	DRIVE CARRIER TOUCH SENSING
83854677	Published		10/28/2011		201180074480	CN	Fan Impeller with Multiple Blades Shaped and Disposed to Provide High Air-Power Efficiency
83857906	Published		10/12/2011		201180074092.2	CN	SELECT DEVICE FOR CROSS POINT MEMORY STRUCTURES
83862102	Published		10/28/2011		201180074448.2	CN	METAL-INSULATOR PHASE TRANSITION FLIP-FLOP
83862738	Published		10/7/2011		201180074041.X	CN	MAPPING PERSISTENT STORAGE
83862993	Published		10/10/2011		201180075414.5	CN	METHODS AND SYSTEMS FOR IDENTIFYING ACTION FOR RESPONDING TO ANOMALY IN CLOUD COMPUTING SYSTEM
83863448	Published		1/6/2012		201280066035.4	CN	WIRELESS ACCESS POINT ASSIGNMENT
83881366	Published		10/13/2011		201280061583.8	CN	PROVISIONING A TELEPHONY NETWORK IN RESPONSE TO AN ELECTRONIC DEVICE ATTACHING TO THE NETWORK
83883365	Published		10/28/2011		201180074487.2	CN	DEVICES INCLUDING A DIAMOND LAYER
83929402	Published		10/31/2011		201180074565.9	CN	REMOTE SOFTWARE DEPOLYMENT ACROSS A NETWORK
83930195	Published		12/9/2011		201180074989.5	CN	Control of Light Wavefronts
83930292	Published		12/9/2011		201180075172.X	CN	Optical Connections
83933039	Allowed		12/23/2011		201180075198.4	CN	MANAGING A FACILITY
83933598	Published		10/31/2011		201180076142	CN	EMAIL TAGS
83946416	Published		3/8/2012		201280068650.9	CN	DATA SAMPLING DEDUPLICATION
83946482	Published		4/27/2012		201280068707.5	CN	COLLABORATIVE CACHING
83948703	Published		1/9/2012		201280060633	CN	Optical Connections
83948775	Published		1/10/2012		201280060852.9	CN	OPTICAL CONNECTORS
83948823	Published		1/12/2012		201280061237.X	CN	INTEGRATED SUB-WAVELENGTH GRATING SYSTEM
83951525	Published		1/27/2012		201280064301.X	CN	Glass-Silicon Wafer-Stacked Opto-Electronic Platforms
83952187	Published		4/30/2012		201280068621.2	CN	PREVENTING A HYBRID MEMORY MODULE FROM BEING MAPPED
83952218	Published		5/1/2012		201280072856.9	CN	PREARRANGING DATA TO COMMIT TO NON-VOLATILE MEMORY
83952372	Published		5/1/2012		201280072861.X	CN	DETERMINING SEGMENT BOUNDARIES FOR DEDUPLICATION
83952424	Published		5/1/2012		201280072821.5	CN	SEGMENT COMBINING FOR DEDUPLICATION
83959804	Published		1/31/2012		201280064638	CN	COMBINATION UNDERFILL-DAM AND ELECTRICAL-INTERCONNECT STRUCTURE FOR AN OPTO-ELECTRONIC ENGINE
83964306	Published		1/25/2012		201280068122.3	CN	STORAGE SYSTEM DEVICE MANAGEMENT

PATENT
REEL: 038498 FRAME: 0037

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0038

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83973122	Published		4/24/2012		201280068688.6	CN	Determining A Schedule For A Job To Replicate An Object Stored On A Storage Appliance
83976188	Published		1/31/2012		201280068623.1	CN	CONNECTOR DETECTION
83980642	Published		3/8/2012		201280068643.9	CN	DIAGNOSTIC MODULE
83983502	Published		4/11/2012		201280068718.3	CN	OPTICAL PLENUM
83985631	Published		2/21/2012		201280068624.6	CN	MAINTAINING SYSTEM FIRMWARE IMAGES REMOTELY USING A DISTRIBUTE FILE SYSTEM PROTOCOL
83987003	Published		2/29/2012		201280068628.4	CN	UNIDIRECTIONAL RING LASERS
83990810	Published		4/20/2012		201280068642.4	CN	Unified User Profiles
83991305	Published		3/2/2012		201280068632	CN	VERSIONED MEMORIES USING A MULTI-LEVEL CELL
83991325	Published		1/26/2012		201280068228.3	CN	IDENTIFYING A PUSH COMMUNICATION PATTERN
83991365	Published		1/30/2012		201280068483.8	CN	REDUNDANT NON-LOOPING PATHS
83991394	Published		4/25/2012		201280068731.9	CN	INTER DOMAIN LINK FOR FIBRE CHANNEL
83991422	Published		4/30/2012		201280068478.7	CN	CONVERGED FABRIC FOR FCoE
83991436	Published		4/30/2012		201280068654.7	CN	NETWORK ACCESS APPARATUS HAVING A CONTROL MODULE AND A NETWORK ACCESS MODULE
83991560	Published		4/27/2012		201280068638.8	CN	LOCAL CHECKPOINTING USING A MULTI-LEVEL CELL
83991599	Published		1/26/2012		201280068227.9	CN	IMAGE-BASED APPLICATION AUTOMATION
83991752	Published		1/31/2012		201280068701.8	CN	IDENTIFCATION OF A FAILED CODE CHANGE
83992312	Published		3/16/2012		201280068485.7	CN	VARIED MULTILAYER MEMRISTIVE DEVICE
83992336	Published		4/11/2012		201280068609.1	CN	ROUTING OPTICAL SIGNALS
83992421	Published		4/25/2012		201280068627.X	CN	ANALYZING LIGHT BY MODE INTERFERENCE
83992441	Published		4/26/2012		201280068357.2	CN	OPTICAL SLAB
83992710	Application		1/30/2013		201380071856.1	CN	ACQUIRING IDENTIFICATION OF AN APPLICATION LIFECYCLE MANAGEMENT ENTITY ASSOCIATED WITH SIMILAR CODE
83992731	Application		1/31/2013		201380072052.3	CN	DEFINING A DESIGN PLAN
83992751	Published		3/29/2012		201280068631.6	CN	A Conceptual Services Implementation Platform
83992767	Published		4/25/2012		201280068614.2	CN	FILE TRANSFER USING XML
83992819	Published		12/3/2012		201280077474.5	CN	GENERIC RESOURCE PROVIDER FOR CLOUD SERVICE
83992837	Published		4/23/2012		201280068358.7	CN	INFLUENCE SCORES FOR SOCIAL MEDIA PROFILES
83995333	Published		4/30/2012		201280068694.1	CN	BLOCK LEVEL STORAGE
83995381	Application		2/28/2013		201380071719.8	CN	AN INTERFACE FOR CREATING A PLAN ARTIFACT
83995570	Published		2/7/2012		201280068697.5	CN	TESTING A MOBILE APPLICATION
83995604	Published		4/26/2012		201280068675.9	CN	PLATFORM RUNTIME ABSTRACTION
83995621	Published		4/27/2012		201280068665.5	CN	MAPPING APPLICATION DEPENDENCIES AT RUNTIME
83995638	Published		1/31/2012		201280068674.4	CN	MEMORY MODULE BUFFER DATA STORAGE
83995667	Published		4/30/2012		201280068787.4	CN	Prioritization of continuous deployment pipeline tests
83995684	Published		1/31/2012		201280068487.6	CN	REDUCING CURRENT HARMONICS AT LIGHT LOADS
83995728	Published		3/12/2012		201280068640.5	CN	LIQUID TEMPERATURE CONTROL COOLING

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83995793	Published		3/12/2012		201280068612.3	CN	RACK COOLING SYSTEM WITH A COOLING SECTION
83995816	Published		4/20/2012		201280068099.8	CN	VOLTAGE REGULATOR CONTROL SYSTEM
83996406	Published		12/15/2014		201410776007.2	CN	FILTERING DATA FROM A DATABASE
83996448	Published		4/30/2012		201280068784	CN	CONTROL SIGNAL BASED ON A COMMAND TAPPED BY A USER
83998470	Published		2/29/2012		201280070943	CN	NETWORK SERVICE INTERFACE ANALYSIS
84000267	Published		2/29/2012		201280070933.7	CN	NETWORK SERVICE INTERFACE ANALYSIS
84017513	Published		2/29/2012		201280070916.3	CN	CONTROL OF FREQUENCY CHANNEL BETWEEN WIRELESS ACCESS POINTS ACCORDING TO SEQUENCE
84017580	Published		4/27/2012		201280072693.4	CN	HOME NETWORK PACKET DELIVERY
84019766	Published		4/27/2012		201280072683	CN	DATA CENTER SERVICE ORIENTED NETWORKING
84020528	Application		4/30/2012		201280072086.8	CN	HYBRID MOS OPTICAL MODULATOR
84022139	Published		2/22/2012		201280071766.8	CN	HIDING LOGICAL PROCESSORS FROM AN OPERATING SYSTEM ON A COMPUTER
84026916	Published		4/25/2012		201280071871.1	CN	OPEN-GAIN TRANS-IMPEDANCE AMPLIFIER WITH PROGRAMMABLE INPUT IMPEDANCE
84027718	Published		2/23/2012		201280072039.3	CN	Firmware Package to Modify Active Firmware
84037070	Published		3/8/2012		201280073034.2	CN	MODIFYING VIRTUAL MACHINE COMMUNICATIONS
84041406	Published		3/26/2012		201280072423.3	CN	TOPOLOGICAL QUERY IN MULTI-TENANCY ENVIRONMENT
84044286	Allowed		1/30/2015		201530028977.X	CN	HOT PLUG BUTTON WITH AN IDENTIFYING COLORED STRIPE
84044298	Granted	ZL201530028758.1	1/30/2015	42214	201530028758.1	CN	Eagle low-cost Small Form Factor Hard Drive Carrier – Design
84044334	Application		12/17/2014		201430532742.X	CN	SLED FOR A CARRIER
84046822	Published		3/30/2012		201280072134.3	CN	SOFTWARE DEVELOPMENT ACTIVITY
84049808	Published		3/14/2012		201280073184.3	CN	REPLACEABLE MODULAR OPTICAL CONNECTION ASSEMBLY
84049825	Published		3/14/2012		201280073000.3	CN	Allocating Bandwidth in a Network
84050561	Published		3/30/2012		201280072159.3	CN	DEFINING A PERIMETER TO MONITOR A WIRELESS DEVICE FOR A VIOLATION OF THE PERIMETER
84060942	Published		4/30/2012		201280072798.X	CN	ADDRESS TRANSLATION GASKET
84061753	Published		4/30/2012		201280072799.4	CN	PROCESSOR PROVIDING MULTIPLE SYSTEM IMAGES
84063605	Published		4/30/2012		201280072800.3	CN	CONFIGURABLE COMPUTER MEMORY
84071849	Published		4/20/2012		201280072501.X	CN	TESTING SYSTEM FOR AN INTEGRATED SOFTWARE SYSTEM
84071974	Published		6/8/2012		201280072863.9	CN	VERSION MANAGEMENT FOR APPLICATIONS
84071997	Published		6/8/2012		201280072820	CN	CLOUD APPLICATION DEPLOYMENT PORTABILITY
84072035	Published		6/28/2012		201280072822.X	CN	MEMORY MODULE WITH A DUAL-PORT BUFFER
84072851	Published		6/8/2012		201280072843.1	CN	TEST AND MANAGEMENT FOR CLOUD APPLICATIONS
84072873	Published		7/31/2012		201280072854.X	CN	Orchestrating Hybrid Cloud Services
84072887	Published		7/16/2012		201280072824.9	CN	WORKFLOW COMPILATION

PATENT
REEL: 038498 FRAME: 0039

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84072916	Published		7/24/2012		201280072857.3	CN	INITIATING A HELP FEATURE
84072990	Published		7/31/2012		201280072825.3	CN	Supporting Multi-Tenancy in a Federated Data Management System
84074281	Published		5/30/2012		201280072885.5	CN	SERVER PROFILE TEMPLATES
84075999	Published		5/29/2012		201280073227.8	CN	DEVICES INCLUDING INDEPENDENTLY CONTROLLABLE ABSORPTION REGION AND MULTIPLICATION REGION ELECTRIC FIELDS
84076048	Published		6/28/2012		201280072890.6	CN	Optical Shuffling
84076096	Published		7/25/2012		201280072708.7	CN	Avalanche Photodiodes with Defect-assisted Silicon Absorption Regions
84076168	Published		7/26/2012		201280074278.2	CN	OPTICAL ENGINE
84076297	Published		7/27/2012		201280072878.5	CN	OPTICALLY CONNECTING A CHIP PACKAGE TO AN OPTICAL CONNECTOR
84076322	Published		7/20/2012		201280072905.9	CN	MIGRATING APPLICATIONS BETWEEN NETWORKS
84076451	Published		7/30/2012		201280072807.5	CN	Detecting Defects in a Processor Socket
84077559	Published		7/30/2012		201280072819.8	CN	PROVIDING AGREEMENT INFORMATION TO ALLOW ACCESS BY A CLIENT DEVICE OF SELECTED EQUIPMENT FROM AMONG MULTIPLE EQUIPMENT
84077657	Published		5/31/2012		201280072858.8	CN	LOCAL ERROR DETECTION AND GLOBAL ERROR CORRECTION
84079480	Published		5/30/2012		201280072651	CN	FIELD SELECTION FOR PATTERN DISCOVERY
84079505	Published		7/25/2012		201280072906.3	CN	DETERMINING APPLICATION VULNERABILITIES
84079548	Published		5/31/2012		201280072795.6	CN	ESTABLISHING TRUST BETWEEN PROCESSOR AND SERVER
84079672	Published		7/30/2012		201280072842.7	CN	GENERATING AND PARTITIONING POLYNOMIALS
84080803	Published		4/30/2012		201280072801.8	CN	Determining Virtual Machine Placement
84084209	Published		4/30/2012		201280072788.6	CN	Globally managed rate-limit assignment for multi-tenant segregation using distributed rate limiters
84088594	Published		4/23/2012		201280074179.4	CN	STATISTICAL ANALYSIS USING A GRAPHICS PROCESSING UNIT
84094648	Published		12/31/2014		201280074442.X	CN	CONFIGURABLE CLOS NETWORK
84096654	Application		1/30/2015		201530028898.9	CN	ENCLOSURE
84096772	Application		12/17/2014		201430532464.8	CN	CARRIER
84103272	Published		7/31/2012		201280074945.7	CN	VIRTUAL MACHINE DATA PACKET ENCAPSULATION AND DECAPSULATION
84105883	Published		5/22/2012		201280073369.4	CN	ALTERNATING POWER SOURCES TO MANAGE INPUT POWER IN A CONVERTER
84106316	Published		6/29/2012		201280073887.6	CN	RE-VERIFICATION OF A DEVICE
84110958	Published		7/27/2012		201280074279.7	CN	DYNAMIC SENSE CIRCUITRY
84110992	Published		7/27/2012		201280074223.1	CN	STORING MEMORY WITH NEGATIVE DIFFERENTIAL RESISTANCE MATERIAL

PATENT
REEL: 038498 FRAME: 0040

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84112885	Published		7/30/2012		201280074028.9	CN	OPTICAL COUPLING SYSTEM AND METHOD FOR FABRICATING THE SAME
84113017	Published		7/30/2012		201280074218	CN	COMPACT PHOTONIC PLATFORMS
84116615	Published		6/4/2012		201280075125.X	CN	USER-DEFINED LOADING OF DATA ONTO A DATABASE
84116990	Published		6/22/2012		201280075374.9	CN	OPTIMAL ASSIGNMENT OF VIRTUAL MACHINES AND VIRTUAL DISKS USING MULTIARY TREE
84117055	Published		6/29/2012		201280074366.2	CN	Optimizing Placement of Virtual Machines
84118232	Published		6/28/2012		201280074302.2	CN	Multi-Level Cell Memory
84118360	Published		9/27/2012		201280074860.9	CN	REPLACING VIRTUAL FILE SYSTEM DATA STRUCTURES DELETED BY A FORCED UNMOUNT
84119008	Published		8/13/2012		201280075002.6	CN	TRANS-IMPEDANCE AMPLIFIERS (TIA) THERMALLY ISOLATED FROM OPTICAL MODULES
84121730	Published		7/31/2012		201280075056.2	CN	MONITORING FOR MANAGED SERVICES
84124741	Published		1/30/2013		201380062446	CN	FAILOVER IN RESPONSE TO FAILURE OF A PORT
84125963	Published		7/27/2012		201280074928.3	CN	RECORDING EXTERNAL PROCESSES
84126484	Published		7/17/2012		201280074749.X	CN	SYSTEM AND METHOD FOR OPERATING SYSTEM AGNOSTIC HARDWARE VALIDATION
84136967	Published		7/31/2012		201280075018.7	CN	NETWORK TRAFFIC PROCESSING SYSTEM
84137261	Published		10/8/2012		201280075050.5	CN	HYBRID CLOUD ENVIRONMENT
84138263	Published		7/30/2012		201280076139.3	CN	COMPILATION SYSTEM FOR EXECUTABLE OBJECTS
84138401	Published		9/27/2012		201280075001.1	CN	ALLOCATING WORKLOADS BASED ON AIR FLOW PRIORITY
84139162	Published		7/31/2012		201280075051.X	CN	CONJOINT VULNERABILITY IDENTIFIERS
84139557	Published		9/28/2012		201280075000.7	CN	PLENUMS FOR REMOVABLE MODULES
84139981	Published		7/31/2012		201280075062.8	CN	INSTRUMENTED FILE DEPLOYMENT
84140050	Published		10/31/2012		201280075007.9	CN	SIGNALING EXISTENCE OF A NETWORK NODE THAT IS IN A REDUCED-POWER MODE
84140141	Published		10/30/2012		201280075022.3	CN	SMART MEMORY BUFFERS
84140181	Published		10/26/2012		201280075016.8	CN	PROCESSING STREAMING DATA WITH OPEN EXECUTORS
84142523	Published		7/12/2012		201280075261.9	CN	PROVIDING DATA TO BE RETRIEVED
84148296	Published		8/24/2012		201280075005.X	CN	DEDICATING RESOURCES OF A NETWORK PROCESSOR
84149040	Published		7/31/2012		201280075078.9	CN	POWER EFFICIENT NETWORK WITH NETWORK CONTROLLER
84155389	Published		8/30/2012		201280075520.8	CN	GLOBAL FEATURE LIBRARY USEABLE WITH CONTINUOUS DELIVERY
84156866	Published		9/25/2012		201280076007	CN	DISPLAYING INBOX ENTITIES AS A GRID OF FACETED TILES
84158896	Published		9/13/2012		201280075693.X	CN	CONTROLLING TEMPERATURES IN OPTICAL CIRCUITS
84161930	Published		9/21/2012		201280075923.2	CN	MONITOR USABLE WITH CONTINUOUS DEPLOYMENT
84162966	Published		8/30/2012		201280076412.2	CN	ENCRYPTED DATA STORE FOR RECORDS

PATENT
REEL: 038498 FRAME: 0041

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0042

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84163272	Published		9/12/2012		201280076421.1	CN	VALIDATING A METADATA TREE USING A METADATA INTEGRITY VALIDATOR
84164182	Published		9/12/2012		201280076411.8	CN	METADATA TREE WITH KEY ROTATION INFORMATION
84164225	Published		3/18/2013		201380049704.1	CN	VISUALIZING CONDITIONS OF INFORMATION TECHNOLOGY ENVIRONMENTS
84164249	Published		9/19/2012		201280076410.3	CN	METADATA TREE OF A PATIENT WITH LOCKBOXES
84168265	Published		8/21/2012		201280076541.1	CN	CONGESTION NOTIFICATION IN A NETWORK
84174496	Published		10/22/2012		201280076140.6	CN	REFRESHING A GROUP OF MEMORY CELLS IN RESPONSE TO PRESENCE OF POTENTIAL DISTURBANCE
84179605	Published		8/31/2012		201280076174.5	CN	SELECTING A RESOURCE TO BE USED IN A DATA BACKUP OR RESTORE OPERATION
84191542	To Be Filed					CN	RDX MicroServer Module
84191736	Application		9/25/2012		201280076003.2	CN	NOTIFICATION OF ADDRESS RANGE INCLUDING NON-CORRECTABLE ERROR
84191757	Application		41495		201380050678.4	CN	QR CODE UTILIZATION IN SELF-REGISTRATION IN A NETWORK
84192570	Application		9/28/2012		201280076099.2	CN	COOLING ASSEMBLY
84192653	Application		10/8/2012		201280076291.1	CN	ROBUST HARDWARE FAULT MANAGEMENT SYSTEM, METHOD AND FRAMEWORK FOR ENTERPRISE DEVICES
84193709	Published		1/14/2013		201380055776.7	CN	NONVOLATILE MEMORY ARRAY LOGIC
84201008	Published		9/28/2012		201280077359.8	CN	System and Method for Dynamically Selecting Between Memory Error Detection and Error Correction
84202571	Published		11/12/2012		201280077014.2	CN	ASSIMILATING BUSINESS RULES
84202583	Published		11/28/2012		201280077356.4	CN	REGULATING APPLICATION TASK DEVELOPMENT
84202600	Published		11/30/2012		201280077396.9	CN	RUNNING AGENTS TO EXECUTE AUTOMATION TASKS IN CLOUD SYSTEMS
84210909	Published		1/27/2013		201380058709	CN	SOCKET STATE TRANSFER
84210926	Published		1/30/2013		201380061044.9	CN	RUNTIME BACKUP OF DATA IN A MEMORY MODULE
84217934	Published		10/31/2012		201280076766.7	CN	EXECUTING A QUERY HAVING MULTIPLE SET OPERATORS
84223928	Application		4/2/2013		201380072004.4	CN	SATA INITIATOR ADDRESSING AND STORAGE DEVICE SLICING
84224847	Application		3/29/2013		201380071699.4	CN	PERFORMANCE RULES AND STORAGE UNITS
84224869	Application		3/28/2013		201380071552.5	CN	COORDINATING REPLICATION OF DATA STORED IN A NON-VOLATILE MEMORY-BASED SYSTEM
84226530	Published		2/15/2008		201510186573.2	CN	Changing Power States Of Data-handling Devices To Meet Redundancy Criterion
84232793	Published		10/26/2012		201280078015.9	CN	Summarization of a document
84237822	Published		12/11/2012		201280077618.7	CN	Data Operation in Shift Register Ring

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84237925	Published		10/31/2012		201280078095.8	CN	CASE MANAGEMENT USING ACTIVE ENTITIES IN A SOCIAL NETWORK
84241552	Published		12/7/2012		201280077566.3	CN	NETWORK RESOURCE MANAGEMENT
84247400	Published		11/30/2012		201280077395.4	CN	MEMORY CONTROLLERS TO FORM SYMBOLS BASED ON BURSTS
84252624	Application		12/3/2012		201280078180.4	CN	CLOUD OBJECT
84252636	Published		12/3/2012		201280077480	CN	CLOUD SERVICE MANAGEMENT SYSTEM
84262623	Application		1/30/2013		201380071523.9	CN	CONTROLLING ERROR PROPAGATION DUE TO FAULT IN COMPUTING NODE OF A DISTRIBUTED COMPUTING SYSTEM
84273863	Application		7/9/2015		201380069957.5	CN	RESTORATION OF A FILE SYSTEM OBJECT FROM RAW IMAGE BACKUP DATA
84291293	Application		1/15/2013		201380070560.8	CN	Dynamic Firmware Updating
84292913	Application		1/31/2013		201380070368.9	CN	LIQUID COOLING
84292942	Application		1/31/2013		201380072022.2	CN	RAM REFRESH RATE
84292958	Application		1/31/2013		201380072019	CN	UPDATING A COMMIT LIST TO INDICATE DATA TO BE WRITTEN TO A FIRMWARE INTERFACE VARIABLE REPOSITORY
84301949	Application		3/28/2013		201380071890.9	CN	APPARATUS AND METHOD FOR STORAGE DEVICE READING
84301999	Application		3/31/2013		201380072024.1	CN	SCHEDULE FOR ACCESS TO SHARED WIRELESS MEDIUM BASED ON PROFILE DATA
84304262	Application		5/28/2013		201380071981.2	CN	MOBILE AUGMENTED REALITY FOR MANAGING ENCLOSED AREAS
84304303	Application		2/27/2013		201380072038.3	CN	Generating a social circle for a user
84304329	Application		3/15/2013		201380072025.6	CN	MAP MATCHING
84304380	Application		9/15/2015			CN	Vertically-Tiered Client-Server Architecture
84304406	Application		7/23/2015			CN	SHARED RESOURCE CONTENTION
84304449	Application		7/31/2015			CN	NON-VOLATILE MULTI-LEVEL-CELL MEMORY WITH DECOUPLED BITS FOR HIGHER PERFORMANCE AND ENERGY EFFICIENCY
84306360	Application		1/25/2013		201380071354.9	CN	BARCODE DEVICE
84306464	Application		3/15/2013		201380071558.2	CN	ENERGY BASED NETWORK RESTRUCTURING
84310694	Application		1/31/2013		201380072088.1	CN	PREDICTIVE CACHE APPARATUS AND METHOD OF CACHE PREDICTION
84312512	Application		7/31/2015		201380072013.3	CN	METHODS AND APPARATUS FOR DEBUGGING OF REMOTE SYSTEMS
84312561	Application		7/28/2015		201380071586.4	CN	REDUCING POWER FOR STORAGE DEVICES
84312581	Application		2/25/2013		201380071980.8	CN	PRESENTATION OF USER INTERFACE ELEMENTS BASED ON RULES

PATENT
REEL: 038498 FRAME: 0043

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84312938	Application		8/31/2015			CN	PROVIDING CODE CHANGE JOB SETS OF DIFFERENT SIZES TO VALIDATORS
90000079	Application		1/31/2013		201380071723.4	CN	GENERATING SOFTWARE TEST SCRIPT FROM VIDEO
90000088	Application		1/31/2013		201380071884.3	CN	PHYSICAL RESOURCE ALLOCATION
90000096	Application		2/1/2013		201380071852.3	CN	TEST SCRIPT CREATION BASED ON ABSTRACT TEST USER CONTROLS
90016074	Application		1/30/2013		201380071868.4	CN	UNIFIED CONTROL OF AN ELECTRONIC CONTROL SYSTEM AND A FACILITY CONTROL SYSTEM
90016427	Application		1/23/2013			CN	Balancing Access Point Workloads
90016633	Application		1/31/2013		201380071979.5	CN	SYNTHETIC HEALTHCARE DATA GENERATION
90016681	Application		1/31/2013		201380072047.2	CN	Linking Media Access Between Devices
90017104	Acknowledged		1/30/2013			CN	CONTROLLING A TOPOLOGY OF A NETWORK
90017128	Acknowledged		1/31/2013			CN	NETWORK SWITCH STIMULATION
90017136	Acknowledged		1/31/2013			CN	INDEXED SHAPED GRAPH CREATION
90022815	Application		8/30/2015			CN	DETERMINING TRANSFERABILITY OF A COMPUTING RESOURCE TO A CLOUD COMPUTING ENVIRONMENT
90022875	Acknowledged		2/28/2013			CN	RESOURCE REFERENCE CLASSIFICATION
90024181	Application		2/28/2013		201380074008.6	CN	RECOVERY PROGRAM USING DIAGNOSTIC RESULTS
90024605	Application		3/25/2013			CN	MEMORY DEVICE HAVING ERROR CORRECTION LOGIC
90024622	Application		3/28/2013			CN	REGULATING MEMORY ACTIVATION RATES
90028930	Acknowledged		4/3/2013			CN	Cartridge Interdependence Switch
90031113	Acknowledged		4/11/2013			CN	AUTOMATED CONTEXTUAL-BASED SOFTWARE LOCALIZATION
90031125	Acknowledged		4/30/2013			CN	DEPENDENCIES BETWEEN FEATURE FLAGS
90031137	Application		4/30/2013			CN	Coordinating Application Deployment with a Platform Tier
90037365	Application		3/12/2013		201380074555.4	CN	PROGRAMMABLE ADDRESS MAPPING AND MEMORY ACCESS OPERATIONS
90046356	Application		3/14/2013			CN	SUPPORT MEMBER
90048523	Acknowledged		4/30/2013			CN	Memory Access Rate
90049322	Application		3/26/2013			CN	TOP LOADING CARTRIDGE
90049348	Application		3/26/2013			CN	TOP LOADING CARTRIDGE
90051543	Application		3/29/2013			CN	SHARING FIRMWARE AMONG AGENTS IN A COMPUTING NODE
90052820	Acknowledged		3/15/2013			CN	CO-PROCESSOR-BASED ARRAY-ORIENTED DATABASE PROCESSING
90053553	Application		3/28/2013			CN	STORING DATA FROM CACHE LINES TO MAIN MEMORY BASED ON MEMORY ADDRESSES
90053566	Application		3/29/2013			CN	ELECTRONIC APPARATUS HAVING A COOLING APPARATUS

PATENT
REEL: 038498 FRAME: 0044

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90053627	Acknowledged		4/3/2013			CN	ZONEABLE POWER REGULATION
90055193	Acknowledged		3/13/2013			CN	MEMRISTORS WITH DOPANT-COMPENSATED SWITCHING
90056862	Acknowledged		3/15/2013			CN	MULTIBAND OPERATION OF A SINGLE WI-FI RADIO
90056896	Application		4/3/2013			CN	Managing Firmware Updates
90065892	Acknowledged		3/28/2013			CN	SHIELD FOR AN ELECTRONIC DEVICE
90068037	Acknowledged		3/28/2013			CN	Generating a Feature Set
90068065	Acknowledged		3/29/2013			CN	QUERY FEATURES AND QUESTIONS
90068090	Acknowledged		3/29/2013			CN	BATCHING TUPLES
90068543	To Be Filed					CN	Scalable Joint Recommendation of User Interest and Friendship for Big Social Media with MapReduce
90068697	Acknowledged		4/16/2013			CN	DISTRIBUTED EVENT CORRELATION SYSTEM
82274972	Granted	200910163581.X	8/28/2009	7/22/2015	200910163581.X	CN	Method for Implementing Network Resource Access Functions into Software Applications
84291352	Application		1/30/2013		201380071865	CN	Power Sequencing by Slave Power Sequencers Sharing a Command Bus
84306414	Application		2/28/2013		201380070909.8	CN	THREE-PHASE PARALLEL POWER CONVERTER LOAD ADJUSTMENT
82186439	Granted	200580015616.5	3/14/2005	6/16/2010	200580015616.5	CN	Airflow Volume Control System
82204046	Granted	200680016682.9	3/17/2006	6/23/2010	200680016682.9	CN	Cooling Fan With External Circuit Board
82207292	Granted	200780028959.4	8/1/2007	7/4/2012	200780028959.4	CN	Cooling Fan Module
82208729	Granted	200710167092.2	10/24/2007	6/6/2012	200710167092.2	CN	Computer System Having Multi-direction Blower
83218685	Published		10/12/2010		201080069596	CN	RESOURCE MANAGEMENT FOR DATA CENTERS
83209013	Allowed		11/1/2010		201080069898.8	CN	STORAGE ELEMENT READING USING RING OSCILLATOR
83974304	Published		1/31/2012		201280068687.1	CN	SINGLE AND DOUBLE CHIP SPARE
84075961	Published		7/27/2012		201280072884	CN	SYSTEMS AND METHODS FOR DETECTING A DIMM SEATING ERROR
84179370	Published		10/31/2012		201280076289.4	CN	REPAIRING A MEMORY DEVICE
82656096	Granted	ZL200880131793.3	10/30/2008	42123	200880131793.3	CN	Supply And Demand Consolidation In Employee Resource Planning
83417889	Published		1/24/2011		201180065854.2	CN	A SYSTEM AND METHOD FOR ACCESSING A SERVICE
84140100	Published		10/30/2012		201280075006.4	CN	ANALYZING DATA WITH COMPUTER VISION
82585359	Granted	ZL200980131796.1	8/4/2009	5/20/2015	200980131796.1	CN	APPARATUS, AND ASSOCIATED METHOD, FOR TRACKING AIRCRAFT STATUS
82252802	Granted	97181126.1	10/29/1997	40212	97181126.1	CN	Distributed On-line Data Communications System And Method
84226546	Published		10/26/2012		201280078014.4	CN	PRODUCT INTELLIGENCE ENGINE
82215848	Granted	200780042621.4	9/14/2007	41185	200780042621.4	CN	Apparatus And Method For Installing An Electrical Support Structure

PATENT
REEL: 038498 FRAME: 0045

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82844222	Granted	ZL200980159006.0	4/29/2009	4/9/2014	200980159006	CN	Printed Circuit Board Cooling Assembly
82938265	Published		2/26/2010		201080064762.8	CN	RESTORING STABILITY TO AN UNSTABLE BUS
83163772	Published		9/16/2010		201080069126.4	CN	Power Capping System
84095586	Application		1/30/2015		201530028861.6	CN	CABINET
84106346	Published		6/27/2012		201280073976	CN	BATTERY TO PROVIDE VOLTAGE TO POWER MODULES
82184192	Granted	200410095761.6	11/19/2004	9/23/2009	200410095761.6	CN	Printed Circuit Board Substrate And Method For Constructing Same
82240943	Granted	200810149759	9/25/2008	6/5/2013	200810149759	CN	Fifty Percent Duty Cycle Clock Divider Circuit And Method
83091097	Published		4/30/2010		201080066518.5	CN	Management Data Transfer Between Processors
83167828	Published		10/16/2010		201080069646.5	CN	DEVICE HARDWARE AGENT
83543625	Allowed		4/7/2011		201180069787.1	CN	SYSTEMS AND METHODS FOR DETERMINING A POWER PHASE AND/OR A PHASE ROTATION
82193306	Granted	200510118880.3	11/1/2005	39694	200510118880.3	CN	A Method Of Copying Data In A Storage Network (as Amended)
82573265	Granted	200880130176.1	7/2/2008	41535	200880130176.1	CN	Verification Of Remote Copies Of Data
83952263	Published		5/1/2012		201280072823.4	CN	PACKAGED MEMORY DIES THAT SHARE A CHIP SELECT LINE
84141331	Published		12/21/2012		201280076543	CN	MEMORY MODULE HAVING ERROR CORRECTION LOGIC
82181384	Granted	200510074631.9	5/24/2005	3/14/2012	200510074631.9	CN	Passing Debug Information
82200422	Granted	200610074149.X	3/21/2006	11/4/2009	200610074149.X	CN	Systems For Driving Data Over A Bus (as Amended)
82895039	Granted	ZL200980161851.1	10/7/2009	42116	200980161851.1	CN	Notification Protocol Based Endpoint Caching Of Host Memory
82934103	Published		1/29/2010		201080062651.3	CN	Methods And Systems For An Interposer Board
83962439	Published		1/6/2012		201280066072.5	CN	CONNECTOR MODULES TO OPTICALLY CONNECT TO ELECTRONIC DEVICES
83962462	Published		1/6/2012		201280066058.5	CN	CONNECTOR MODULE HAVING A MOVEABLE OPTICAL CONNECTOR
84022814	Published		4/24/2012		201280071585.5	CN	OPTICAL DATA INTERFACE WITH ELECTRICAL FORWARDED CLOCK
90016451	Application		9/24/2015			CN	Address Resolution In Software-Defined Networks
82234700	Granted	ZL200780100697.8	9/18/2007	2/12/2014	200780100697.8	CN	IDENTIFYING A SUBNET ADDRESS RANGE FROM DNS INFORMATION
82274966	Granted	ZL200910139369.X	5/13/2009	41941	200910139369.X	CN	Open Network Connections
82746392	Granted	ZL200880132584.0	12/30/2008	4/15/2015	200880132584	CN	Storing Network Flow Information

PATENT
REEL: 038498 FRAME: 0046

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82808596	Granted	ZL200980158441.1	1/29/2009	5/20/2015	200980158441.1	CN	Managing Security In A Network
82933914	Published		10/28/2009		200980162190.4	CN	Methods And Apparatus For Detection Of A Nat Device
83271695	Published		1/31/2011		201180066243.X	CN	METHODS FOR HANDLING CONFLICTS IN A MULTICAST ROUTING ELECTION
83733002	Published		8/8/2011		201180071506.6	CN	FABRIC CHIP HAVING A PORT RESOLUTION MODULE
83793434	Published		9/28/2011		201180073165.6	CN	MANAGING A SWITCH FABRIC
84077604	Published		7/31/2012		201280072889.3	CN	MANAGING AN INTERFACE BETWEEN AN APPLICATION AND A NETWORK
84184508	Published		9/27/2012		201280076093.5	CN	TRANSMIT SPECIFIC TRAFFIC ALONG BLOCKED LINK
82274036	Granted	3815507.9	6/30/2003	40198	3815507.9	CN	System and Method for Roaming Between Wireless Networks
82934003	Allowed		1/31/2010		201080062834.5	CN	METHOD AND SYSTEM FOR MANAGEMENT OF SAMPLED TRAFFIC DATA
82235639	Granted	ZL200880128811.2	4/25/2008	41717	200880128811.2	CN	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82211417	Granted	200610081960	5/12/2006	40758	200610081960	CN	Information Sharing Between A Backup Storage Device And A Management Appliance
82251935	Granted	99811086.8	7/15/1999	40338	99811086.8	CN	System And Method For Selectively Defining Access To Application Features
82238072	Granted	ZL200880127851.5	3/6/2008	1/28/2015	200880127851.5	CN	Prediction Of Systems Location Inside A Data Center By Using Correlation Coefficients
82817461	Granted	ZL200980157958.9	3/13/2009	41773	200980157958.9	CN	A PLURALITY OF SENSORS COUPLED TO A SERIES OF SWITCHING DEVICES
83164622	Published		7/20/2010		201080069169.2	CN	FORMATTING SYSTEM MONITORING INFORMATION
82241756	Published		11/13/2008		200880116980.4	CN	AUTOMATED RE-ORDERING OF COLUMNS FOR ALIGNMENT TRAP REDUCTION
83214669	Published		11/12/2010		201080070102	CN	DETERMINE AUTHORIZATION OF A SOFTWARE PRODUCT BASED ON A FIRST AND SECOND AUTHORIZATION ITEM
83108415	Published		4/7/2010		201080065906.1	CN	SYSTEM AND METHOD FOR AUTOMATED DISCOVERY OF CUSTOMER-EDGE DEVICES AND INTERFACE CONNECTIONS IN A VIRTUAL-PRIVATE-NETWORKING ENVIRONMENT
83963501	Published		1/20/2012		201280067637.1	CN	STORAGE PROVISIONING NEGOTIATION
82239074	Published		2/29/2008		200880127627.6	CN	Identification Of Elements Of Currently-executing Component Script
83498527	Published		2/18/2011		201180067784.4	CN	GENERATING TEST DATA
83543313	Published		3/8/2011		201180069103.8	CN	CREATING A TEST CASE
82578990	Granted	ZL200880129806.3	6/13/2008	3/25/2015	200880129806.3	CN	Hierarchical Policy Management

PATENT
REEL: 038498 FRAME: 0047

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84312769	Application		1/29/2013		201380071708.X	CN	ANALYZING STRUCTURE OF WEB APPLICATION
82250621	Granted	ZL201010167179.1	4/20/2010	2/12/2014	201010167179.1	CN	Policy-provisioning
83195276	Published		10/13/2010		201080069153.1	CN	CREATING A CONFIGURATION FILE TEMPLATE
82199987	Granted	200510134014.3	12/19/2005	11/16/2011	200510134014.3	CN	Service Data Organization
82229768	Published		1/29/2008		200880003497.5	CN	Service Routing For Communication Systems
82576202	Published		6/12/2009		200980122334.3	CN	Improvements In Or Relating To Communications
83271672	Published		3/30/2011		201180063108.X	CN	SYSTEMS AND METHODS FOR GENERATING A SHORTENED NOTIFICATION OF AN INCOMING CALL
83694957	Published		10/24/2011		201180071744.7	CN	PROVIDE SERVICES USING UNIFIED COMMUNICATION CONTENT
84094527	Published		8/29/2012		201280073576.X	CN	CIRCUIT-SWITCHED CALL DELIVERY
82651098	Granted	ZL200880131341.5	9/30/2008	41878	200880131341.5	CN	Authentication Of Services On A Partition
82192373	Granted	200510079206.9	3/30/2005	3/25/2009	200510079206.9	CN	Method And System Of Determining Whether A User Program Has Made A System Level Call
82195496	Granted	200510109832.8	8/4/2005	40394	200510109832.8	CN	Systems And Methods To Determine Processor Utilization
82201109	Granted	200610006879.6	1/24/2006	39995	200610006879.6	CN	METHOD AND SYSTEM OF ALIGNING EXECUTION POINT OF DUPLICATE COPIES OF A USER PROGRAM
82227584	Granted	200880016822.1	7/7/2008	6/6/2012	200880016822.1	CN	Data Packet Processing Method For A Multi Core Processor
82811447	Published		1/29/2009		200980158542.9	CN	CONNECTING PORTS OF ONE OR MORE ELECTRONIC DEVICES TO DIFFERENT SUBSETS OF NETWORKS BASED ON DIFFERENT OPERATING MODES
82853024	Published		3/25/2009		200980159504.5	CN	POWER DISTRIBUTION UNIT-DEVICE CORRELATION
81976418	Granted	2128215.3	8/2/2002	1/4/2006	2128215.3	CN	System And Method For Developing Customized Integration Tests And Network Peripheral Device Evaluations
82257863	Granted	2819445.4	7/24/2002	3/3/2010	2819445.4	CN	Block Data Storage Within A Computer Network
82239572	Published		11/8/2007		200780101491.7	CN	Navigational Ranking For Focused Crawling
83114223	Published		10/8/2010		201080067520.4	CN	DATA DEDUPLICATION
83229096	Published		10/19/2010		201080070780.7	CN	Managing Content From Structured And Unstructured Data Sources
83933534	Published		10/27/2011		201180075990.X	CN	Aligning Annotation of Fields of Documents
84208481	Published		9/30/2012		201280077404.X	CN	ELECTRONIC HEALTH RECORD SYSTEM WITH CUSTOMIZABLE COMPLIANCE POLICIES
83969744	Published		3/30/2012		201280068726.8	CN	AUTHORIZATION CACHE
84223068	Application		6/30/2015		201510384886.9	CN	MANAGEMENT OF CRYPTOGRAPHIC KEYS
84173791	Published		9/28/2012		201280076101.6	CN	LOCATION BASED ADVERTISING
82195742	Granted	200580045918.7	10/27/2005	6/20/2012	200580045918.7	CN	Methods And Systems For Controlling The Admission Of Media Content Into A Network

PATENT
REEL: 038498 FRAME: 0048

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82086050	Granted	200680013948.4	4/25/2006	8/15/2012	200680013948.4	CN	Three-dimensional Nanoscale Crossbars
82223522	Granted	200880012535.3	4/18/2008	3/27/2013	200880012535.3	CN	COMPUTATIONAL NODES AND COMPUTATIONAL-NODE NETWORKS THAT INCLUDE DYNAMICAL-NANODEVICE CONNECTIONS
82678340	Granted	200880132493.7	12/23/2008	10/29/2014	200880132493.7	CN	Memristive Device And Methods Of Making And Using The Same
83168698	Published		8/30/2010		201080068814.9	CN	MULTILAYER MEMORY ARRAY
82744686	Allowed		1/12/2009		200980154309.3	CN	Reducing Propagation Of Message Floods In Computer Networks
83034246	Published		4/30/2010		201080066517	CN	Method For Routing Data Packets In A Fat Tree Network
83928313	Published		10/31/2011		201180076141.6	CN	Reducing TCP Timeouts due to Incast Collapse at a Network Switch
84312663	Application		1/18/2013			CN	PREVENTING AN INPUT/OUTPUT BLOCKING ATTACK TO A WIRELESS ACCESS POINT
90017141	Acknowledged		1/31/2013			CN	Approximate Query Processing
90051001	Acknowledged		3/7/2013			CN	CLOUD APPLICATION BANDWIDTH MODELING
90056952	Acknowledged		3/15/2013			CN	CLOUD-BASED CONNECTIVITY
82208357	Granted	200680022355.4	6/21/2006	10/27/2010	200680022355.4	CN	Integrated Circuit Device Having Optically Coupled Layers
82227773	Granted	200880009047.7	3/21/2008	11/16/2011	200880009047.7	CN	ELECTROMAGNETIC RADIATION AMPLIFICATION SYSTEMS BASED ON PHOTONIC GRATINGS
82235141	Granted	200880128462.4	1/31/2008	1/16/2013	200880128462.4	CN	MODULAR DATA PROCESSING COMPONENTS AND SYSTEMS
82238132	Published		1/30/2008		200880126067.2	CN	OPTICAL INTERCONNECTS
82245002	Granted	200880129034.3	5/6/2008	7/4/2012	200880129034.3	CN	SYSTEM AND METHOD FOR MICRO RING LASER
82405411	Published		5/8/2008		200880130267.5	CN	Optical Polymorphic Computer Systems
82595701	Granted	ZL200880130639.4	7/31/2008	8/6/2014	200880130639.4	CN	Nano-wire Optical Block Devices For Amplifying, Modulating, And Detecting Optical Signals
82716631	Granted	ZL200880131815.6	10/31/2008	8/26/2015	200880131815.6	CN	Variably Configurable Computer Buses
82716697	Published		10/31/2008		200880131799	CN	Optical Connector Interconnection System And Method
82790073	Granted	200980157954	1/9/2009	4/16/2014	200980157954	CN	OPTICAL ENGINE FOR POINT-TO-POINT COMMUNICATIONS
82805241	Granted	200980155868.6	1/30/2009	2/11/2015	200980155868.6	CN	PLASMONIC LIGHT EMITTING DIODE
82925991	Allowed		7/31/2009		200980160709.5	CN	BEAM DIRECTION SENSOR
82930479	Allowed		10/29/2009		200980161185.1	CN	OPTICAL DATA BUS AND METHOD
83566562	Published		9/17/2013		201310422439.9	CN	Optical Broadcast With Buses With Shared Optical Interfaces
83835747	Allowed		9/6/2011		201180074113	CN	MECHANICALLY ALIGNED OPTICAL ENGINE
83858300	Published		10/21/2011		201180074221.8	CN	GRATING COUPLERS WITH DEEP-GROOVE NON-UNIFORM GRATINGS

PATENT
REEL: 038498 FRAME: 0049

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83959940	Published		1/31/2012		201280065498.9	CN	APPARATUS FOR USE IN OPTOELECTRONICS
84112918	Published		7/30/2012		201280074270.6	CN	OPTICAL WAVEGUIDE
90041300	Application		9/14/2015		201380074633	CN	BACKLIGHT HAVING COLLIMATING REFLECTOR
90041320	Application		9/28/2015			CN	MODE CONVERSION FOR OPTICAL ISOLATION
84185029	Published		9/14/2012		201280076386.3	CN	DETERMINING A LOAD DISTRIBUTION FOR DATA UNITS AT A PACKET INSPECTION DEVICE
83738412	Published		7/29/2011		201180072676.6	CN	SYSTEMS AND METHODS FOR DISTRIBUTED RULE-BASED CORRELATION OF EVENTS
83789813	Published		8/24/2012		201280041621.3	CN	MULTIDIMENSION CLUSTERS FOR DATA PARTITIONING
83793354	Published		1/26/2012		201280068235.3	CN	CLUSTERING EVENT DATA BY MULTIPLE TIME DIMENSIONS
83927125	Published		12/20/2011		201180074636.5	CN	DISTRIBUTED EVENT PROCESSING
84141288	Published		7/31/2012		201280074998.9	CN	Pattern Consolidation To Identify Malicious Activity
90043610	Application		3/11/2013		201380074551.6	CN	EVENT CORRELATION BASED ON CONFIDENCE FACTOR
82191371	Granted	200510022801.9	12/5/2005	6/10/2009	200510022801.9	CN	Persistent Memory Manipulation Using EFI
83965894	Published		1/30/2012		201280068475.3	CN	BOOTING A SERVER USING A REMOTE READ-ONLY MEMORY IMAGE
84291332	Application		1/29/2013		201380071515.4	CN	ASSIGNING PROCESSORS TO MEMORY MAPPED CONFIGURATION
90051522	Application		3/28/2013			CN	IDENTIFYING MEMORY OF A BLADE DEVICE FOR USE BY AN OPERATING SYSTEM OF A PARTITION INCLUDING THE BLADE DEVICE
84160120	Published		8/16/2013		201380045398.4	CN	NETWORK SYSTEM FOR IMPLEMENTING A CLOUD PLATFORM
82241006	Granted	200880129258.4	4/1/2008	10/9/2013	200880129258.4	CN	Management Of A 3D Package And Cooling System
82242506	Granted	ZL200880117051.5	9/19/2008	9/24/2014	200880117051.5	CN	Generating A Parallel Recovery Plan For A Data Storage System
82243127	Published		4/10/2008		200880129741.2	CN	Virtual Machine Migration According To Environmental Data
82245626	Granted	ZL200880130148.X	4/30/2008	1/14/2015	200880130148.X	CN	Intentionally Skewed Optical Clock Signal Distribution
82692031	Granted	ZL200880131782.5	10/31/2008	7/15/2015	200880131782.5	CN	Prioritized Optical Arbitration Systems And Methods
82756442	Published		7/29/2011		201110215012.2	CN	Detect Repeat Pattern On Web Page
82925882	Granted	ZL200980161282.0	12/10/2009	2/11/2015	200980161282	CN	Fair Token Arbitration Systems And Methods
82929792	Published		3/7/2011		201180013079.6	CN	DATA STORAGE APPARATUS AND METHODS
83769023	Published		7/27/2011		201180072605.6	CN	Efficient Data-Storage Devices that Include Memory Elements Characterized by Potentially Large Switching Latencies

PATENT
REEL: 038498 FRAME: 0050

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83854725	Published		10/27/2011		201180074415.8	CN	SHIFTABLE MEMORY SUPPORTING IN-MEMORY DATA STRUCTURES
83881924	Published		10/28/2011		201180074489.1	CN	ROW SHIFTING SHIFTABLE MEMORY
84223655	Application		6/30/2015			CN	MANAGING AIRFLOW DISTRIBUTION THROUGH ADAPTIVE VENT TILES
82936590	Granted	ZL200980161810.2	10/5/2009	4/22/2015	200980161810.2	CN	Adjusting A Transducer Head For Transferring Data
83818503	Published		11/16/2011		201180074262.7	CN	Operation of Tape Drives
82554424	Granted	200880129898.5	6/20/2008	3/27/2013	200880129898.5	CN	DOMAIN MANAGEMENT PROCESSOR
83166319	Application		7/26/2010		201080068252.8	CN	A System Including A Module
83199226	Published		6/19/2008		201310087375.1	CN	Multi-blade Interconnector
83784234	Published		2/25/2007		201410087641.5	CN	Automated Cable Identification And Verification System
83984196	Published		1/6/2012		201280066228.X	CN	CONNECTOR MODULES HAVING OPTICAL CONNECTORS MOVEABLE BETWEEN A RETRACTED POSITION AND AN EXTENDED POSITION
84044322	Allowed		12/17/2014		201430532954.8	CN	HANDLE FOR A CARRIER
84080529	Published		7/31/2012		201280072879.X	CN	RECEIVING INPUT POWER MEASUREMENTS TO MANAGE A RECTIFIER
84096762	Application		12/17/2014		201430532851.1	CN	HANDLE FOR A CARRIER
84245415	Published		11/19/2012		201280077154	CN	ELECTRICAL CONNECTORS FOR POWER SUPPLIES
90056880	Application		4/3/2013			CN	Disabling Counterfeit Cartridges
82175879	Granted	200510088233.2	7/29/2005	1/19/2011	200510088233.2	CN	Crossbar Switch Debugging
82199852	Granted	ZL200610006424.4	1/20/2006	10/29/2014	200610006424.4	CN	Systems And Methods For Maintaining Performance
82240625	Granted	200880129081.8	5/8/2008	4/30/2014	200880129081.8	CN	A Method For Interfacing A Fibre Channel Network With An Ethernet Based Network
82893476	Published		7/31/2009		200980160725.4	CN	Controlling A Virtual Machine
83092462	Published		12/16/2010		201080070696.5	CN	A DETACHABLE LID
82201358	Granted	200510118886	11/1/2005	8/5/2009	200510118886	CN	Recovery Operations In Storage Networks
82938216	Published		1/26/2010		201080062455.6	CN	Heat Sink With Multiple Vapor Chambers
83873820	Published		10/25/2011		201180074439.3	CN	DRIVE CARRIER SUBSTRATE
84141193	Published		12/19/2012		201280076488.5	CN	NVRAM PATH SELECTION
84215531	Application		3/28/2013		201380071543.6	CN	ADDRESS RANGE TRANSFER FROM FIRST NODE TO SECOND NODE
82241438	Granted	ZL200880126999.7	2/18/2008	2/11/2015	200880126999.7	CN	Systems And Methods Of Communicatively Coupling A Host Computing Device And A Peripheral Device
84057409	Published		4/25/2012		201280072656.3	CN	ELECTRICAL/OPTICAL CONNECTOR
84073439	Published		4/30/2012		201280072767.4	CN	FEEDBACK-BASED TRANS-IMPEDANCE AMPLIFIER WITH PROGRAMMABLE INPUT IMPEDANCE
84073516	Published		4/30/2012		201280072791.8	CN	OPTICAL BASE LAYER

PATENT
REEL: 038498 FRAME: 0051

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83507638	Published		3/15/2011		201180068900.4	CN	Network Switching Device for Quantifying Available Service-Level Capacity of a Network For Projected Network Traffic
82206164	Granted	200680037426.8	8/7/2006	5/11/2011	200680037426.8	CN	Method For Reducing The Inductance In Series With A Decoupling Capacitor For A BGA Chip And Corresponding Assembly (as Amended By ISA)
82273712	Granted	2812705.6	5/16/2002	4/8/2009	2812705.6	CN	AUTHENTICATION METHOD
82772042	Granted	ZL200980155748.6	1/29/2009	7/15/2015	200980155748.6	CN	Loading A Plurality Of Appliances Into A Blade
83991378	Published		1/31/2012		201280068645.8	CN	DETERMINATION OF SPOOFING OF A UNIQUE MACHINE IDENTIFIER
84017558	Published		3/26/2012		201280071318.8	CN	FRAME PASSING BASED ON ETHERTYPE
84084087	Published		4/26/2012		201280072732	CN	MULTICAST ROUTER TOPOLOGY DISCOVERY
84168246	Published		8/21/2012		201280076542.6	CN	CONGESTION NOTIFICATION IN A NETWORK
90017158	Acknowledged		1/31/2013			CN	NETWORK CONTROLLER PROVISIONED MACSEC KEYS
90056986	Acknowledged		6/14/2013			CN	LOOP-FREE HYBRID NETWORK
82274213	Granted	200480010746.5	4/20/2004	4/28/2010	200480010746.5	CN	Modular RF Antenna and Filter System for Dual Radio WLAN Access Points
83863415	Application		12/20/2011		201180076406.2	CN	WIRELESS ACCESS POINT ALTERNATE SETTINGS
83972798	Published		2/2/2012		201280068663.6	CN	SYSTEMS AND METHODS FOR DATA CHUNK DEDUPLICATION
82585290	Published		10/12/2009		200980140622.1	CN	SYSTEMS AND PROCESSES FOR SECURING SENSITIVE INFORMATION
82891309	Granted	ZL200980160667.5	7/29/2009	8/26/2015	200980160667.5	CN	INTERFACING CLIMATE CONTROLLERS AND COOLING DEVICES
84141276	Published		1/21/2013		201380060903.2	CN	PALLETIZED LOAD REACTANT REGULATION HEATING
84141153	Published		10/31/2012		201280074957.X	CN	CATALOGING BACKUP DATA
84156155	Published		8/29/2012		201280075523.1	CN	Querying Structured And Unstructured Databases
82243433	Published		10/30/2009		200910253086.8	CN	Federated Configuration Data Management
82676582	Allowed		10/15/2008		200880132346.X	CN	Retrieving Configuration Records From A Configuration Management Database
83217746	Published		10/27/2010		201080069852.6	CN	SYSTEMS AND METHODS FOR SCHEDULING CHANGES
83800106	Published		8/31/2011		201180073181.5	CN	PROVIDING APPLICATION CONTEXT FOR A CONVERSATION
82821365	Granted	ZL200980160737.7	6/1/2009	8/6/2014	200980160737.7	CN	System And Method For Collecting Application Performance Data
83141954	Published		6/30/2010		201080068862.8	CN	Tracking A Server Request
83681552	Published		3/30/2011		201180069897.8	CN	TIME FRAME BASED DATA ANALYSIS
83816156	Published		9/21/2011		201180073608.1	CN	AUTOMATED DETECTION OF A SYSTEM ANOMALY
84014750	Published		6/29/2012		201280074365.8	CN	RULE-BASED AUTOMATED TEST DATA GENERATION
84117615	Published		6/29/2012		201280074374.7	CN	PERSONALIZING SHARED COLLABORATION CONTENT

PATENT
REEL: 038498 FRAME: 0052

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84237629	Published		11/28/2012		201280077358.3	CN	DETERMINING AT LEAST ONE COST FACTOR ASSOCIATED WITH USING THE CLOUD TO PROVIDE AN APPLICATION COMPONENT
84274031	Application		12/4/2012		201280078191.2	CN	Displaying Information Technology Conditions with Heat Maps
84312969	Application		4/3/2013			CN	EXPLORATION MAPS FOR VISUALIZING SOFTWARE PRODUCT KNOWLEDGE
82926128	Published		11/23/2009		200980162565.7	CN	System And Method For Object Identification In A User Interface
83108509	Published		4/10/2010		201080066099.5	CN	INJECTION OF DATA INTO A SOFTWARE APPLICATION
83681489	Published		5/6/2011		201180070362.2	CN	IMAGE-BASED AUTOMATION SYSTEMS AND METHODS
83991693	Published		1/26/2012		201280068226.4	CN	IMAGE-BASED APPLICATION AUTOMATION
83992629	Published		1/31/2012		201280068686.7	CN	CONTINUOUS DEPLOYMENT OF CODE CHANGES
84139610	Published		10/31/2012		201280074806.4	CN	EXECUTABLE SOFTWARE SPECIFICATION GENERATION
90001171	Application		2/27/2013		201380073928.6	CN	DETERMINING EVENT AND INPUT COVERAGE METRICS FOR A GRAPHICAL USER INTERFACE CONTROL INSTANCE
83721317	Published		5/31/2011		201180071246.2	CN	AUTOMATED SECURITY TESTING
84079530	Published		7/26/2012		201280072883.6	CN	APPLICATION SECURITY TESTING
82790814	Granted	ZL200980158275.5	1/23/2009	8/5/2015	200980158275.5	CN	Verifying Virtual Machines
83139747	Published		6/21/2010		201080068695.7	CN	SYSTEM FOR TESTING AND CERTIFYING A VIRTUAL APPLIANCE ON A CUSTOMER COMPUTER SYSTEM
83140165	Published		6/30/2010		201080067844.8	CN	SYSTEM AND METHOD FOR SELF-SERVICE CONFIGURATION OF AUTHORIZATION
83141928	Published		6/30/2010		201080068865.1	CN	SYSTEM AND METHOD FOR SERVICE RECOMMENDATION SERVICE
83991730	Published		1/29/2012		201280068389.2	CN	BEST-DEAL LIST GENERATION
83992798	Published		12/3/2012		201280077489.1	CN	BINDING OF APPLICATION AND INFRASTRUCTURE BLUEPRINTS
84118574	Published		7/3/2012		201280074449.1	CN	MANAGING A CLOUD SERVICE
84118660	Published		7/3/2012		201280074453.8	CN	MANAGING A MULTITENANT CLOUD SERVICE
84123194	Published		7/31/2012		201280075054.3	CN	ABSTRACTION MODELS FOR MONITORING OF CLOUD RESOURCES
84198279	Published		11/23/2012		201280076132.1	CN	Dynamic Management Of A Cloud Computing Infrastructure
90031032	Application		3/15/2013			CN	Sending Encrypted Data to a Service Provider
82181060	Granted	200510082264.7	6/30/2005	7/4/2012	200510082264.7	CN	Telecommunications System And Method For Forwarding Messages Based Upon Subscriber Identification Information
82242431	Published		1/24/2009		200910126750.2	CN	Method And System For Accessing Applications

PATENT
REEL: 038498 FRAME: 0053

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82249862	Published		4/28/2010		201010171580.2	CN	Packet Routing Method, Proxy Server And Apparatus
84077681	Published		7/31/2012		201280072897.8	CN	GENERATING SERVICE REQUEST MESSAGE TO OBTAIN WIRELESS SERVICES USING A MINIMAL SET OF SERVICES THAT ARE DESIGNATED BY DEFAULT FOR A ROAMING CONDITION
82208786	Granted	200610088634.2	3/21/2006	3/24/2010	200610088634.2	CN	Method And Apparatus For Direct Imput And Output In A Virtual Machine Environment
82214465	Published		12/11/2007		200780047149.3	CN	Computer System And Method Of Control Thereof
82216022	Granted	200710112166.2	6/19/2007	12/22/2010	200710112166.2	CN	Discovering Software Code Subject To Licenses
82237943	Granted	200810173958.5	10/31/2008	3/27/2013	200810173958.5	CN	Dynamic Allocation Of Virtual Machine Device
84060077	Published		4/27/2012		201280072701.5	CN	SHIELDING A MEMORY DEVICE
84269700	Application		1/31/2013		201380072012.9	CN	Mapping Mechanism for Large Shared Address Spaces
90028914	Acknowledged		4/2/2013			CN	STATE-RETAINING LOGIC CELL
82656084	Published		10/28/2008		200880132542.7	CN	WORKFORCE PLANNING
83053673	Published		5/11/2010		201080065957.4	CN	Software Application Testing
83229090	Published		10/14/2010		201080070687.6	CN	CONTINUOUS QUERYING OF A DATA STREAM
83566616	Published		3/1/2011		201180070347.8	CN	Pattern Recognition
84088670	Published		4/30/2012		201280074178.X	CN	NOTIFICATION BASED ON AN EVENT IDENTIFIED FROM VIBRATION DATA
83776053	Published		7/29/2011		201180072675.1	CN	CREDENTIAL VALIDATION
84196696	Published		9/28/2012		201280077350.7	CN	APPLICATION RANDOMIZATION
82201544	Granted	200680013546.4	4/19/2006	3/28/2012	200680013546.4	CN	Multiplexer Interface To A Nanoscale-crossbar
82214714	Granted	200780038466.9	10/16/2007	7/25/2012	200780038466.9	CN	CROSSBAR-MEMORY SYSTEMS WITH NANOWIRE CROSSBAR JUNCTIONS
82218833	Granted	200780003630.2	1/26/2007	4/4/2012	200780003630.2	CN	Mixed-scale Electronic Interface
82226327	Granted	200780044725.9	10/3/2007	2/27/2013	200780044725.9	CN	Electrically Actuated Switch
82244558	Granted	200880119663.8	5/22/2008	11/21/2012	200880119663.8	CN	HYBRID MICROSCALE-NANOSCALE NEUROMORPHIC INTEGRATED CIRCUIT
82678331	Granted	ZL200880132544.6	10/29/2008	6/4/2014	200880132544.6	CN	Electrically Actuated Device And Method Of Controlling The Formation Of Dopants Therein
82918780	Granted	ZL200980161379.1	7/10/2009	7/15/2015	200980161379.1	CN	MEMRISTIVE JUNCTION WITH INTRINSIC RECTIFIER
82924253	Granted	ZL200980160656.7	9/4/2009	7/15/2015	200980160656.7	CN	MEMRISTORS BASED ON MIXED-METAL-VALENCE COMPOUNDS
83863037	Published		11/4/2011		201180074578.6	CN	DECODER CIRCUITS HAVING METAL-INSULATOR-METAL THRESHOLD SWITCHES
83933004	Published		12/12/2011		201180075205	CN	MEMRISTORS AND METHODS OF FABRICATION
84193759	Published		1/18/2013		201380056770.1	CN	INTERCONNECTION ARCHITECTURE FOR MULTILAYER CIRCUITS

PATENT
REEL: 038498 FRAME: 0054

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82190990	Granted	200580009708.2	1/28/2005	6/20/2012	200580009708.2	CN	Selecting Nodes Close To Another Node In A Network Using Location Information For The Nodes
82225388	Granted	200710306845.3	10/26/2007	7/4/2012	200710306845.3	CN	Computer System With Network Interface Retransmit
84103151	Published		6/15/2012		201280073966.7	CN	COMMUNICATING DATA ASSOCIATED WITH DIFFERENT PERSONAS OF A USER
84103234	Published		7/31/2012		201280074280.X	CN	BANDWIDTH GUARANTEE AND WORK CONSERVATION
82181501	Granted	200580024861.2	6/28/2005	1/18/2012	200580024861.2	CN	Nonlinear Electromagnetic Quantum Information Processing
82198421	Granted	200580046906.6	11/18/2005	8/3/2011	200580046906.6	CN	Composite Material With Controllable Resonant Cells
82230635	Granted	200780023308.6	4/20/2007	7/11/2012	200780023308.6	CN	Self-authenticating Quantum Random Bit Generators
82232504	Granted	200880109804.8	7/30/2008	4/3/2013	200880109804.8	CN	System And Methods For Routing Optical Signals
82233443	Granted	ZL200880120896.X	10/15/2008	8/20/2014	200880120896.X	CN	OPTICAL INTERCONNECT SYSTEM PROVIDING COMMUNICATION BETWEEN COMPUTER SYSTEM COMPONENTS
82234943	Granted	200880100998.5	7/30/2008	7/13/2011	200880100998.5	CN	MICRORESONATOR SYSTEM AND METHODS OF FABRICATING THE SAME
82235006	Granted	200880112838.2	10/23/2008	7/25/2012	200880112838.2	CN	Three-dimensional Die Stacks With Inter-device And Intra-device Optical Interconnect
82235255	Granted	200880100629.6	7/16/2008	5/30/2012	200880100629.6	CN	Plasmon-enhanced Electromagnetic-radiation-emitting Devices And Methods For Fabricating The Same
82240121	Granted	200880112836.3	10/23/2008	12/11/2013	200880112836.3	CN	Three-dimensional Memory Module Architectures
82243748	Granted	200880129039.6	5/5/2008	11/28/2012	200880129039.6	CN	NANOWIRE-BASED PHOTODIODE
82774435	Granted	ZL200980153982.5	1/7/2009	7/8/2015	200980153982.5	CN	PHOTONIC WAVEGUIDE
82829672	Allowed		2/23/2009		200980158276.X	CN	DYNAMIC IMPEDANCE PHOTODETECTOR RECEIVER CIRCUIT
82931415	Granted	201080062576	1/29/2010	12/10/2014	201080062576	CN	MULTIMODE VERTICAL-CAVITY SURFACE-EMITTING LASER ARRAYS
83699777	Published		4/20/2011		201180071008.1	CN	SUB-WAVELENGTH GRATING-BASED OPTICAL ELEMENTS
83706043	Published		4/20/2011		201180071510.2	CN	LIGHT-DETECTION SYSTEMS
83932068	Published		12/9/2011		201180075153.7	CN	Optical Connections
83951464	Published		1/18/2012		201280062546.9	CN	HIGH DENSITY LASER OPTICS
83992360	Published		4/18/2012		201280068517.3	CN	FLEXIBLE CIRCUIT CABLE WITH FLOATING CONTACT
84068278	Published		4/16/2012		201280072422.9	CN	INTEGRATED OPTICAL SUB-ASSEMBLY
90022754	Application		8/31/2015			CN	RADIX ENHANCEMENT FOR PHOTONIC PACKET SWITCH
90041277	Application		9/14/2015			CN	COUPLED RING RESONATOR SYSTEM
83131984	Published		6/10/2011		201180028615.X	CN	QUERY PIPELINE
83137580	Published		6/1/2011		201180037823.6	CN	Dynamic Multidimensional Schemas for Event Monitoring
83682156	Published		4/29/2011		201180070497.9	CN	SYSTEMS AND METHODS FOR IN-MEMORY PROCESSING OF EVENTS

PATENT
REEL: 038498 FRAME: 0055

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84077641	Published		7/20/2012		201280072874.7	CN	POLICY-BASED SCALING OF NETWORK RESOURCES
83194912	Published		8/15/2011		201180045409.X	CN	STORING ELECTRONIC CONTENT WITH TIME-VARYING PROPERTIES
82223396	Granted	ZL200780033921.6	7/11/2007	12/26/2012	200780033921.6	CN	DEFECT-AND-FAILURE-TOLERANT DEMULTIPLEXER USING SERIES REPLICATION AND ERROR-CONTROL ENCODING
82239563	Granted	200780101492.1	11/8/2007	10/30/2013	200780101492.1	CN	URL And Anchor Text Analysis For Focused Crawling
82242308	Granted	200880129356.8	5/16/2008	4/23/2014	200880129356.8	CN	Provisioning A Geographical Image For Retrieval
83168801	Published		8/20/2010		201080068671.1	CN	SYSTEMS AND METHODS FOR FILTERING WEB PAGE CONTENTS
83988384	Published		4/25/2012		201280068619.5	CN	NETWORK MANAGEMENT
84077698	Published		6/8/2012		201280072796	CN	CHECKPOINTING USING FPGA
84137057	Published		7/31/2012		201280075064.7	CN	SYSTEMS AND METHODS FOR CONTROLLING ACCESS TO A SHARED DATA STRUCTURE WITH READER-WRITER LOCKS USING MULTIPLE SUB-LOCKS
84217901	Published		10/19/2012		201280077870.8	CN	ASYNCRHONOUS CONSISTENT SNAPSHOTS IN PERSISTENT MEMORY STORES
84301124	Application		1/31/2013		201380072045.3	CN	ADAPTIVE -RANULARITY ROW BUFFER CACHE
84304370	Application		1/9/2013		201380074429.9	CN	Characterizing Risks in Resource Distribution Systems
84306265	Application		3/20/2013		201380072040	CN	CACHING DATA IN A MEMORY SYSTEM HAVING MEMORY NODES AT DIFFERENT HIERARCHICAL LEVELS
90052801	Acknowledged		3/14/2013			CN	MULTIVERSIONED NONVOLATILE MEMORY HIERARCHY FOR PERSISTENT MEMORY
82817495	Granted	ZL200980157496.0	2/24/2009	1/7/2015	200980157496	CN	Method And System To Lower Power Consumption
82235315	Granted	200880126791.5	2/15/2008	1/8/2014	200880126791.5	CN	Coolant Pulsing For Computer System
83854693	Published		10/26/2011		201180074454.8	CN	Device for Cooling an Electronic Component in a Data Center
84299272	Application		4/29/2013		201380071717.9	CN	RECORDING UNSTRUCTURED EVENTS IN CONTEXT
84274114	Application		6/30/2015		201380069466	CN	SYSTEMS AND METHODS FOR PREDICTIVE POWER MANAGEMENT IN A COMPUTING CENTER
84126783	Published		1/31/2013		201380062402.8	CN	MAGNETIC TAPE PROCESSING
82237994	Granted	2823231.3	9/20/2002	39239	2823231.3	CN	SYSTEM AND METHOD FOR IMPLEMENTING JOURNALING IN A MULTI-NODE ENVIRONMENT
83137886	Published		7/12/2010		201080067873.4	CN	FLEXIBLE DATA CENTER AND METHODS FOR DEPLOYMENT
84159541	Published		1/31/2013		201380062405.1	CN	CONTROLLED HEAT DELIVERY
82554395	Granted	200880129900.9	6/20/2008	41479	200880129900.9	CN	LOW LEVEL INITIALIZER
82855508	Published		6/19/2009		200980159964.8	CN	Pivoting Mounts For Media Drives
82904513	Published		7/31/2009		200980160722	CN	PROVIDING FAULT-TOLERANT SPREAD SPECTRUM CLOCK SIGNALS IN A SYSTEM

PATENT
REEL: 038498 FRAME: 0056

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82922581	Published		8/25/2009		200980161106.7	CN	Error Correcting
83693677	Published		6/30/2011		201180071656.7	CN	A MEMORY MODULE THAT INCLUDES A MEMORY MODULE COPY ENGINE FOR COPYING DATA FROM AN ACTIVE MEMORY DIE TO A SPARE MEMORY DIE
84044310	Application		1/30/2015		201530028935.6	CN	Eagle 2U storage Node - Design
84191572	Allowed		5/28/2015		201530167367.8	CN	ROUTER
84192674	Published		10/31/2012		201280076631	CN	MODULAR RACK SYSTEM
84275141	Application		12/19/2012		201280077899.6	CN	HEAT REMOVAL ASSEMBLY
90049363	Application		3/26/2013			CN	TOP LOADING CARTRIDGE
82243676	Granted	ZL200880128768.X	4/23/2008	3/5/2014	200880128768.X	CN	A Method And System For Forcing One Or More Power States On A Display
82895030	Granted	ZL200980160899.0	8/11/2009	42158	200980160899	CN	Enclosure Airflow Controller
83120657	Published		5/28/2010		201080067095.9	CN	INITIALIZING A MEMORY SUBSYSTEM OF A MANAGEMENT CONTROLLER
90016519	Application		3/21/2013		201380074014.1	CN	USING A NETWORK SWITCH TO CONTROL A VIRTUAL LOCAL NETWORK IDENTITY ASSOCIATION
82258037	Granted	ZL200980105859.6	2/20/2009	41500	200980105859.6	CN	Method And System For Implementing A Virtual Storage Pool In A Virtual Environment
84140875	Published		9/6/2012		201280075248.3	CN	Scalable File System
84215519	Application		3/28/2013		201380071540.2	CN	DATA FLUSH OF GROUP TABLE
82241552	Granted	ZL200880128265.2	3/25/2008	41507	200880128265.2	CN	System And Method For Transforming PCIE SR-IOV Functions To Appear As Legacy Functions
82559516	Published		6/1/2008		200880130649.8	CN	Queue Sharing And Reconfiguration In PCI Express Links
82671982	Granted	ZL200880132801.6	12/15/2008	41822	200880132801.6	CN	Detecting An Unreliable Link In A Computer System
82892365	Allowed		7/15/2009		200980160437.9	CN	Shared Video Management Subsystem
83980595	Published		2/24/2012		201280068698	CN	OPTICAL BLIND-MATE CONNECTOR
84106328	Published		6/29/2012		201280074027.4	CN	GENERATION OF ACCESS POINT CONFIGURATION CHANGE BASED ON A GENERATED COVERAGE MONITOR
84126202	Published		7/9/2012		201280074610.5	CN	SITE MODEL SELECTION FOR A WIRELESS ACCESS POINT
82274954	Granted	ZL200910146274.0	6/26/2009	1/28/2015	200910146274	CN	Method for Implementing Distributed Voice Functions Into Software Applications
82715723	Granted	ZL200880131788.2	10/31/2008	41745	200880131788.2	CN	Method And Apparatus For Network Intrusion Detection
82866139	Published		5/19/2009		200980159202.8	CN	Network Traffic Rate Limiting System And Method
83425382	Published		2/10/2011		201180069365.4	CN	SYSTEMS, METHODS, AND APPARATUS TO AUTHENTICATE COMMUNICATIONS MODULES
83425451	Published		2/18/2011		201180067359.5	CN	METHODS FOR CONTROLLING ELECTIONS IN A MULTICAST NETWORK

PATENT
REEL: 038498 FRAME: 0057

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84077509	Published		7/30/2012		201280072891	CN	PROVIDER BRIDGED NETWORK COMMUNICATION
83991352	Published		1/27/2012		201280068085.6	CN	INTELLIGENT EDGE DEVICE
82233311	Application		10/25/2007		200780101501.7	CN	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
84215505	Application		4/30/2013		201380072014.8	CN	GROUPING CHUNKS OF DATA INTO A COMPRESSION REGION
82257473	Granted	200880116701.4	6/27/2008	6/3/2015	200880116701.4	CN	APPARATUS, AND AN ASSOCIATED METHODOLOGY, FOR FACILITATING AUTHENTICATION USING A DIGITAL MUSIC AUTHENTICATION TOKEN
82900878	Granted	ZL200980160602.0	7/31/2009	41801	200980160602	CN	COMMISSIONING OF SENSORS
83119180	Allowed		5/20/2010		201080066686.4	CN	DATA CENTER COOLING
82104953	Granted	100416559	3/15/2004	39694	200410030467.7	CN	An Interactive Service Searching Method Using Meta-date Uds(guid)system
84312496	Application		7/30/2015		201380071870.1	CN	Sending a Request to a Management Service
83189164	Allowed		10/6/2010		201080068990.2	CN	METHOD AND SYSTEM FOR PROCESSING EVENTS
83210538	Published		10/25/2010		201080069686.X	CN	PROVIDING INFORMATION MANAGEMENT
83487901	Published		3/17/2011		201180069276.X	CN	DATA SOURCE ANALYTICS
83193787	Published		9/1/2010		201080069933.6	CN	PERFORMING WHAT-IF ANALYSIS
83584503	Published		3/9/2011		201180069121.6	CN	PERFORMING A CHANGE PROCESS BASED ON A POLICY
84046852	Published		3/30/2012		201280072103.8	CN	ASSOCIATING AN APPLICATION WITH AN APPLICATION FILE
84139959	Published		9/27/2012		201280074807.9	CN	CAPTURING AN APPLICATION STATE IN A CONVERSATION
82676536	Published		10/14/2008		200880132329.6	CN	Managing Event Traffic In A Network System
83136077	Published		6/1/2010		201080068408.2	CN	Methods, Apparatus, And Articles Of Manufacture To Deploy Software Applications
83185165	Published		8/26/2010		201080068756.X	CN	ISOLATION OF PROBLEMS IN A VIRTUAL ENVIRONMENT
83691264	Published		4/4/2011		201180071393.X	CN	CREATING A CORRELATION RULE DEFINING A RELATIONSHIP BETWEEN EVENT TYPES
84073055	Published		7/31/2012		201280072855.4	CN	Constructing test-centric model of application
84162667	Application		8/29/2012		201280076097.3	CN	SECURITY SCAN BASED ON DYNAMIC TAINT
84182372	Application		9/28/2012		201280076151.4	CN	Application Security Testing
84118608	Published		7/3/2012		201280074441.5	CN	MANAGING A HYBRID CLOUD SERVICE
84252605	Published		12/3/2012		201280077486.8	CN	ASYNCHRONOUS FRAMEWORK FOR MANAGEMENT OF IAAS
82176122	Published		7/11/2005		200510084699.5	CN	Allocation Of Speech Recognition Tasks And Combination Of Results Thereof
82211897	Granted	200680021439.6	4/3/2006	8/3/2011	200680021439.6	CN	Multimedia Transfer For Wireless Networks
82219760	Granted	200780003771.4	1/3/2007	40982	200780003771.4	CN	Call Screening For VOIP Calls At Gateway
82223759	Published		10/1/2007		200780037548.1	CN	Management Of Access To Address Data

PATENT
REEL: 038498 FRAME: 0058

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82562762	Published		8/4/2009		200980131658.3	CN	FLEXIBLE INTEGRATED ACCESS TO PUBLISHED MATERIAL
84100729	Published		6/30/2012		201280073815.1	CN	SYSTEM AND METHOD FOR VIRTUAL REPLICATION OF A MOBILE PHONE
82188047	Granted	200510116320.4	10/12/2005	5/5/2010	200510116320.4	CN	Transparent Migration Of Files Among Various Types Of Storage Volumes Based On File Access Properties
82201094	Granted	1811724	1/24/2006	8/3/2011	200610007183.5	CN	Method And System Of Aligning Execution Point Of Duplicate Copies Of A User Program By Copying Memory Stores
82653937	Granted	ZL200980155758.X	1/30/2009	42102	200980155758.X	CN	SYSTEM AND METHOD FOR INTEGRATING CAPACITY PLANNING AND WORKLOAD MANAGEMENT
83422491	Published		8/17/2011		201180067527	CN	METHOD OF MANAGING USAGE RIGHTS IN A SHARE GROUP OF SERVERS
83974283	Published		1/30/2012		201280068476.8	CN	ESTABLISHING CONNECTIVITY OF MODULAR NODES IN A PRE-BOOT ENVIRONMENT
83165228	Published		7/22/2010		201080069230.3	CN	Context-based Item Bookmarking
84078880	Published		6/8/2012		201280072847.X	CN	PATIENT INFORMATION INTERFACE
84081210	Published		7/31/2012		201280072860.5	CN	Concept Categorization
84116398	Published		6/1/2012		201280074447.2	CN	SHARING INFORMATION ABOUT RESOURCES IN A COLLABORATIVE ENVIRONMENT
84122544	Published		6/29/2012		201280075515.7	CN	CAPACITY PLANNING SYSTEM
84140165	Published		10/25/2012		201280075059.6	CN	EVENT CORRELATION
84210215	Published		10/18/2012		201280076487	CN	COMMUNICATING TUPLES IN A MESSAGE
84237769	Published		10/31/2012		201280078093.9	CN	Patient oriented hospital care approach and system
84237912	Application		10/31/2012		201280078099.6	CN	GENERATING AN OUTPUT BASED ON COLLECTING INFORMATION RELATING TO A CASE
83728679	Published		6/16/2011		201180071647.8	CN	System and Method for Policy Generation
84301888	Application		3/28/2013		201380071993.5	CN	Implementing Coherency with Reflective Memory
90028902	Acknowledged		4/1/2013			CN	External Memory Controller
84077592	Published		7/31/2012		201280072876.6	CN	SYSTEM ARCHITECTURE GENERATION
84304238	Application		7/29/2015		201380071711.1	CN	FEDERATED SOCIAL MEDIA ANALYSIS SYSTEM AND METHOD THEREOF
83991621	Published		2/27/2012		201280068644.3	CN	METHOD AND SYSTEM FOR VEHICLE PERSONALIZATION
82252856	Granted	97181124.5	10/29/1997	40212	97181124.5	CN	Fail-safe Event Driven Transaction Processing System And Method
84141084	Published		9/10/2012		201280075003	CN	USE OF PRIMARY AND SECONDARY CONNECTION TABLES
84038219	Published		5/30/2012		201280072844.6	CN	PARAMETER ADJUSTMENT FOR PATTERN DISCOVERY
84265735	Published		6/12/2015		201280077653.9	CN	Distributed Pattern Discovery
82231937	Granted	200880100626.2	6/13/2008	41297	200880100626.2	CN	Centralized Server Rack Management Using USB
83874541	Published		10/28/2011		201180074473	CN	Management of A Computer

PATENT
REEL: 038498 FRAME: 0059

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84084127	Published		4/25/2012		201280072698.7	CN	DYNAMIC MEMORY ALLOCATION
84283820	Application		1/30/2013		201380071885.8	CN	NON-VOLATILE MEMORY WRITE MECHANISM
90049383	Application		3/28/2013			CN	MAKING MEMORY OF COMPUTE AND EXPANSION BLADE DEVICES AVAILABLE FOR USE BY AN OPERATING SYSTEM
84079590	Published		5/15/2012		201280072765.5	CN	QUERY PROCESSING
84217958	Published		11/14/2012		201280077069.3	CN	Updating Statistics in Distributed Databases
90022848	Application		2/7/2013		201380072533.4	CN	Formatting Semi-Structured Data in a Database
82195850	Granted	200680022900.X	4/26/2006	5/19/2010	200680022900.X	CN	Nanoscale Interconnection Interface
82631627	Granted	200880131355.7	7/31/2008	41654	200880131355.7	CN	Multi-layer Reconfigurable Switches
82925847	Published		9/4/2009		200980161240.7	CN	SWITCHABLE JUNCTION WITH AN INTRINSIC DIODE FORMED WITH A VOLTAGE DEPENDENT RESISTOR
82930490	Granted	ZL200980161184.7	11/30/2009	41899	200980161184.7	CN	REMAPPING FOR MEMORY WEAR LEVELING
83255739	Published		1/31/2011		201180055717	CN	Method and Circuit for Switching a Memristive Device
84020483	Published		4/25/2012		201280071789.9	CN	NONLINEAR MEMRISTORS
84020503	Published		4/26/2012		201280071817.7	CN	CUSTOMIZABLE NONLINEAR ELECTRICAL DEVICES
82228130	Granted	ZL200880020035.4	4/2/2008	6/19/2013	200880020035.4	CN	Available Bandwidth Estimation
82766414	Granted	ZL200980154813.3	1/19/2009	42102	200980154813.3	CN	Load Balancing
83034268	Published		5/20/2010		201080066907.8	CN	SWITCHING IN A NETWORK DEVICE
84076490	Published		6/29/2012		201280072846.5	CN	Wireless Network with Coordinated Sectors to Mitigate Interference
82217390	Granted	200680037481.7	8/11/2006	12/14/2011	200680037481.7	CN	Quantum Repeater
82219139	Granted	200780023478.4	4/20/2007	11/17/2010	200780023478.4	CN	Optical-based, Self-authenticating Quantum Random Number Generators
82230374	Granted	200880021368.9	6/16/2008	10/19/2011	200880021368.9	CN	OPTICAL INTERCONNECT
82230566	Granted	200880024854.6	7/16/2008	6/26/2013	200880024854.6	CN	Optical Device Including Waveguide Grating Structure
82239494	Granted	200880128457.3	1/31/2008	3/27/2013	200880128457.3	CN	FREE SPACE OPTICAL INTERCONNECT
82243361	Granted	ZL200880122377.7	10/23/2008	4/16/2014	200880122377.7	CN	Photonic Interconnects For Computer System Devices
82245482	Granted	200880129056.X	5/7/2008	4/16/2014	200880129056.X	CN	OPTICAL ENGINE FOR POINT-TO-POINT COMMUNICATIONS
82405419	Granted	200880130269.4	5/9/2008	3/11/2015	200880130269.4	CN	Optical Splitter Device
82554381	Granted	200880130477.4	5/23/2008	9/25/2013	200880130477.4	CN	Optical Interconnect
82654452	Granted	ZL200880130978.2	9/4/2008	41437	200880130978.2	CN	Dielectric Waveguide Intersection With Reduced Losses
83734816	Published		5/23/2011		201180071831.2	CN	OPTICAL TRANSMISSION SYSTEM
83862158	Published		11/1/2011		201180074425.1	CN	DIRECT MODULATED LASER

PATENT
REEL: 038498 FRAME: 0060

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83959965	Published		1/31/2012		201280065738.5	CN	OPTICAL ARCHITECTURES, OPTICAL DISTRIBUTION MATRICES, AND METHODS OF MANUFACTURING OPTICAL STRUCTURES
84195004	Published		1/28/2013		201380057209.5	CN	RADIUSED ALIGNMENT POST FOR SUBSTRATE MATERIAL
82631607	Granted	ZL200880131798.6	10/30/2008	42186	200880131798.6	CN	RECONFIGURING A MODEL
83174557	Published		7/30/2010		201080069333.X	CN	CONFIGURATION MANAGEMENT
84076338	Published		6/25/2012		201280072838	CN	TRANSLATED SESSION INFORMATION TO PROVISION A NETWORK PATH
82240991	Granted	ZL200880129631.6	4/4/2008	4/22/2015	200880129631.6	CN	DC-TO-DC CONVERTER WITH INDEPENDENT COMPENSATION LOGIC
82671976	Granted	ZL200880132288.0	12/9/2008	42032	200880132288	CN	Power Circuit
82901705	Published		1/29/2010		201080033493.9	CN	Managing Electric Energy Distribution To Multiple Loads Using Selective Capping
83140714	Published		10/26/2010		201080069805.1	CN	BACKUP POWER SUPPLY SYSTEMS AND METHODS
83787451	Granted	ZL201430045309.3	3/10/2014	42130	201430045309.3	CN	FRONT BEZEL FOR AN UNINTERRUPTIBLE POWER SYSTEMS (UPS) RACK AND TOWER
84291317	Application		1/21/2013		201380071035.8	CN	POWER FACTOR CORRECTOR POWER SHARING
82240364	Granted	ZL200880128642.2	4/14/2008	41668	200880128642.2	CN	Fan For Computer Element In The Service Position
82580950	Published		7/31/2008		200880130664.2	CN	Heatsink With A Plurality Of Fans
84252648	Published		12/19/2012		201280077884.X	CN	MULTI-CHANNEL CONVERSATION
82184306	Granted	200580036905.3	8/18/2005	8/4/2010	200580036905.3	CN	Mapping Power System Componets
82207649	Granted	200680050186.5	11/1/2006	7/4/2012	200680050186.5	CN	Cooling Components Across A Continuum
82241306	Granted	200880127257.6	2/22/2008	11/28/2012	200880127257.6	CN	Detecting Anomalies In A Sensor Networked Environment
82573980	Granted	200880130224.7	6/30/2008	41444	200880130224.7	CN	Cooling Medium Distribution Over A Network Of Passages
83769071	Published		7/27/2011		201180072584.8	CN	Method and System for Reducing Write-Buffer Capacities within Memristor-Based Data-Storage Devices
83881886	Published		10/27/2011		201180074427	CN	SHIFTABLE MEMORY EMPLOYING RING REGISTERS
83988352	Published		4/24/2012		201280068655.1	CN	IDENTIFYING NETWORK COMMUNICATION PATTERNS
84115691	Published		6/8/2012		201280075200.2	CN	AUGMENTING MEMORY CAPACITY FOR KEY VALUE CACHE
84115714	Published		6/8/2012		201280075199.3	CN	ACCESSING MEMORY
84140128	Published		10/31/2012		201280075044.X	CN	Combined Block-Style Error Correction
84304470	Application		1/31/2013		201380072021.8	CN	SELECTING CIRCUITS OF A MULTI-LEVEL INTEGRATED CIRCUIT
84304487	Application		3/15/2013		201380072007.8	CN	MEMORY MODULE CONTROLLER SUPPORTING EXTENDED WRITES

PATENT
REEL: 038498 FRAME: 0061

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83663203	Published		6/8/2011		201180071446.8	CN	Determining and Visualizing Social Media Expressed Sentiment
84080912	Published		7/30/2012		201280072817.9	CN	SEARCH METHOD
90016556	Application		1/29/2013		201380071738	CN	METHODS AND SYSTEMS FOR SHARED FILE STORAGE
82237733	Published		12/20/2007		200780102376.1	CN	MODELLING COMPUTER BASED BUSINESS PROCESS FOR CUSTOMISATION AND DELIVERY
82678090	Granted	ZL200980138894.8	7/22/2009	41941	200980138894.8	CN	QKD Transmitter And Transmission Method
83093240	Published		6/23/2010		201080068733.9	CN	Authorization Control
84312822	Application		1/31/2013		201380072035.X	CN	TARGETED SECURITY ALERTS
82675339	Granted	ZL200980148656.5	11/13/2009	41661	200980148656.5	CN	Data Centre And Apparatus And Method For Data Centre Cooling
82676467	Granted	ZL200980143345.X	10/21/2009	42165	200980143345.X	CN	DATA CENTER AND DATA CENTER DESIGN
82180985	Granted	200710184977.3	10/31/2007	8/3/2011	200710184977.3	CN	Cache Memory System And Method For Providing Transactional Memory
83038178	Granted	201230416492.4	8/31/2012	3/27/2013	201230416492.4	CN	A Removable Bezel of a Computing Device with an LCD Display
83136234	Published		6/7/2010		201080067287.X	CN	MODULE AND PORT
83543103	Published		4/27/2011		201180069645.5	CN	Rotational Lockout
84078665	Published		5/24/2012		201280072764	CN	Fiber Connector Assembly
84104739	Published		8/17/2012		201280074489.6	CN	CONNECTION INCLUDING FLANGE IN COOPERATION WITH RESILIENT MEMBER TO ENGAGE AND DISENGAGE REMOVABLE PRINTED CIRCUIT ASSEMBLY
90056364	Application		4/3/2013			CN	MICROCONTROLLER AT A CARTRIDGE OF A CHASSIS
82187975	Granted	200610100120.4	6/27/2006	9/1/2010	200610100120.4	CN	Centralized Hot-pluggable Video And KVM
82233743	Granted	200880100401.7	5/21/2008	7/18/2012	200880100401.7	CN	TAMPER-EVIDENT CONNECTOR
82237859	Published		2/15/2008		200880126784.5	CN	Changing Power States Of Data-handling Devices To Meet Redundancy Criterion
82240607	Granted	ZL200880127959.4	3/10/2008	41437	200880127959.4	CN	Cable Management Module
82897849	Granted	201130506676.5	12/30/2011	41094	201130506676.5	CN	Hard Drive Carrier
83786712	Published		12/13/2011		201180072861.5	CN	STORAGE CONTROLLER WITH HOST COLLABORATION FOR INITIALIZATION OF A LOGICAL VOLUME
83951303	Published		2/22/2012		201280068625	CN	MULTIPLEXER FOR SIGNALS ACCORDING TO DIFFERENT PROTOCOLS
82232801	Granted	200880100415.9	5/27/2008	41262	200880100415.9	CN	Systems And Methods For Improving Performance Of A Routable Fabric

PATENT
REEL: 038498 FRAME: 0062

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0063

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82241672	Granted	ZL200880130063.1	4/28/2008	41822	200880130063.1	CN	Method And System For Generating And Delivering Inter-processor Interrupts In A Multi-core Processor And In Certain Shared-memory Multi-processor Systems
82716607	Published		10/30/2008		200880131789.7	CN	BIT Inversion For Communication Interface
83965930	Published		1/31/2012		201280068651.3	CN	CONNECTOR INDICIA
83984350	Published		4/12/2012		201280068732.3	CN	RECONFIGURATION OF AN OPTICAL CONNECTION INFRASTRUCTURE
84027702	Published		4/25/2012		201280071724.4	CN	OPERATING VERTICAL-CAVITY SURFACE-EMITTING LASERS
84056063	Published		4/25/2012		201280072650.6	CN	OPERATING VERTICAL-CAVITY SURFACE-EMITTING LASERS
84269665	Application		1/30/2013		201380071906.6	CN	OPTICAL CONNECTOR HAVING A CLEANING ELEMENT
83220854	Published		10/26/2010		201080069860	CN	METHODS AND SYSTEMS FOR DETECTING SUSPECTED DATA LEAKAGE USING TRAFFIC SAMPLES
82274633	Granted	200610137341.9	10/13/2006	41059	200610137341.9	CN	Method and System for Using a Packet-Network Telephone to Schedule a Conference Call
83135879	Published		7/29/2010		201080068321.5	CN	A Device And Method For Egress Packet Forwarding Using Mesh Tagging
83977168	Application		12/21/2011		201180076424	CN	PROPER INSTALLATION DETERMINATION BASED ON RFID
83991406	Published		4/26/2012		201280068488	CN	MULTICAST ROUTING PATH CHECK
82274135	Granted	3815527.3	6/30/2003	40198	3815527.3	CN	System and Method for a Universal Wireless Access Gateway
84016713	Published		2/29/2012		201280070811.8	CN	INFORMATION TRANSMISSION FROM WIRELESS ACCESS POINT
82837122	Granted	ZL200980158509.6	3/30/2009	42221	200980158509.6	CN	Deduplication Of Data Stored In A Copy Volume
83952325	Published		3/15/2012		201280068730.4	CN	Accessing And Replicating Backup Data Objects
84141238	Published		10/31/2012		201280075493.4	CN	THERMAL STABILIZATION SHIPPING SYSTEM AND METHOD
82852402	Granted	ZL200980160715.0	7/31/2009	42053	200980160715	CN	Compression Of XML Data
83442153	Published		3/3/2011		201180067773.6	CN	RECORDS MANAGEMENT SYSTEM
83995425	Published		4/9/2012		201280068481.9	CN	CREATING AN ARCHIVAL MODEL
84079561	Published		5/15/2012		201280072816.4	CN	PATTERN MINING BASED ON OCCUPANCY
84289436	Application		7/22/2015			CN	STORING BACKUP DATA SEPARATE FROM CATALOG DATA
84312536	Application		7/31/2015		201380071986.5	CN	SELECTING A BACKUP TYPE BASED ON CHANGED DATA
82241795	Granted	200880117052.X	11/13/2008	41171	200880117052.X	CN	Allocation Of Resources For Concurrent Query Execution Via Adaptive Segmentation
83118736	Published		5/27/2010		201080067069.6	CN	Bundling Configuration Items Into A Composite Configuration Item
83854661	Published		9/30/2011		201180073793.4	CN	EXTENDING A CONVERSATION ACROSS APPLICATIONS

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83184704	Published		8/6/2010		201080069452.5	CN	SYSTEM AND METHODS FOR APPORTIONING POWER CONSUMPTION
83209547	Published		12/20/2010		201080070088.4	CN	METHOD OF PROVISIONING ADDITIONAL STORAGE TO COMPUTER APPLICATIONS
83617587	Published		3/17/2011		201180069346.1	CN	SELF-ORGANIZATION OF A SATELLITE GRID
83789789	Published		7/29/2011		201180073768.6	CN	MIGRATING VIRTUAL MACHINES
83799679	Published		7/31/2011		201180073873.X	CN	INCIDENT HANDLING
83883792	Published		10/10/2011		201180075413	CN	Methods And Systems For Planning Execution Of An Application In A Cloud Computing System
84273827	Application		12/4/2012		201280078189.5	CN	Determining Suspected Root Causes of Anomalous Network Behavior
83987158	Published		1/23/2012		201280067942	CN	IDENTIFYING A POLLING COMMUNICATION PATTERN
84071961	Published		4/23/2012		201280072829.1	CN	SOFTWARE DEFECT VERIFICATION
84312699	Application		2/28/2013		201380071978	CN	DETERMINING COVERAGE OF DYNAMIC SECURITY SCANS USING RUNTIME AND STATIC CODE ANALYSES
82890401	Published		5/29/2009		200980159582.5	CN	System And Method For Allocating Resources Of A Server To A Virtual Machine
83117717	Published		6/7/2011		201180036366.9	CN	METHOD AND SYSTEM FOR DEPLOYING Saas (software As A Service) SERVICE BUNDLES
83140442	Published		6/30/2010		201080067848.6	CN	SYSTEM AND METHOD FOR AN AUTOMATED DATA DISCOVERY SERVICE
83142019	Published		7/1/2010		201080068857.7	CN	Migrating Artifacts Between Service-oriented Architecture Repositories
84092605	Published		6/8/2012		201280073806.2	CN	CLOUD APPLICATION DEPLOYMENT
84137291	Published		10/10/2012		201280077596.4	CN	IDENTIFYING REPORTS TO ADDRESS NETWORK ISSUES
84148234	Published		8/13/2012		201280075302.4	CN	PERFORMANCE TESTS IN A CONTINUOUS DEPLOYMENT PIPELINE
82168937	Granted	200410048980.9	6/10/2004	40170	200410048980.9	CN	Software Authentication For Mobile Communication Devices
82171187	Granted	200410088376.9	11/3/2004	7/29/2009	200410088376.9	CN	Selective Message Discard
82181924	Granted	200480034521.3	7/23/2004	40625	200480034521.3	CN	Methods And Apparatus For Controlling Signalling Gateways
82186730	Granted	200480032570.3	7/12/2004	41157	200480032570.3	CN	Method And Apparatus For Load-balancing
82230494	Granted	ZL200880003158.7	1/23/2008	41430	200880003158.7	CN	PAUSING CALL PROCESSING TO ENABLE THE PLAYBACK OF INFORMATION
82805177	Granted	ZL201080006144.8	1/26/2010	41899	201080006144.8	CN	Communications System And Method
82241417	Granted	ZL200880127526.9	2/26/2008	42018	200880127526.9	CN	Method And Apparatus For Performing A Host Enumeration Process
83123499	Published		5/13/2010		201080066763.6	CN	FILE SYSTEM MIGRATION

PATENT
REEL: 038498 FRAME: 0064

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82225436	Granted	200810009510.x	1/25/2008	41248	200810009510.x	CN	MEMORY MODULE AND METHOD EMPLOYING A MULTIPLEXER TO REPLACE A MEMORY DEVICE
84123806	Published		10/22/2012		201280074861.3	CN	PERFORMING REFRESH OF A MEMORY DEVICE IN RESPONSE TO ACCESS OF DATA
90022713	Application		3/27/2013			CN	Non-Volatile Memory Based Synchronous Logic
90025965	Application		3/28/2013			CN	Shared Memory System
90048541	Acknowledged		4/30/2013			CN	Coalescing Memory Access Requests
83255607	Published		1/27/2011		201180063114.5	CN	ELECTRONIC BOOK WITH CHANGEABLE PATHS
84306287	Application		1/22/2013		201380070464.3	CN	DETERMINING A REMEDIAL ACTION FOR A MOTORIZED VEHICLE BASED ON SENSED VIBRATION
82848363	Published		5/8/2009		200980159178.8	CN	ACCESS CONTROL OF DISTRIBUTED COMPUTING RESOURCES SYSTEM AND METHOD
83127143	Published		6/22/2010		201080067619.4	CN	METHODS AND SYSTEMS FOR PLANNING APPLICATION DEPLOYMENT
84306373	Application		7/30/2015		201380071849.1	CN	SYSTEMS AND METHODS FOR DETERMINING COMPATIBILITY BETWEEN SOFTWARE LICENSES
82257530	Granted	200980117604.1	7/15/2008	41843	200980117604.1	CN	ARCHITECTURE FOR SERVICE ORIENTED ARCHITECTURE (SOA) SOFTWARE FACTORIES
82257650	Granted	200980117602.2	7/25/2008	42025	200980117602.2	CN	BYTE-BASED METHOD, PROCESS AND ALGORITHM FOR SERVICE-ORIENTED AND UTILITY INFRASTRUCTURE USAGE MEASUREMENT, METERING, AND PRICING
82004369	Granted	3814194.9	4/16/2003	7/25/2007	3814194.9	CN	Using Energy Recognition Techniques For Energy Management In Large Data Centers
82201898	Granted	200680043420.1	11/8/2006	3/20/2013	200680043420.1	CN	Control Layer For A Nanoscale Electronic Switching Device
82837228	Granted	200980158474.6	3/27/2009	41710	200980158474.6	CN	SWITCHABLE JUNCTION WITH INTRINSIC DIODE
82925131	Published		3/12/2010		201080065394.9	CN	DEVICE HAVING MEMRISTIVE MEMORY
83215484	Application		9/27/2010		201080069812.1	CN	DEVICE STRUCTURE FOR LONG ENDURANCE MEMRISTORS
83858239	Published		10/21/2011		201180074219	CN	MEMRISTIVE ELEMENT BASED ON HETERO-JUNCTION OXIDE
83959999	Published		2/29/2012		201280065140.6	CN	Memristor with Channel Region in Thermal Equilibrium with Containing Region
84078599	Published		7/31/2012		201280072903.X	CN	NON-VOLATILE RESISTIVE MEMORY CELLS
83863148	Published		10/11/2011		201180074109.4	CN	Authenticating a User's Location in a Femtocell-Based Network
84077623	Published		7/31/2012		201280072859.2	CN	IMPLEMENTING A TRANSITION PROTOCOL IN WHICH A FIRST RULE SET FOR ROUTING PACKETS RECEIVED BY A GROUP OF SWITCHES DURING A FIRST TIME PERIOD IS UPDATED TO A SECOND RULE SET
84100826	Published		5/11/2012		201280074616.2	CN	SERVER SELECTION

PATENT
REEL: 038498 FRAME: 0065

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84103199	Published		7/31/2012		201280074022.1	CN	WIRELESS ACCESS POINT CELL ID INSERTION IN FRAME HEADER
84312639	Application		1/18/2013			CN	PREVENTING A MEMORY ATTACK TO A WIRELESS ACCESS POINT
82207397	Granted	200680020299	6/9/2006	3/17/2010	200680020299	CN	OPTICALLY COUPLED INTEGRATED CIRCUIT LAYERS
82242671	Granted	200880128547.2	4/2/2008	9/26/2012	200880128547.2	CN	PRISM BEAMSPLITTERS
82595680	Granted	200880130511.8	7/25/2008	1/16/2013	200880130511.8	CN	LIGHT-EMITTING DEVICES
82716713	Granted	ZL200880131795.2	10/31/2008	42186	200880131795.2	CN	Optical Broadcast With Buses With Shared Optical Interfaces
82790052	Published		1/9/2009		200980157959.3	CN	CONFIGURABLE POINT-TO-POINT OPTICAL COMMUNICATIONS SYSTEM BETWEEN SERVERS
82844161	Published		3/23/2009		200980158821.5	CN	INDIRECT-BANDGAP-SEMICONDUCTOR, LIGHT-EMITTING DIODE
82926256	Published		9/25/2009		200980161152.7	CN	SILICON-GERMANIUM, QUANTUM-WELL, LIGHT-EMITTING DIODE
83770210	Published		6/15/2011		201180072291.X	CN	MICRO-RING RESONATOR
83791120	Published		7/29/2011		201180073223.5	CN	FIBER OPTICS CONNECTORS
83821153	Published		8/31/2011		201180074348.X	CN	Thermal Shunt
83948847	Published		1/18/2012		201280062622.6	CN	INTEGRATED SUB-WAVELENGTH GRATING ELEMENT
82274696	Granted	3824110.2	8/11/2003	39806	3824110.2	CN	Multi-level packet screening with dynamically selected filtering criteria
84153335	Published		7/31/2012		201280075507.2	CN	UNAUTHORIZED USER CLASSIFICATION
83784107	Published		10/20/2011		201180073352.4	CN	SYSTEMS AND METHODS FOR EVALUATION OF EVENTS BASED ON A REFERENCE BASELINE ACCORDING TO TEMPORAL POSITION IN A SEQUENCE OF EVENTS
84141264	Published		7/31/2012		201280075026.1	CN	VULNERABILITY VECTOR INFORMATION ANALYSIS
83730047	Published		7/30/2011		201180071504.7	CN	SIDEWAYS INFORMATION PASSING
84079644	Published		6/4/2012		201280072902.5	CN	MANAGING AN ANALYTIC FUNCTION TO BE PERFORMED ON DATA STORED IN AN INPUT BLOCK
83991652	Published		4/30/2012		201280068636.9	CN	AUTOMATED EVENT MANAGEMENT
84279572	Application		12/11/2012		201280078208.4	CN	Provisioning Tools for Application Development
82183361	Granted	200580024570.3	5/24/2005	6/16/2010	200580024570.3	CN	Energy Efficient CRAC Unit Operation
82197716	Granted	200580023995.2	5/24/2005	4/13/2011	200580023995.2	CN	Energy Efficient CRAC Unit Operation Using Heat Transfer Levels
82210577	Granted	200710084117.2	1/5/2007	10/5/2011	200710084117.2	CN	Head Of Queue Cache For Communication Interfaces
82223504	Granted	ZL200880010559.5	3/21/2008	1/16/2013	200880010559.5	CN	Three-dimensional Crossbar Array Systems And Methods For Writing Information To And Reading Information Stored In Three-dimensional Crossbar Array Junctions
82232183	Granted	ZL200880102318.3	7/30/2008	9/25/2013	200880102318.3	CN	Electronic System Having Free Space Optical Elements

PATENT
REEL: 038498 FRAME: 0066

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0067

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82238921	Granted	ZL200880128043.0	3/14/2008	41570	200880128043	CN	Exergy Based Evaluation Of An Infrastructure
82239548	Published		11/27/2007		200780102257.6	CN	SYSTEM SYNTHESIS TO MEET AN EXERGY LOSS TARGET VALUE
82240172	Granted	200880129470	4/1/2008	6/26/2013	200880129470	CN	Management System Operable Under Multiple Metric Levels
82242233	Granted	ZL200880126802.X	3/3/2008	11/27/2013	200880126802.X	CN	METHOD AND SYSTEM FOR DETECTION AND CORRECTION OF PHASED-BURST ERRORS, ERASURES, SYMBOL ERRORS, AND BIT ERRORS IN A RECEIVED SYMBOL STRING
82242542	Granted	ZL200880129118.7	3/10/2008	12/3/2014	200880129118.7	CN	Two-phase Optical Communication Methods And Optical Bus Systems For Implementing The Same
82573991	Granted	200880130237.4	6/30/2008	7/3/2013	200880130237.4	CN	Optimizing Fluid Flow Distribution In A Structure
82728097	Granted	ZL200880132413.8	12/19/2008	42158	200880132413.8	CN	Redundant Data Storage For Uniform Read Latency
83134883	Allowed		6/16/2010		201080067447	CN	Computer Racks
83862773	Published		11/11/2011		201180074750.8	CN	MANAGING AIRFLOW PROVISIONING
84077872	Published		7/10/2012		201280072828.7	CN	LIST SORT STATIC RANDOM ACCESS MEMORY
84158934	Published		8/28/2012		201280075500	CN	HIGH PERFORMANCE PERSISTENT MEMORY
84217946	Published		11/6/2012		201280076901.8	CN	ENHANCED GRAPH TRAVERSAL
84223024	Published		11/2/2012		201280078087.3	CN	Selective Error Correcting Code and Memory Access Granularity Switching
84304435	Application		1/30/2013		201380071875.4	CN	RECOVERING PAGES OF A DATABASE
82891337	Published		6/23/2009		200980160061.1	CN	Power Distribution To Computer System
83012848	Published		10/25/2010		201080069807	CN	POWER CONVERTER
83273477	Published		12/22/2010		201080070842.4	CN	Mosfet Switch Gate Driver, Mosfet Switch System And Method
83996149	Published		4/20/2012		201280068684.8	CN	OVERVOLTAGE PROTECTION SYSTEMS AND METHOD
83995711	Published		2/9/2012		201280068668.9	CN	HEAT DISSIPATING SYSTEM
81953471	Granted	69602484.5	3/22/1996	5/19/1999	96302014.4	DE	Disk Data Recording Device
81957098	Granted	69621077	6/11/1996	5/8/2002	96109347.3	DE	Method And Apparatus For Providing Topology Based Enterprise Management Services
81968684	Granted	102005029428	6/24/2005	8/8/2013	102005029428.6	DE	System And Method For Managing Cache Access In A Distributed System
81976055	Granted	10209803.4	3/6/2002	7/29/2004	10209803.4	DE	Method And Apparatus For Providing File System Access To A Disk Array
81978692	Granted	60210211.1	1/9/2002	38805	2250150.6	DE	Redundant Backup Device
81989315	Published		2/28/2002		10208771.7	DE	Adaptive Synchronous DC Fan Speed Controller
81994793	Granted	60220350.3	8/22/2002	5/30/2007	2255883.7	DE	Systems And Methods For Providing Automatic Access To Data Media In A Data Storage System

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82001303	Granted	10306598.9	2/17/2003	10/25/2007	10306598.9	DE	Method And System For Assessing Availability Of Complex Electronic Systems Including Computer Systems
82004534	Granted	60307027.2	11/21/2003	7/26/2006	3257361	DE	Media-detection Systems
82006841	Granted	10315490.6	4/4/2003	4/29/2010	10315490.6	DE	A Method And System Of Switching Between Two Or More Images Of Firmware On A Host Device
82006859	Granted	60313729.6	7/23/2003	5/9/2007	3016822.3	DE	Backplane System And Method For Its Use
82012850	Granted	69614460.3	6/10/1996	8/16/2001	96109263.2	DE	Computer Frame Structure With Modular Housing
82019711	Granted	69837461.4	7/31/1998	4/4/2007	98306134.2	DE	Internet Enabled Computer System Management
82020959	Granted	69735576.4	10/7/1997	3/29/2006	97307976.7	DE	Method And Apparatus For Automatic Device Segmentation And Port-To-Segment Distribution
82025012	Granted	69838498.9	6/9/1998	10/3/2007	98304565.9	DE	Automatic Internet Protocol (IP) Address Allocation And Assignment
82028273	Granted	69938908.9	3/2/1999	6/18/2008	99301567.6	DE	Servo Band Identification In Linear Tape Systems Having Timing-based Servo Formats
82037372	Granted	69929289.1	10/21/1999	1/4/2006	99308294	DE	Mail Slot Data Cartridge Exchange System For Use With A Data Storage System
82037948	Granted	69926476.6	12/20/1999	8/3/2005	99310273	DE	Network Appliance Combining Asynchronous Notification With Interactive Network Transfer Protocol Server
82041689	Granted	69833723.9	12/10/1998	3/8/2006	98123605.2	DE	Network Management Event Storage And Manipulation Using Relational Database Technology In A Data Warehouse
82043123	Granted	69926602.5	11/30/1999	8/10/2005	99123777.7	DE	Hybrid Just-in-time Compiler That Consumes Minimal Resource
82044554	Granted	60000518.6	2/24/2000	10/2/2002	301478.4	DE	Data Cartridge Exchange Apparatus
82046540	Granted	69939460	11/18/1999	9/3/2008	99122965.9	DE	An Adaptive Web Server
82047860	Granted	49906067.9	6/22/1999	10/19/1999	49906067.9	DE	Bezel For Rack Mounted Device
82049246	Granted	10100810.4	1/10/2001	11/20/2003	10100810.4	DE	Media Handling Device Having Replaceable Modules
82060043	Granted	60010458.3	8/30/2000	5/6/2004	307436.6	DE	Method, Computer System And Computer Program Product For Printing A Document Page
82062533	Granted	60110579.6	5/8/2001	5/4/2005	1925726	DE	Charging For VAS Resource Usage In A Communications Infrastructure
82062836	Granted	60135891	7/10/2001	9/24/2008	1305936.5	DE	Location Data Diffusion And Location Discovery
82062860	Granted	60111481.7	11/30/2001	6/15/2005	1310044.1	DE	Idiom Handling In Voice Service Systems
82063649	Granted	60123969.5	8/17/2001	10/18/2006	1958228.7	DE	A Computer System Operable To Revert To A Trusted State
82064207	Granted	60207500.9	9/10/2002	11/23/2005	2256245.8	DE	Method And Apparatus For Identifying A Voice Caller
82064600	Granted	60214632.1	7/26/2002	9/13/2006	2255218.6	DE	Multi-domain Authorisation And Authentication
82066271	Granted	10248006	10/15/2002	1/17/2008	10248006	DE	A Method, Using Identity Based Encryption, To Permit A Sender Of A Message To Place Constraints On Who Can Read The Message

PATENT
REEL: 038498 FRAME: 0068

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82066853	Granted	69732741.8	1/17/1997	3/16/2005	97900685.5	DE	Multicarrier Communication System And Method For Peak Power Control
82068077	Granted	69802294.7	8/28/1998	10/31/2001	98940428	DE	Data Backup And Recovery System
82068167	Granted	69926302.6	5/14/1999	7/27/2005	99303793.6	DE	Calibrating WPE
82068479	Granted	69816415.6	3/2/1998	7/16/2003	98301498.6	DE	Enhancing Reliability
82068530	Granted	69910466.1	2/19/1999	8/20/2003	99301223.6	DE	Dynamic Index
82069397	Granted	60025439.9	4/19/2000	1/11/2006	303325.5	DE	Loop Prevention In Networks
82071329	Granted	60205208.4	1/21/2002	7/27/2005	2354011.5	DE	Method Of Brokering Network Services
82071350	Granted	60228044.3	1/18/2002	8/6/2008	2354007.3	DE	Distributed Computing System And Method
82077317	Granted	69726138.7	4/24/1997	11/12/2003	97922458.1	DE	System, Method And Article Of Manufacture For Network Electronic Authorization Utilizing An Authorization Instrument
82082570	Granted	60329459.6	10/17/2003	9/30/2009	3023651.7	DE	Media Storage System And Method For Identifying A Storage Location Therein
82084058	Granted	10338002.7	8/19/2003	2/3/2011	10338002.7	DE	Method And Apparatus For High Speed Bus Having Adjustable, Symmetrical, Edge-rate Controlled, Waveforms
82085207	Granted	60310364.2	10/9/2003	12/13/2006	3022914	DE	High-density Media Storage System
82095944	Granted	60327507.9	11/3/2003	5/6/2009	3256934.5	DE	Method And Architecture To Provide Client Session Failover
82097072	Granted	602005020930.1	6/13/2005	4/28/2010	5754562.6	DE	Method And System For Establishing Communications
82097570	Granted	10325816.7	6/6/2003	9/4/2008	10325816.7	DE	Public Key Instructure In Network Management
82098431	Granted	112007002130	8/28/2007	9/11/2014	112007002130.6	DE	Computer System Indicator Panel With Exposed Indicator Edge
82099604	Granted	602005014979.1	9/12/2005	6/17/2009	5300740.7	DE	Context-based Event Processing
82100432	Published		6/9/2004		102004028154.8	DE	A Rack Equipment Environmental Condition Adjustment System And Method
82101545	Granted	60322018.5	4/3/2003	7/9/2008	3290837.8	DE	Methods And Apparatus For Controlling Processing Entities, Such As Distributed Signalling Gateways
82102316	Granted	60301718.5	10/17/2003	9/28/2005	3256580.6	DE	System And Method Of Measuring Low Impedances
82103477	Granted	102004012835.9	3/16/2004	2/11/2010	102004012835.9	DE	Method Of Managing Utilization Of Network Intrusion Detection Systems In A Dynamic Data Center
82116032	Granted	69614009.8	1/23/1996	7/25/2001	96300437.9	DE	REMOTE DUPLICATE DATABASE FACILITY WITH DATABASE REPLICATION SUPPORT FOR ONLINE DDL OPERATIONS
82116086	Granted	69615230.4	1/23/1996	9/19/2001	96300429.6	DE	RELATIONAL DATABASE SYSTEM AND METHOD WITH HIGH DATA AVAILABILITY DURING TABLE DATA RESTRUCTING
82126973	Granted	69721209.2	12/31/1997	4/23/2003	97310692.5	DE	BUFFER RESERVATION METHOD FOR A BUS BRIDGE SYSTEM
82127447	Granted	69621212.9	12/12/1996	5/15/2002	96309071.7	DE	BUS ERROR HANDLER FOR PERR# & SERR# ON DUAL PCI BUS SYSTEM

PATENT
REEL: 038498 FRAME: 0069

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0070

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82128830	Granted	69731603.3	12/30/1997	11/17/2004	69731603.3	DE	A NETWORK SWITCH WITH A MULTIPLE BUS STRUC- TURE AND A BRIDGE INTERFACE FOR TRANSFERR- ING NETWORK DATA BETWEEN DIFFERENT BUSES
82133594	Granted	60016213.3	6/23/2000	11/24/2004	943160.2	DE	METHOD AND SYSTEM FOR PROVIDING TELECOMMUNICATION SERVICES ACROSS NETWORKS THAT USE DIFFERENT PROTOCOLS
82136267	Granted	69811832.4	11/25/1998	3/5/2003	98309653.8	DE	METHOD FOR ESTIMATING STATISTICS OF PROPERTIES OF INTERACTIONS PROCESSED BY A PROCESSOR PIPELINE
82164119	Granted	69518604.3	10/5/1995	8/30/2000	95307130.5	DE	VARIABLE FREQUENCY CLOCK CONTROL FOR MICROPROCESSOR-BASED COMPUTER SYSTEMS
82165232	Granted	69626946.5	12/23/1996	3/26/2003	96120819.6	DE	METHOD AND APPARATUS FOR RATE-BASED SCHEDULING USING A RELATIVE ERROR APPROACH
82170161	Granted	102004033828	7/13/2004	11/8/2012	102004033828	DE	Method And Apparatus For Storing Data On Magnetic Tape
82171154	Granted	602004010704.2	10/21/2004	12/12/2007	4796284	DE	Methods And Systems For Dynamically Configuring A Network Component
82173488	Granted	602004018251.6	10/18/2004	12/10/2008	4105131.9	DE	Tape Drive Permanent Emulation Of Cd--drive For Disaster Recovery
82176485	Published		8/9/2004		102004038649.8	DE	Persistent Memory Device For Backup Process Checkpoint States
82178642	Granted	602004019955.9	10/21/2004	3/11/2009	4796093.5	DE	Controlling Power Supplied To A Circuit Using An Externally Applied Magnetic Field
82179539	Granted	102005056892	11/29/2005	9/9/2010	102005056892	DE	Electronic Module For System Board With Pass-thru Holes
82185473	Granted	102004063573	12/30/2004	2/12/2009	102004063573	DE	Providing A Flexible Protection Model In A Computer System By Decoupling Protection From Computer Privilege Level
82186205	Granted	602005003668.7	5/13/2005	12/5/2007	5752784.8	DE	Improvements In Message-based Communications
82187768	Granted	602005012839.5	8/31/2005	2/18/2009	5784661	DE	COMMUNICATIONS INFRASTRUCTURE FOR CONTENT DELIVERY USING EDGE SERVERS
82189079	Granted	602005021113.6	10/17/2005	5/5/2010	5300830.6	DE	Communication System And Method
82189409	Published		6/30/2005		102005030663.2	DE	System And Method For Operating Load Balancers For Multiple Instance Applications
82191764	Granted	602005010567	5/10/2005	10/22/2008	5748148.3	DE	Architecture And Methods For Computing With Nanometer Scale Reconfigurable Resistor Crossbars Switches (as Amended)
82197395	Granted	102005053727	11/10/2005	4/11/2013	102005053727.8	DE	Distributed Lock
82199936	Granted	602005017733.7	12/19/2005	11/18/2009	5027786.2	DE	Data Retrieval From Computing Systems
82200128	Granted	602005022590	10/21/2005	7/28/2010	5300845.4	DE	Distinguishing Between Network Entities Having The Same Address (as Amended)
82201808	Granted	602005009139.4	3/29/2005	8/20/2008	5300226.7	DE	Routing Element With Special Functions
82201868	Published		6/9/2006		112006001454.4	DE	Fiber-coupled Single Photon Source

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82205864	Granted	112005003037.7	10/31/2005	9/8/2011	112005003037.7	DE	Determining Highest Workloads For Nodes In An Overlay Network
82205879	Granted	112005003035	12/6/2005	9/15/2011	112005003035	DE	Splitting A Workload Of A Node
82206302	Granted	112006000650.9	3/9/2006	2/12/2009	112006000650.9	DE	Embedded Web-based Management Method
82209068	Granted	602005008022.8	3/10/2005	7/9/2008	5720467.9	DE	Server System, Server Device And Method Therefor
82209575	Granted	112007002361	10/12/2007	8/14/2013	112007002361.9	DE	Composite Material With Chirped Resonant Cells
82211357	Published		7/18/2006		102006033185	DE	Data Serializer
82211678	Published		10/9/2006		102006047656.5	DE	Memory Controller
82211861	Granted	602006012118	7/20/2006	2/3/2010	6787976.7	DE	Service Chaining
82212863	Granted	602007005468	4/25/2007	3/24/2010	7756009.2	DE	Method And System For Scaleable, Distributed, Differential Electronic-data Backup And Archiving
82214111	Granted	102007016060	4/3/2007	8/28/2014	102007016060.9	DE	Computer Workload Redistribution
82215131	Granted	602006006445.4	7/31/2006	4/22/2009	6300840.3	DE	Signalling Gateway
82215296	Granted	102007048505	10/10/2007	7/11/2013	102007048505.2	DE	Server Configured For Managing Power And Performance
82216118	Granted	602007001125.6	1/30/2007	5/13/2009	7762845.1	DE	Methods And Systems For Avoiding Transmission-channel Disruptions
82224350	Published		1/10/2008		102008003905.5	DE	SOFTWARE LICENSE AGREEMENT MANAGEMENT BASED ON TEMPORARY USAGE
82226600	Granted	112008000994	4/25/2008	8/8/2013	112008000994.5	DE	Active Control Of Time-varying Spatial Temperature Distribution
82226993	Published		1/10/2008		112008000147.2	DE	Capacitively Coupling Layers Of A Multilayer Device
82227035	Published		1/3/2008		112008000133.2	DE	Photonic Systems And Methods For Encoding Data In Carrier Electromagnetic Waves
82227776	Published		3/21/2008		112008000703.9	DE	Electromagnetic Radiation Amplification Systems Based On Photonic Gratings
82229978	Published		5/21/2008		112008001727.1	DE	END-TO-END FLOW CONTROL IN A NETWORK BACKGROUND
82230476	Granted	112007003645.1	10/25/2007	6/16/2011	112007003645.1	DE	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82230533	Granted	112008001441	6/4/2008	11/27/2014	112008001441.8	DE	OPTICAL INTERCONNECT
82233026	Published		9/19/2008		112008002888.5	DE	Hardware Device Interface Supporting Transaction Authentication
82233110	Granted	112008001665	5/21/2008	12/13/2012	112008001665.8	DE	Dynamic Converter Control For Efficient Operation
82233218	Granted	60103888.6	4/3/2001	6/16/2004	1926566.9	DE	USE OF A SINGLE THREAT TO SUPPORT MULTIPLE NETWORK CONNECTIONS FOR SERVER LOAD TESTING
82233296	Published		10/25/2007		112007003678.8-53	DE	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82234163	Granted	112008002429	9/8/2008	12/11/2014	112008002429.4	DE	Hybrid Integrated Source Of Polarization-entangled Photons
82234541	Published		7/16/2008		112008001961.4	DE	Free Space WDM Signal Detector

PATENT
REEL: 038498 FRAME: 0071

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82234607	Published		10/15/2008		112008002736.6	DE	METHOD AND SYSTEM OF TRACKING OPTICAL BEAM SHIFT
82234670	Granted	112008001351	6/25/2008	8/20/2015	112008001351.9	DE	Nanowire Photodiodes And Methods Of Making Nanowire Photodiodes
82234979	Granted	112008002059	7/30/2008	11/14/2013	112008002059	DE	Microresonator Systems And Methods Of Fabricating The Same
82235144	Published		1/31/2008		112008003655.1	DE	MODULAR DATA PROCESSING COMPONENTS AND SYSTEMS
82235165	Granted	112008002737	10/15/2008	5/21/2015	112008002737.4	DE	PLASMONIC HIGH-SPEED DEVICES FOR ENHANCING THE PERFORMANCE OF MICROELECTRONIC DEVICES
82235642	Granted	112008003826	4/25/2008	8/20/2015	112008003826	DE	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82235954	Application		2/20/2008		112008003746.9	DE	Mounting Assembly For Rack Equipment
82238330	Published		1/31/2008		112008003660.8	DE	OPTICAL TAPS FOR CIRCUIT BOARD-MOUNTED OPTICAL WAVEGUIDES
82238540	Published		1/30/2008		112008003659.4	DE	NANOSTRUCTURES AND METHODS OF MAKING THE SAME
82238651	Published		1/28/2008		112008003652.7	DE	DEPLOYMENT OF BOOT IMAGES IN DISKLESS SERVERS
82239458	Published		1/30/2008		112008003654.3	DE	PLASMON ENHANCED LIGHT-EMITTING DIODES
82241888	Published		3/4/2008		112008003759.0-56	DE	ANGLE SENSOR, SYSTEM AND METHOD EMPLOYING GUIDED-MODE RESONANCE
82242215	Granted	112008003784	3/28/2008	7/9/2015	112008003784.1	DE	FLEXIBLE OPTICAL INTERCONNECT
82242635	Published		4/2/2008		112008003798.1	DE	IMAGE-ROTATION PRISMS AND OPTICAL INTERCONNECTS EMPLOYING THE SAME
82242653	Granted	112008003796	4/4/2008	11/27/2014	112008003796.5	DE	BEAMSPLITTERS WITH OFFSET COMPENSATION
82242956	Granted	102008047612.9	9/17/2008	7/22/2010	102008047612.9	DE	Protected Portion Of Partition Memory For Computer Code
82245323	Published		5/7/2008		112008003848.1	DE	ARRAYS, SYSTEM AND METHOD FOR BI-DIRECTIONAL DATA TRANSMISSION
82251566	Granted	69624342.3	2/12/1996	10/16/2002	96906429.4	DE	System And Method For Electronic Transfer Of Funds Using An Automated Teller Machine To Dispense The Transferred Funds
82252394	Granted	69729722.5	2/24/1997	6/30/2004	97906748.5	DE	Automated System For Selecting An Initial Computer Reservation System
82252883	Granted	69733266.7	10/29/1997	5/11/2005	97946866.7	DE	Fail-safe Event Driven Transaction Processing System And Method
82253642	Granted	60214188.5	7/19/2002	8/23/2006	2752474.3	DE	Method And System For Weld Process Monitoring
82254581	Granted	60333657.4	9/30/2003	8/4/2010	3799309.4	DE	DRIVE-BY-WIRELESS VEHICLE CONTROL
82255022	Granted	60306425.6	12/17/2003	6/21/2006	3814189.1	DE	METHOD OF GUARANTEED DELIVERY OF SNMP TRAPS ACROSS A WIDE AREA NETWORK
82256270	Granted	602005023293.1	4/21/2005	9/1/2010	5737577.6	DE	INTERNET MICRO CELL
82256576	Granted	602005008062.7	5/3/2005	7/9/2008	5761078.4	DE	System And Method For Wireless Asset Tracking

PATENT
REEL: 038498 FRAME: 0072

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82266305	Granted	69635190	7/24/1996	9/14/2005	96925499.4	DE	METHOD AND APPARATUS FOR ASYNCHRONOUS PPP SYNCHRONOUS PPP CONVERSION
82267673	Granted	69805849.6	12/11/1998	6/5/2002	98967000.5	DE	A Forward Error Correction System For Packet Based Real Time Media
82269500	Granted	60024237.4	3/15/2000	11/23/2005	914989.9	DE	METHOD AND SYSTEM FOR NETWORK ADDRESS TRANSLATION WITH SAFETY FEATURES
82271174	Granted	69941048.7	11/30/1999	7/1/2009	99965063.3	DE	Telecommunication Conferencing System And Method
82274240	Granted	60317155.9	1/4/2003	10/31/2007	3000154.9	DE	Network units for use in and organisation of cascade systems
82276985	Granted	60318353	6/4/2003	1/2/2008	3253538.7	DE	Propagation Of Viruses Through An Information Technology Network
82277792	Granted	60214391.8	10/24/2002	8/30/2006	2354169.1	DE	Event Detection For Multiple Voice Channel Communications
82277807	Granted	60231384.8	7/5/2002	3/4/2009	2354105.5	DE	Improvements In Or Relating To DTMF Control
82392130	Granted	602005024894.3	7/11/2005	11/24/2010	5254326.1	DE	Allocation Of Speech Recognition Tasks And Combination Of Results Thereof
82576658	Granted	60334748.7	1/4/2003	10/27/2010	6023983.7	DE	Network Units For Use In And Organisation Of Cascade Systems
82578770	Granted	60223470	6/12/2002	11/14/2007	2254085	DE	Node Controller for a Data Storage System
82579294	Granted	602005020609.4	5/4/2005	4/14/2010	5746753.2	DE	Pattern Discovery In A Network Security System
82595682	Published		7/25/2008		112008003954.2-33	DE	Light-emitting Devices
82635092	Granted	602007015649.1	4/20/2007	7/6/2011	7755826	DE	Self-authenticating Quantum Random Bit Generators
82660021	Published		10/7/2008		112008004025.7	DE	Analyzing Events
82672026	Published		10/29/2008		112008004061.3	DE	Component Installation Guidance
82678696	Granted	602007015650.5	4/20/2007	7/6/2011	7755829.4	DE	Optical-based, Self-authenticating Quantum Random Number Generators
82729650	Granted	69943407.6	11/15/1999	5/4/2011	99309055.4	DE	Private Arbitrated Loop Self-test Management For A Fibre Channel Storage Enclosure
82738930	Granted	602008005935.9	10/14/2008	3/30/2011	8806753.3	DE	Data Processing Arrangements For Use In Data Communication Apparatus In Connection With Error Correction
82743451	Granted	60030761.1	7/10/2000	9/13/2006	947182.2	DE	Electrically Addressable Volatile Non-volatile Molecular-based Switching Devices
82743834	Granted	602006023349.3	4/25/2006	7/27/2011	6751576.7	DE	Three-dimensional Nanoscale Crossbars
82815953	Granted	602005030748.6	8/5/2005	10/19/2011	5778416.7	DE	System, Method And Apparatus To Obtain A Key For Encryption/decryption/data Recovery From An Enterprise Cryptography Key Management System
82847506	Granted	1859346	3/4/2005	1/11/2012	5733005.2	DE	A Method And Apparatus For Facilitating Pipeline Throughput
82855472	Granted	2301277	6/12/2009	10/12/2011	9761506.6	DE	Improvements In Or Relating To Communications

PATENT
REEL: 038498 FRAME: 0073

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82857868	Published		4/28/2009		112009004708,4	DE	Network Interface
82862041	Granted	2018734	4/18/2007	10/19/2011	7755684.3	DE	Providing Different Network Services To A Network Agent
82891339	Granted	112009004869	6/23/2009	11/13/2014	112009004869.2	DE	Power Distribution To Computer System
82892352	Granted	112009004875	6/19/2009	8/13/2015	112009004875.7	DE	Enclosure Power Controller
82900682	Granted	1324172	12/19/2002	2/8/2012	2258777.8	DE	System And Method For Securing Fiber Channel Drive Access In A Partitioned Data Library
82900880	Published		7/31/2009		112009004987,7	DE	COMMISSIONING OF SENSORS
82901621	Granted	602007019152.1	8/1/2007	11/30/2011	7836443.7	DE	Cooling Fan Module
82901715	Published		2/26/2010		112010005127.5	DE	MIXED-FLOW DUCTED FAN
82903957	Granted	602005033567,6	6/2/2005	4/11/2012	5104797.5	DE	Non Unique Fragment Number Identifiers
82936592	Published		10/5/2009		112009005197.9	DE	Adjusting A Transducer Head For Transferring Data
82937584	Granted	112010003170	3/24/2010	12/18/2014	112010003170.3	DE	Power Capping Feedback Normalization
82938231	Published		4/22/2010		112010003227	DE	System And Method For Balancing Input Current With Parallel Power Supplies
82938254	Granted	112009005129	12/28/2009	11/13/2014	112009005129.4	DE	A SYSTEM FOR PROVIDING PHYSICALLY SEPARATED COMPUTE AND I/O RESOURCES IN THE DATACENTER TO ENABLE SPACE AND POWER SAVINGS
82951110	Granted	60200801688.3	11/13/2008	6/27/2012	8851440.1	DE	Allocation Of Resources For Concurrent Query Execution Via Adaptive Segmentation
82997367	Granted	2096672	1/26/2007	8/3/2011	9006878.4	DE	MIXED-SCALE ELECTRONIC INTERFACE
83009779	Granted	60146607.1	3/26/2001	5/30/2012	1107514	DE	Method, Computer System, And Computer Program For Monitoring Objects Of An Information Technology Environment
83012850	Published		10/25/2010		112010005789.3	DE	POWER CONVERTER
83050466	Granted	836306	10/10/1996	7/4/2012	69638509	DE	System Providing For Multiple Virtual Circuits Between Two Network Entities
83057026	Granted	60244008.4	9/20/2002	11/7/2012	2768873.8	DE	A System And Method For A Multi-node Environment With Shared Storage
83087137	Granted	1805767	10/14/2005	12/5/2012	5810496.9	DE	Nanoscale Latches And Impedance-encoded Logic For Use In Nanoscale State Machines, Nanoscale Pipelines, And In Other Nanoscale Electronic Circuits
83092455	Granted	60146955.1	4/9/2001	8/8/2012	1921066.5	DE	Authentication And Encryption Method And Apparatus For A Wireless Local Access Network
83092464	Published		12/16/2010		112010006008,8	DE	A DETACHABLE LID
83111664	Published		6/22/2010		112010005609,9	DE	STORING DATA IN ANY OF A PLURALITY OF BUFFERS IN A MEMORY CONTROLLER
83115117	Granted	1825640	12/6/2004	9/5/2012	4805930.7	DE	Interconnect System For Supply Chain Management Of Virtual Private Network Services
83115128	Granted	2008220	3/21/2007	9/5/2012	7759004	DE	Service Management Framework
83119182	Published		5/20/2010		112010005583,1	DE	DATA CENTER COOLING

PATENT
REEL: 038498 FRAME: 0074

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0075

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83136101	Granted	2015553	7/10/2008	11/28/2012	8160071	DE	Reverse Billing Of Messages Delivered To A Mobile Device
83136236	Published		6/7/2010		112010005657.9	DE	MODULE AND PORT
83136244	Published		6/7/2010		112010005659.5	DE	MODULE AND PORT
83137888	Published		7/12/2010		112010005636,6	DE	FLEXIBLE DATA CENTER AND METHODS FOR DEPLOYMENT
83139207	Granted	1484682	6/2/2003	12/5/2012	3291306.3	DE	Method And Apparatus For Providing Support For An Electronic Device
83140716	Published		10/26/2010		112010005914,4	DE	BACKUP POWER SUPPLY SYSTEMS AND METHODS
83173966	Granted	2076836	10/25/2007	12/5/2012	7868580.7	DE	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security
83185275	Granted	69834845.1	12/17/1998	6/7/2006	98964021.4	DE	Tape Leader Pin Asembly And Method For Making The Same
83213141	Granted	2260364	4/2/2008	3/20/2013	8744891.6	DE	Converting Resets In Shared I/O System
83217121	Granted	1394679	8/30/2002	5/29/2013	2354124.6	DE	Improvements Relating To Technical Support Systems
83221477	Granted	1650990	10/20/2004	4/17/2013	4300698	DE	METHOD AND APPRATUS FOR ROUTING SHORT MESSAGES IN MOBILE TELEPHONE NETWORKS
83223392	Granted	2212887	10/23/2008	4/17/2013	8842157.3	DE	Three-dimensional Memory Module Architectures
83228576	Granted	2271992	4/28/2008	4/3/2013	8743362.9	DE	Method And System For Generating And Delivering Inter-processor Interrupts In A Multi-core Processor And In Certain Shared-memory Multi-processor Systems
83247588	Granted	69740590.7	12/8/1997	5/8/2013	97953075.5	DE	PUBLIC KEY CRYPTOGRAPHIC APPARATUS AND METHOD
83266005	Granted	2055073	7/10/2007	5/15/2013	7787333.9	DE	Interface Module
83273479	Published		12/22/2010		112010006027.4	DE	Mosfet Switch Gate Driver, Mosfet Switch System And Method
83277111	Granted	1929818	7/18/2006	6/5/2013	6787730.8	DE	Automated Application Server (AS) Permissions Provisioning
83439109	Granted	1465472	10/24/2003	7/31/2013	3024381	DE	Media Storage Systems And Control Panel For Use Therewith
83505404	Granted	2313830	8/13/2008	10/2/2013	8795330.3	DE	Dynamic Utilization Of Power-down Modes In Multi-core Memory Modules
83543105	Published		4/27/2011		112011104984.6	DE	Rotational Lockout
83683794	Granted	2427994	10/26/2009	9/25/2013	9743889.9	DE	Method And Apparatus For Creating Entanglements And Quantum Repeater Utilising The Same
83693679	Published		6/30/2011		112011105326.6	DE	A MEMORY MODULE THAT INCLUDES A MEMORY MODULE COPY ENGINE FOR COPYING DATA FROM AN ACTIVE MEMORY DIE TO A SPARE MEMORY DIE
83694929	Granted	2013708	4/20/2007	10/16/2013	7775953.8	DE	OPTICAL-BASED, SELF-AUTHENTICATING QUANTUM RANDOM NUMBER GENERATORS
83721498	Granted	2011042	4/25/2007	11/6/2013	7756008.4	DE	Distributed Differential Store With Non-distributed Objects And Compression-enhancing Data-object Routing

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83748540	Granted	1858266	5/18/2006	11/13/2013	6300494.9	DE	Method And Gateway For Sending Subsystem Allowed And Subsystem Prohibited SCCP Management Messages For Distributed SCCP Application Servers
83781699	Granted	2311094	7/31/2008	1/1/2014	8794914.5	DE	MULTI-LAYER RECONFIGURABLE SWITCHES
83785185	Granted	602007034891.9	3/30/2007	1/22/2014	7300912.8	DE	SIGNALING STATUS INFORMATION OF AN APPLICATION SERVICE
83787163	Granted	2288996	4/28/2008	1/29/2014	602008030187.7	DE	Virtual-interrupt-mode Interface And Method For Virtualizing An Interrupt Mode
83793383	Published		10/25/2011		112011105760.1	DE	DRIVE CARRIER LIGHT SOURCE CONTROL
83800545	Granted	2031822	12/12/2002	2/12/2014	8017098.8	DE	System And Method For Managing Wireless Vehicular Communications
83815923	Granted	2011012	4/25/2007	3/5/2014	602007035374.2	DE	Content-based, Compression-enhancing Routing In Distributed, Differential Electronic-data Storage Systems
83854731	Published		10/27/2011		112011105774.1	DE	SHIFTABLE MEMORY SUPPORTING IN-MEMORY DATA STRUCTURES
83874027	Granted	2248230	2/29/2008	4/16/2014	8731153.6	DE	Modular System And Retractable Assembly For Electronic Devices
83874316	Granted	2255291	2/18/2008	4/16/2014	8730074.5	DE	Systems And Methods Of Communicatively Coupling A Host Computing Device And A Peripheral Device
83874491	Granted	1741139	4/25/2005	7/16/2014	5740296.8	DE	Misalignment-tolerant Methods For Fabricating Multiplexing/demultiplexing Architectures
83881516	Granted	1920586	8/7/2006	4/9/2014	6800866.3	DE	Screening Of Calls In A Packet-based Network
83881930	Published		10/28/2011		112011105706.7	DE	ROW SHIFTING SHIFTABLE MEMORY
83929725	Granted	1986409	3/13/2008	5/7/2014	8004715.2	DE	A Method, Apparatus And Software For Providing Communications Between A Packet Switched Network And A Public Switched Telephone Network
83933045	Published		12/23/2011		112011105886.1	DE	MANAGING A FACILITY
83984200	Published		1/6/2012		112012005120.3	DE	CONNECTOR MODULES HAVING OPTICAL CONNECTORS MOVEABLE BETWEEN A RETRACTED POSITION AND AN EXTENDED POSITION
83985778	Granted	2368268	12/23/2008	7/9/2014	8879253.6	DE	Memristive Device And Methods Of Making And Using The Same
83995642	Published		1/31/2012		112012005617.5	DE	MEMORY MODULE BUFFER DATA STORAGE
83995688	Published		1/31/2012		112012005603.5	DE	REDUCING CURRENT HARMONICS AT LIGHT LOADS
83996535	Published		4/27/2012		112012005628	DE	Similarity Score Lookup and Representation
84016658	Granted	1977572	1/23/2007	8/27/2014	7762485.6	DE	Compute Clusters Employing Photonic Interconnections For Transmitting Optical Signals Between Compute Cluster Nodes
84022795	Granted	2374250	1/19/2009	10/29/2014	9838521.4	DE	Load Balancing

PATENT
REEL: 038498 FRAME: 0076

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84058057	Granted	2460105	7/30/2009	10/1/2014	9847912.4	DE	Constructing A Bayesian Network Based On Received Events Associated With Network Entities
84081214	Application		7/31/2012		112012006768.1	DE	Concept Categorization
84084091	Published		4/26/2012		112012006265.5	DE	MULTICAST ROUTER TOPOLOGY DISCOVERY
84088599	Published		4/23/2012		112012006119.5	DE	STATISTICAL ANALYSIS USING A GRAPHICS PROCESSING UNIT
84103204	Published		7/31/2012		112012006763	DE	WIRELESS ACCESS POINT CELL ID INSERTION IN FRAME HEADER
84103238	Published		7/31/2012		112012006642.1	DE	BANDWIDTH GUARANTEE AND WORK CONSERVATION
84103276	Published		7/31/2012		112012006766.5	DE	VIRTUAL MACHINE DATA PACKET ENCAPSULATION AND DECAPSULATION
84105774	Granted	2480977	9/25/2009	11/5/2014	9849912.2	DE	MAPPING NON-PREFETCHABLE STORAGE LOCATIONS INTO MEMORY MAPPED INPUT/OUTPUT SPACE
84115805	Granted	2486487	10/7/2009	12/3/2014	9850311.3	DE	Notification Protocol Based Endpoint Caching Of Host Memory
84122549	Published		6/29/2012		112012006536	DE	CAPACITY PLANNING SYSTEM
84140169	Published		10/25/2012		112012006649.9	DE	EVENT CORRELATION
84155341	Granted	2497023	11/2/2009	2/25/2015	9850993.8	DE	Multiprocessing Computing With Distributed Embedded Switching
84172782	Granted	2350842	10/30/2008	2/25/2015	8877865.9	DE	Redundant Array Of Independent Disks (RAID) Write Cache Sub-assembly
84210219	Published		10/18/2012		11 2012 006 928.5	DE	COMMUNICATING TUPLES IN A MESSAGE
84211161	Granted	2248029	2/26/2008	4/8/2015	8726109.5	DE	Method And Apparatus For Performing A Host Enumeration Process
84212968	Granted	2080048	5/4/2009	3/4/2015	7839603.3	DE	Photonic-interconnect Systems For Reading Data From Memory Cells And Writing Data To Memory Integrated Circuits
84223072	Application		6/11/2015		102015210734.5	DE	MANAGEMENT OF CRYPTOGRAPHIC KEYS
84251696	Granted	2143259	1/29/2008	5/27/2015	8708351.5	DE	Method And System For Facilitating Multi-point Communications
84290589	Granted	2622487	9/28/2011	7/15/2015	11833057	DE	HOST BASED WRITE ORDERING FOR ASYNCHRONOUS REPLICATION
90037714	Granted	2176773	7/7/2008	9/2/2015	8808136.9	DE	Data Packet Processing Method For A Multi Core Processor
90063371	Application		9/30/2008		8824049.4	DE	Authentication Of Services On A Partition
90064662	Granted	2465030	8/11/2009	10/7/2015	9848324.1	DE	Enclosure Airflow Controller
82859768	Published		4/27/2009		112009004565,0	DE	Electric Power Conversion System Having An Adaptable Transformer Turns Ratio For Improved Efficiency
82912586	Published		6/25/2009		112009005003.4	DE	Systems And Methods For Delivering Power
83166374	Granted	112010005872	9/13/2010	12/11/2014	112010005872.5	DE	POWER RAIL REGULATOR SYSTEM
83996153	Published		4/20/2012		112012006250.7	DE	OVERVOLTAGE PROTECTION SYSTEMS AND METHOD

PATENT
REEL: 038498 FRAME: 0077

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82231832	Granted	112008001875	5/21/2008	8/1/2013	112008001875.8	DE	A Modular High-density Computer System
83629029	Published		6/27/2011		112011105205.7	DE	COOLING A SECONDARY COMPONENT BY DIVERTING AIRFLOW USING AN AIR CHANNEL ASSOCIATED WITH A THERMAL DISSIPATION DEVICE THAT COOLS A PRIMARY COMPONENT
82176578	Granted	112004002834	4/23/2004	41249	112004002834.5	DE	Diagnostic Apparatus And Method
82234637	Published		6/30/2008		102008030875.7	DE	Datacenter Workload Evaluation
83159856	Published		9/15/2010		112010005798.2	DE	COMPUTER SYSTEM WITH FABRIC MODULES
82180946	Granted	102005047992.8	10/6/2005	10/8/2009	102005047992.8	DE	Systems And Methods Of Balancing Crossbar Bandwidth
82126883	Granted	69631106.2	10/4/1996	37972	96307279.8	DE	ON-LINE DISK ARRAY RECONFIGURATION
82194995	Published		5/13/2005		112005001050.3	DE	Providing An Alternative Caching Scheme At The Storage Area Network Level
83853746	Published		10/25/2011		112011105660.5	DE	DRIVE CARRIER TOUCH SENSING
82128254	Granted	69732268.8	6/4/1997	1/19/2005	97303808.6	DE	AUTOMATICALLY PREFETCHING DATA IN A COMP-
82275404	Granted	69801477.4	3/4/1998	8/29/2001	98910176.1	DE	System And method For Determining End to End Characteristics Of A Data Communications Channel
82268351	Granted	69940341.3	4/7/1999	1/21/2009	99915315.8	DE	Point-To-Point Protocol With A Signaling Channel
82721360	Granted	69842202.3	5/28/1998	3/30/2011	98923848	DE	Method And Apparatus For Providing Security In A Star Network Connection Using Public Key Cryptography
83242870	Granted	EP2077029	9/18/2007	5/1/2013	7842678	DE	IDENTIFYING A SUBNET ADDRESS RANGE FROM DNS INFORMATION
82037354	Granted	60013037.1	5/23/2000	8/18/2004	111113.7	DE	Laterally Expandable Modular Data Storage System
82067759	Granted	69831790.4	5/12/1998	10/5/2005	98303691.4	DE	Read After Write
82068317	Granted	69802969	4/1/1998	12/12/2001	98913957.1	DE	AFN Append Point
82644403	Granted	60335237.5	10/9/2003	12/8/2010	3022910.8	DE	Apparatus For Sensing The Presence Of An Inductive Load Driven By A Pulse Width Modulated Signal
83261201	Granted	913823	10/30/1998	5/22/2013	98308892.3	DE	Data encoding method and apparatus
82251992	Granted	69934894.3	7/15/1999	39099	99934061.5	DE	System And Method For Selectively Defining Access To Application Features
82173392	Published		4/19/2006		102006018232.4	DE	Quality Of Service In IT Infrastructures
82060082	Granted	60106467.4	12/14/2001	10/13/2004	1129865	DE	Method, System And Computer Program For Monitoring Objects In An It Network
82182506	Granted	102005053688.3	11/10/2005	10/23/2008	102005053688.3	DE	Method And Mechanism For Identifying An Unmanaged Switch In A Network
82219844	Granted	602006008412.9	12/29/2006	8/12/2009	6027116	DE	Determining Data Link (L2) Network Paths
82182011	Granted	602004006947.7	11/8/2004	6/13/2007	4256917.8	DE	Non-platform-specific Unique Identifier Generation
82062512	Granted	60121569.9	5/8/2001	7/19/2006	1925734.4	DE	Operating A Ommunications Infrastructure On A Pre-payment Basis
82070945	Granted	60139485.2	10/31/2001	8/5/2009	1410142.2	DE	Data Processing System And Method
82071065	Granted	60129022.4	10/30/2001	6/20/2007	1410140.6	DE	Communication System And Method

PATENT
REEL: 038498 FRAME: 0078

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82212596	Granted	602006019223.1	6/30/2006	12/29/2010	6300735.5	DE	SIGNALLING SYSTEM AND METHOD
82230893	Granted	602008002011.8	4/11/2008	8/4/2010	8103499.3	DE	REDUCING A NUMBER OF REGISTRATION TERMINATION MESSAGES IN A NETWORK FOR CELLULAR DEVICES
82910731	Granted	2039121	7/10/2007	12/21/2011	7787337	DE	METHOD OF PROVIDING SERVICES IN A NETWORK, NETWORK ELEMENT
83013559	Granted	1885138	7/11/2006	41066	6300790	DE	Signalling Gateway
84191607	Application	2166703	9/21/2009		9170876.8	DE	Method And System For Managing A Hierarchical Information Base With An Application Layer Protocol
84196124	Granted	2597899	10/13/2011	4/1/2015	11306325.9	DE	Optimizing telephony numbers for Machine 2 Machine Communications using Round Robin Assignment Technique
82098347	Granted	102004012056	3/11/2004	4/26/2012	102004012056	DE	Systems And Methods For Monitoring Resource Utilization And Application Performance
82116140	Granted	69613722.4	1/15/1996	7/11/2001	96300261.3	DE	METHOD AND APPARATUS FOR PREVENTING INADVERTENT CHANGES TO SYSTEM-CRITICAL FILES IN A COMPUTING SYSTEM
82208789	Granted	602006012567.4	3/20/2006	3/3/2010	6111395.7	DE	Method And Apparatus For Direct Input And Output In A Virtual Machine Environmeent
82255862	Granted	602004006312.6	10/29/2004	5/2/2007	4796875.5	DE	METHOD AND SYSTEM FOR DETECTING A BOUNDARY CROSSING FOR EMBEDDED DEVICES IN VEHICLE
82190936	Granted	102005023128.4	5/19/2005	3/5/2009	102005023128.4	DE	System And Method For Sharing Storage Resources Between Multiple Files
84080916	Application		7/30/2012		112012006749.5	DE	SEARCH METHOD
82105841	Granted	602004001273.4	4/21/2004	6/21/2006	4252330.8	DE	Cryptographic Method And Apparatus
82107155	Granted	602004008877.3	1/27/2004	9/12/2007	4785812.1	DE	Controlled Input Molecular Crossbar Latch
82214726	Granted	602007005156.8	10/16/2007	3/3/2010	7852786.8	DE	CROSSBAR-MEMORY SYSTEMS WITH NANOWIRE CROSSBAR JUNCTIONS
82218842	Granted	602007005098.7	1/26/2007	3/3/2010	7709841.6	DE	Mixed-scale Electronic Interface
82223525	Published		4/18/2008		112008000988	DE	Computational Nodes And Computational-node Networks That Include Dynamical-nanodevice Connections
90031087	Granted	2686883	3/29/2011	7/1/2015	11862142.4	DE	DUAL-PLANE MEMORY ARRAY
82080059	Granted	60308144.4	1/15/2003	9/6/2006	3707402.8	DE	A Method For Searching Nodes For Information
82198430	Granted	602005013999	11/18/2005	4/15/2009	5851812.7	DE	Composite Material With Controllable Resonant Cells
82207415	Granted	602006009536.8	7/21/2006	9/30/2009	6788057.5	DE	Method And Apparatus For Electromagnetic Resonance Using Negative Index Material
82235009	Granted	112008002822	10/23/2008	9/22/2015	112008002822.2	DE	Three-dimensional Die Stacks With Inter-device And Intra-device Optical Interconnect
82238135	Granted	112008003647	1/30/2008	5/21/2015	112008003647	DE	OPTICAL INTERCONNECTS
82245005	Published		5/6/2008		112008003845.7	DE	SYSTEM AND METHOD FOR MICRO RING LASER

PATENT
REEL: 038498 FRAME: 0079

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82595664	Published		7/14/2008		112008003936.4	DE	HYBRID GUIDED-MODE RESONANCE FILTER AND METHOD EMPLOYING DISTRIBUTED BRAGG REFLECTION
83087121	Granted	2047319	7/11/2007	11/7/2012	7796825.3	DE	Compact Systems For Generating Polarization-entangled Photons
83988221	Granted	2321934	10/28/2009	6/25/2014	9752028.2	DE	Distributed Packet Flow Inspection and Processing
82190687	Granted	102005032734	7/13/2005	6/6/2013	102005032734.6	DE	Index Extraction From Documents
82245629	Published		4/30/2008		112008003832.5	DE	Intentionally Skewed Optical Clock Signal Distribution
83087144	Granted	2215539	11/27/2007	1/2/2013	7871581	DE	SYSTEM SYNTHESIS TO MEET AN EXERGY LOSS TARGET VALUE
83808774	Granted	2245516	12/21/2007	2/12/2014	7869793.5	DE	Moisture Content Control System
82004384	Granted	60319688.8	4/16/2003	3/12/2008	3724032.2	DE	Atmospheric Control Within A Building
82084478	Granted	602004006569.2	3/3/2004	5/23/2007	4004995.9	DE	Method And Apparatus For Managing Device Reservation (as Amended)
82088099	Granted	60326440.9	12/29/2003	3/4/2009	3029948.1	DE	Cartridge-handling Apparatus For A Media Storage System
82072304	Granted	10008674.8	2/24/2000	5/24/2006	10008674.8	DE	Electronic Apparatus Having Improved Diagnostic Interface
83618372	Published		5/25/2011		112011105140.9	DE	BLADE COMPUTER SYSTEM
83787626	Granted	2460074	7/31/2009	12/31/2014	9847921.5	DE	PROVIDING FAULT-TOLERANT SPREAD SPECTRUM CLOCK SIGNALS IN A SYSTEM
82103645	Granted	602004019326.7	6/28/2004	2/4/2009	4015147.4	DE	Method And Apparatus For Reducing Soft Errors
82127624	Granted	69721381.1	6/4/1997	5/2/2003	97303797.1	DE	EXPANSION CARD INSERTION AND REMOVAL
83092488	Granted	112010005672	6/18/2010	2/12/2015	112010005672.2	DE	Systems And Methods For Determining Electrical Connectivity
82258040	Published		2/20/2009		112009000411.3	DE	Method And System For Implementing A Virtual Storage Pool In A Virtual Environment
82786343	Granted	69842332.1	3/30/1998	7/13/2011	98302442.3	DE	APPARATUS AND METHOD FOR STORAGE SUBSYSTEM DRIVE MOVEMENT AND VOLUME ADDITION
83538876	Granted	2255263	2/20/2008	7/31/2013	8730240.2	DE	Redriver With Two Reference Clocks And Method Of Operation Thereof
83928530	Granted	2359534	12/15/2008	5/7/2014	8879013.4	DE	Detecting An Unreliable Link In A Computer System
82036907	Granted	69928603.4	4/8/1999	11/30/2005	99302754.9	DE	Link Control State Machine For Controlling A Media Access Controller, A Serial Physical Layer Device And A Media Independent Interface Physical Layer Device
82275209	Granted	69629660.8	9/6/1996	8/27/2003	69629660.8	DE	Transparent Support Of Protocol And Data Compression Features For Data Communication
82233317	Granted	112007003693	10/25/2007	5/15/2014	112007003693.1	DE	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
81978719	Granted	60131348.8	4/5/2001	11/14/2007	1108610.5	DE	Device Detection System And Method
82715606	Granted	602004031978.3	11/5/2004	3/23/2011	4800797.5	DE	PREVENTING IDENTITY THEFT IN ELECTRONIC COMMUNICATIONS

PATENT
REEL: 038498 FRAME: 0080

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82170953	Granted	10341692.7	9/8/2003	1/11/2007	10341692.7	DE	Object Copy And Object Mirror
84067465	Granted	2324440	8/7/2008	10/8/2014	8797322.8	DE	Providing Data Structures For Determining Whether Keys Of An Index Are Present In A Storage System
83120019	Granted	2361465	10/15/2008	8/29/2012	8875183.9	DE	Retrieving Configuration Records From A Configuration Management Database
84119241	Granted	1748621	7/5/2006	12/31/2014	6253519	DE	Computer System Polling
82070621	Granted	60039975.3	6/19/2000	8/20/2008	60039975.3	DE	Process For Controlling Devices Of An Intranet Network Through The Web
82100462	Granted	60216772.8	10/22/2002	12/13/2006	2354168.3	DE	Method And Apparatus For Operating A Telecommunication Platform
82186748	Granted	60330350.1	10/30/2003	12/2/2009	3292712.1	DE	Communnication Method And Apparatus
82211903	Granted	602006002122.4	4/3/2006	8/6/2008	6749186	DE	Multimedia Transfer For Wireless Networks
82654152	Granted	602006022697.7	7/20/2006	6/22/2011	6787972.6	DE	Telephony And Web Services Coordination
82675314	Granted	602004033546	5/18/2004	9/14/2011	4733568.2	DE	Method And Apparatus For Load-balancing.
82683515	Granted	60144865	7/6/2001	6/29/2011	1410085.3	DE	Multi-service Telecommunications System And Associated Methods
82991031	Granted	1725065	5/11/2006	5/23/2012	6113818.6	DE	Controlling Access To Communication Services
83538246	Granted	1592217		10/16/2013	602004043575.9	DE	Method And Apparatus For Providing A Specialized Resource Function In A Telephone Network
83809804	Granted	1676420	7/6/2004	3/5/2014	4766134.3	DE	Improvements In Or Relating To Fault Tolerant Systems
84118594	Granted	2277311	5/20/2009	2/25/2015	9751488.9	DE	Apparatus And Method For Recording Video Data
81967736	Granted	60105326.5	1/11/2001	9/8/2004	1300224.1	DE	Lightweight Public Key Infrastructure Employing Disposable Certficates
82103708	Published		10/9/2003		10346923	DE	A Method For Protecting Security Of Intrusion Detection Sensors
82004195	Granted	40111120.2	12/19/2001	9/6/2002	40111120.2	DE	Electrical Contact
82277960	Granted	60314636.8	10/21/2003	6/27/2007	3292628.9	DE	Methods Relating To The Monitoring Of Computer Systems
82257104	Granted	602007006944	4/27/2007	6/2/2010	7761477.4	DE	In-transit Two-way Route Communication Between A Handheld Positioning Device And A Service Provider
82042217	Granted	60020907.5	4/18/2000	6/22/2005	303272.9	DE	Modular Data Storage System Utilizing A Wireless Cartridge Access Device
82253486	Granted	60230304.4	10/15/2002	12/10/2008	2793789.5	DE	Method And System For Communicating Telematics Messages
82392461	Granted	60238204.1	9/18/2002	11/3/2010	2775864.8	DE	Monitoring In Component-based Systems At Runtime (as Amended)
83996453	Published		4/30/2012		112012005609.4	DE	CONTROL SIGNAL BASED ON A COMMAND TAPPED BY A USER
84079676	Published		7/30/2012		112012006753.3	DE	GENERATING AND PARTITIONING POLYNOMIALS
82065194	Granted	60101142.2	3/2/2001	11/5/2003	1301921.1	DE	Beacon Based Web Services II
82208222	Granted	602006001680.8	4/27/2006	7/9/2008	6113237.9	DE	Network Management And Administration

PATENT
REEL: 038498 FRAME: 0081

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82277207	Granted	60326027.6	7/1/2003	1/28/2009	3254190.6	DE	Authentication Method And Apparatus Using Pairing Functions For The Elliptic Curves Based Cryptosystems
82184183	Granted	602005007722.7	1/28/2005	6/25/2008	5712551	DE	Split-stream Multi-access Point Data Transmission (as Amended)
82226330	Granted	112007002328	10/3/2007	12/1/2011	112007002328.7	DE	Electrically Actuated Switch
82991744	Granted	1872370	4/19/2006	7/11/2012	6758437.5	DE	Multiplexer Interface To A Nanoscale-crossbar
83253501	Granted	2361438	10/29/2008	5/15/2013	8877855	DE	Electrically Actuated Device And Method Of Controlling The Formation Of Dopants Therein
82172573	Granted	602005016661	4/28/2005	9/16/2009	5738071.9	DE	Assigning Wan Links To Subflows Based On Wan Link Characteristics And Application Preferences
82226636	Published		1/31/2008		112008000304.1	DE	Electronic And Optical Circuit Integration Through Wafer Bonding
82230320	Granted	112008001648	6/25/2008	10/24/2013	112008001648.8	DE	Micro-electro-mechanical Systems And Photonic Interconnects Employing The Same
82230512	Published		7/30/2008		112008001951.7	DE	Optical Interconnect
82230569	Published		7/16/2008		112008001619.4	DE	Optical Device Including Waveguide Grating Structure
82232507	Published		7/30/2008		112008002076	DE	System And Methods For Routing Optical Signals
82233446	Published		10/15/2008		112008002756	DE	OPTICAL INTERCONNECT SYSTEM PROVIDING COMMUNICATION BETWEEN COMPUTER SYSTEM COMPONENTS
82235258	Published		7/16/2008		112008002003.5	DE	Plasmon-enhanced Electromagnetic-radiation-emitting Devices And Methods For Fabricating The Same
82239497	Published		1/31/2008		112008003653.5	DE	FREE SPACE OPTICAL INTERCONNECT
82243745	Published		5/5/2008		112008003839.2	DE	NANOWIRE-BASED PHOTODIODE
82405545	Published		5/9/2008		112008003858.9-51	DE	Proximity Free Space Optical Interconnect
82576820	Published		6/9/2008		112008003901.1	DE	Cylindrical Resonators For Optical Signal Routing
84038205	Granted	602009026774.4	1/9/2009	9/17/2014	9837743.5	DE	CONFIGURABLE POINT-TO-POINT OPTICAL COMMUNICATIONS SYSTEM BETWEEN SERVERS
82729655	Granted	60338205.3	11/7/2003	8/24/2011	3783255.7	DE	Active Network Defense System and Method
82802868	Granted	60337893.5	10/11/2003	8/3/2011	3256431.2	DE	Propagation Of Viruses Through An Information Technology Network
82216589	Published		6/12/2007		112007001135.1	DE	Sharing Data Between Partitions In A Partitionable System
83881892	Published		10/27/2011		112011105670.2	DE	SHIFTABLE MEMORY EMPLOYING RING REGISTERS
83884016	Granted	1625501	5/13/2004	4/16/2014	4785554.9	DE	Read, Write, And Recovery Operations For Replicated Data
84210536	Granted	EP1909178	6/6/2007	4/8/2015	7252277.4	DE	Transactional Shared Memory System And Method Of Control
82938279	Published		3/22/2010		112010003211,4	DE	MODULAR DATA CENTER
82810951	Granted	60240930.6	1/3/2002	8/31/2011	2250028.4	DE	A Method For Sensing Humidity In A Tape Library
83087109	Granted	942427	2/24/1999	6/27/2012	99301353.1	DE	EOD IN MIC
83240731	Granted	69843017.4	10/30/1998	5/1/2013	98308912.9	DE	Data Encoding Scheme

PATENT
REEL: 038498 FRAME: 0082

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82055816	Granted	10125039.8	5/22/2001	10/6/2005	10125039.8	DE	Imaging Device Testing With Thermographic Sheet Material
82164764	Granted	69633808.4	3/22/1996	11/10/2004	69633808.4	DE	METHOD AND APPARATUS FOR CONDITIONING TIMED PROGRAM INDEPENDENT OF TRANSPORT TIMING
82844224	Published		4/29/2009		112009004714,9	DE	Printed Circuit Board Cooling Assembly
82938293	Published		12/2/2009		112009005186.3	DE	SIGNAL SENSING DEVICES AND CIRCUIT BOARDS
82233746	Published		5/21/2008		112008001945.2	DE	TAMPER-EVIDENT CONNECTOR
84022112	Granted	602008033965.3	3/31/2008	8/20/2014	8742453.7	DE	Automated Power Topology Discovery
82102142	Granted	102005008778	2/25/2005	2/27/2014	102005008778.7	DE	Bus Configuration Multiplexer
81986516	Granted	60202618	8/13/2002	1/12/2005	2757123.1	DE	Asymmetric Wireless Communication System Using Two Different Radio Technologies
82266587	Granted	69836271.3	5/28/1998	10/25/2006	98924930.5	DE	Multilayer Firewall System
81978899	Granted	60206540.2	1/28/2002	10/12/2005	2250543.2	DE	Apparatus And Method For Retrieving Data Cartridge Information External To A Media Storage System
82005002	Granted	60332514.9	7/11/2003	5/12/2010	3254395.1	DE	Intrusion Monitors For Media Storage Systems
82029095	Granted	19828619.8	6/26/1998	10/24/2002	19828619.8	DE	Tape Cartridge Reel Lock
82047137	Granted	10113779.6	3/21/2001	1/12/2006	10113779.6	DE	Positioning System For Removable Data Storage Cartridges
82047143	Granted	10164927.4	3/21/2001	11/25/2010	10164927.4	DE	Positioning System For Removable Data Storage Cartridges
82901625	Granted	60241169,6	12/6/2002	9/28/2011	2786899.1	DE	Network User Authentication System And Method
83164610	Granted	1846867	1/20/2006	1/9/2013	6719098.3	DE	Non-invasive Method And System For Automated Administration Of Diverse Security Constrained Servers
83810196	Granted	1884872	7/13/2007	2/26/2014	7013794.8	DE	Method And System For Using Application Development Data To Instantiate Support Information
82060064	Granted	60130434.9	5/10/2001	9/12/2007	1111444.4	DE	Method, Computer System And Computer Program For Monitoring Objects In An IT Network
82584176	To Be Filed					DE	Hierarchical Policy Management
82062557	Granted	60037972.8	10/10/2000	2/6/2008	308910.9	DE	E-appliances
82097456	Granted	10260926.8	12/20/2002	12/1/2005	10260926.8	DE	Communication Method
82198598	Granted	602005008186	1/31/2005	7/16/2008	5300075.8	DE	Signalling Point
82281443	Granted	602005000679.6	1/5/2005	3/14/2007	5250014.7	DE	Method And System For Modelling A Communications Network
82603034	Granted	602004031637.7	7/23/2004	3/2/2011	4766305.9	DE	Methods And Apparatus For Controlling Signalling Gateways
82924038	Granted	602006026977.3	1/13/2006	1/11/2012	6704619.3	DE	IMPROVEMENTS IN OR RELATING TO COMMUNICATION SYSTEMS
83004404	Granted	1202176	10/31/2000	4/25/2012	410131.7	DE	Message-based Software System
83192845	Granted	602006034751	4/10/2006	2/27/2013	6743275.7	DE	IMPROVEMENTS IN OR RELATING TO COMMUNICATIONS
83194262	Granted	2074771	10/1/2007	2/27/2013	7820748.7	DE	Management Of Access To Address Data
82128179	Granted	69720594	6/4/1997	4/9/2003	97303798.9	DE	CONNECTING EXPANSION CARDS
84140185	Published		10/26/2012		112012006651	DE	PROCESSING STREAMING DATA WITH OPEN EXECUTORS
82198535	Granted	602005003984.8	6/6/2005	12/26/2007	5104894	DE	Cryptographic Method And Apparatus

PATENT
REEL: 038498 FRAME: 0083

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83209015	Published		11/1/2010		112010005970.5	DE	STORAGE ELEMENT READING USING RING OSCILLATOR
82077359	Granted	69734059.7	4/24/1997	8/24/2005	97922456.5	DE	A System And Method For Secure Network Electronic Payment And Credit Collection
82253228	Granted	60220662.6	4/23/2002	6/13/2007	2726784.8	DE	Method And System For Reporting XML Data Based On Precomputed Context And A Document Object Model
82128614	Granted	69718859	8/13/1997	2/5/2003	97306154.2	DE	A SERVER CONTROLLER CONFIGURED TO SNOOP AND RECEIVE A DUPLICATIVE COPY OF DISPLAY DATA PRESENTED TO A VIDEO CONTROLLER
82094651	Granted	602004010270.9	7/22/2004	11/21/2007	4743493.1	DE	Improvements Relating To Quantum Cyptography
82234685	Published		9/8/2008		112008002444.8	DE	Electrical Contact Apparatus For Optical Waveguides
82242674	Published		4/2/2008		112008003797.3	DE	PRISM BEAMSPLITTERS
82245485	Published		5/7/2008		112008003853.8	DE	OPTICAL ENGINE FOR POINT-TO-POINT COMMUNICATIONS
82634146	Published		8/26/2008		112008003994.1	DE	Tunable Nanowire Resonant Cavity For Optical Modulation
83553806	Granted	2080046	10/16/2007	9/4/2013	7852817.1	DE	Photonic-based Interconnects For Interconnecting Multiple Integrated Circuits
82002878	Granted	10231160	7/10/2002	10/11/2012	10231160.9	DE	Loadshedding Uninterruptible Power Supply
83053690	Granted	2292082	4/14/2008	8/1/2012	8780524.8	DE	Fan For Computer Element In The Service Position
82097834	Granted	60305436.6	11/21/2003	5/24/2006	3812445.9	DE	Cooling System With Evaporators Distributed In Series
82223507	Published		3/21/2008		112008000800	DE	Three-dimensional Crossbar Array Systems And Methods For Writing Information To And Reading Information Stored In Three-dimensional Crossbar Array Junctions
82654392	Granted	602004032628.3	5/28/2004	5/11/2011	4753796.4	DE	Air Re-circulation Index
83862779	Published		11/11/2011		112011105708.3	DE	MANAGING AIRFLOW PROVISIONING
84088675	Published		4/30/2012		112012006296.5	DE	NOTIFICATION BASED ON AN EVENT IDENTIFIED FROM VIBRATION DATA
82277129	Granted	60316861.2	3/28/2003	10/17/2007	3251967	DE	Method And Apparatus For Encrypting/decrypting Data
82977451	Granted	1271313	6/12/2002	8/8/2012	2254078.5	DE	Performing Secure And Insecure Computing Operations In A Compartmented Operating System
83835723	Granted	2126770	1/21/2008	3/19/2014	8702121.8	DE	TRUSTED COMPUTING ENTITIES
82090712	Granted	602004020144.8	1/19/2004	3/25/2009	4001012.6	DE	Modular Storage Library With Automatic Configuration
83185305	Granted	69840555.2	12/17/1998	2/11/2009	6011296.8	DE	Tape Leader Pin Assembly And Method For Making The Same
83593525	Granted	913824	10/30/1998	8/14/2013	98308901.2	DE	Generating appendable points in encoded data
83821050	Granted	1592004	4/27/2005	3/12/2014	602005042906.9	DE	METHOD AND APPARATUS FOR RECORDING DATA ONTO A RECORDING MEDIUM INCLUDING WARNING OF THE APPROACH TO AN END OF MEDIUM POSITION
81978518	Granted	10205762.1	2/12/2002	4/13/2006	10205762.1	DE	Method And Structure For Characterization Of Bayesian Belief Networks

PATENT
REEL: 038498 FRAME: 0084

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82071041	Granted	60118327.4	6/8/2001	3/29/2006	1410070.5	DE	A Method Of Providing Access To Computer Configuration Information To An Interested Party, An Arrangement Apparatus For Providing Remote Support To A Computer User, And Apparatus For Obtaining Remote Support For A Computer User
82082717	Granted	10348330.6	10/17/2003	5/18/2006	10348330.6	DE	Systems And Methods For Remote Testing Of Printing Devices
83146745	Granted	2352953	11/13/2009	41276	9775127.5	DE	Data Centre And Apparatus And Method For Data Centre Cooling
82180988	Granted	102007048507	10/10/2007	3/25/2014	102007048507.9	DE	Cache Memory System And Method For Providing Transactional Memory
82938267	Published		2/26/2010		112010003368.4	DE	RESTORING STABILITY TO AN UNSTABLE BUS
82128731	Granted	69731936.9	12/30/1997	38336	69731936.9	DE	NETWORK SWITCH WITH MULTIPLE BUS ARCHITECTURE
82129478	Granted	69712448.7	12/11/1997	37384	97310024.1	DE	SYSTEM AND METHOD FOR SECURE INFORMATION OVER A NETWORK
82938218	Published		1/26/2010		112010004802,9	DE	Heat Sink With Multiple Vapor Chambers
83873825	Published		10/25/2011		112011105765.2	DE	DRIVE CARRIER SUBSTRATE
82030838	Granted	69936679.8	3/18/1999	8/1/2007	99302101.3	DE	Efficient Routing Of Transactions With Ordering Constraints
82232804	Published		5/27/2008		112008001957.6	DE	Systems And Methods For Improving Performance Of A Routable Fabric
83240742	Granted	2257880	3/25/2008	5/8/2013	8732796.1	DE	System And Method For Transforming PCIE SR-IOV Functions To Appear As Legacy Functions
82266332	Granted	69634916.7	10/11/1996	7/6/2005	96936429.8	DE	METHOD AND APPARATUS FOR TRANSPARENT INTERMEDIATE SYSTEM BASED FILTERING ON A LAN OF MULTICAST PACKETS
82723766	Granted	60240383.9	8/13/2002	6/29/2011	2255636.9	DE	Reduced Pin-count System Interface For Gigabit Ethernet Physical Layer Devices
82274138	Granted	60332838.5	6/30/2003	6/2/2010	3762222.2	DE	System and Method for a Universal Wireless Access Gateway
82061678	Granted	60036539.5	6/9/2000	9/26/2007	304891.5	DE	Utilization Of Unused Disk Space On Networked Computers
81996497	Granted	60316230.4	6/19/2003	39337	3253874.6	DE	Cartridge-handling Apparatus
82049627	Granted	10000123.8	1/4/2000	5/21/2008	10000123.8	DE	Firm Addressing For Devices On A Fibre Channel Arbitrated Loop
82891311	Published		7/29/2009		112009004988.5	DE	INTERFACING CLIMATE CONTROLLERS AND COOLING DEVICES
83873533	Granted	2249542	4/8/2010	4/2/2014	10159409.1	DE	Communicating Confidential Information Between An Application And A Database
81956543	Granted	69620303	6/11/1996	4/3/2002	96109337.4	DE	Method And Apparatus For Shared Management Information Via A Common Repository

PATENT
REEL: 038498 FRAME: 0085

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0086

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82038017	Granted	69817158.6	12/10/1998	8/13/2003	98123600.3	DE	User Interface Mechanism For Manipulating Context In Computer Management Applications
82097453	Granted	102004016850.4	3/31/2004	3/29/2007	102004016850.4	DE	Dynamic Mapping Of Status Messages To Service Elements
82164005	Granted	69631502.5	8/9/1996	2/11/2004	96112876.6	DE	DISTRIBUTED INTERACTIVE MULTIMEDIA SERVICE SYSTEM
82186733	Granted	602004016566.2	7/12/2004	9/10/2008	4766194.7	DE	Method And Apparatus For Load-balancing
82197656	Granted	602004021600.3	10/4/2004	6/17/2009	4300652.7	DE	Methods And Apparatus For Controlling Signalling Gateways
84109794	Granted	1784962	7/26/2005	4/8/2015	5775235.4	DE	System, Method, And Computer Program Product For Content Delivery In A Push-to-talk Communication System
82189667	Granted	102005048729.7	10/12/2005	40801	102005048729.7	DE	Methods And Systems For Defragmenting Subnet Space Within An Adaptive Infrastructure
82101197	Granted	102004007641	2/17/2004	41459	102004007641.3	DE	Computer System
82212323	Published		10/4/2007		102007047377.1	DE	Memory Access Strobe Configuration System And Process
82215386	Published		4/17/2007		102007018033.2	DE	Coherency Directory Updating
82077473	Granted	69730435.3	6/17/1997	8/25/2004	97933142.8	DE	A System, Method And Article Of Manufacture For Multiple-Entry Point Virtual Point Of Sale Architecture
82256840	Granted	602006007540.5	1/10/2006	7/1/2009	6717875.6	DE	RFID VEHICLE MANAGEMENT SYSTEM AND METHOD
84210667	Granted	1695468	11/19/2004	4/15/2015	4816965	DE	LASER-BASED COMMUNICATIONS WITH A REMOTE INFORMATION SOURCE
82254278	Granted	60330960.7	5/7/2003	40191	3726681.4	DE	Data Archive Recovery
83189527	Granted	1457007	12/17/2002	2/13/2013	2790678.3	DE	System For Supply Chain Management Of Virtual Private Network Services
81968465	Granted	10113191.7	3/19/2001	11/4/2004	10113191.7	DE	Speculative Pre-Flush Of Data In An Out-Of-Order Execution Processor System
81978767	Granted	60220113.6	3/22/2002	5/16/2007	2252102.5	DE	Inventory Control Apparatus And Method For A Data Storage System
82810922	Granted	602006026897,1	11/1/2006	1/4/2012	6844255.7	DE	Crossbar-array Designs And Wire Addressing Methods That Tolerate Misalignment Of Electrical Components With Wires At Wire Overlap Points
82182608	Granted	602005006977.1	1/28/2005	5/21/2008	5722583.1	DE	Determining Location Information For A Node In A Network Using At Least One Local Landmark Node
83542273	Granted	2137888	4/2/2008	8/21/2013	8742575.7	DE	Available Bandwidth Estimation
83694853	Granted	1719308	1/28/2005	10/16/2013	5722658.1	DE	Selecting Nodes Close To Another Node In A Network Using Location Information For The Nodes
84077563	Application		7/30/2012		112012006751.7	DE	PROVIDING AGREEMENT INFORMATION TO ALLOW ACCESS BY A CLIENT DEVICE OF SELECTED EQUIPMENT FROM AMONG MULTIPLE EQUIPMENT
82232489	Published		7/30/2008		112008002057.4	DE	Photonic Guiding Device
82595703	Granted	112008003958	7/31/2008	4/2/2015	112008003958.5	DE	Nano-wire Optical Block Devices For Amplifying, Modulating, And Detecting Optical Signals

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82672113	Granted	60336240	8/11/2003	3/2/2011	3785167.2	DE	Multi-level packet screening with dynamically selected filtering criteria
82205273	Granted	112007001775.9	6/22/2007	9/8/2011	112007001775.9	DE	Image Management Methods, Image Management Systems, And Articles Of Manufacture
82235048	Published		10/23/2008		112008002823	DE	All Optical Fast Distributed Arbitration In A Computer System Device
82179551	Granted	102005056872	11/29/2005	2/9/2012	102005056872;6	DE	Multi-chip Module With Power System And Pass-thru Holes
83218687	Published		10/12/2010		112010005865.2	DE	RESOURCE MANAGEMENT FOR DATA CENTERS
82209746	Granted	000460498-0001	1/3/2006	1/3/2006	000460498-0001	EM	Computer Having A Pull-tab
82238891	Granted	000895552-0001	2/29/2008	2/29/2008	000895552-0001	EM	Bronco Front Bezel
83786685	Granted	002423624-0001	3/12/2014	5/20/2014	2423624	EM	FRONT BEZEL FOR AN UNINTERRUPTIBLE POWER SYSTEMS (UPS) TOWER
83787456	Granted	002423616-001	3/12/2014	5/20/2014	2423616	EM	FRONT BEZEL FOR AN UNINTERRUPTIBLE POWER SYSTEMS (UPS) RACK AND TOWER
84044314	Granted	002608836-0001	1/6/2015	6/1/2015	2608836	EM	Eagle 2U storage Node - Design
84044326	Application		1/8/2015		2610378	EM	HANDLE FOR A CARRIER
84044338	Granted	002599530-0001	12/17/2014	12/17/2014	2599530	EM	SLED FOR A CARRIER
84096766	Granted	002599555-0001	12/17/2014	12/17/2014	2599555	EM	HANDLE FOR A CARRIER
84191356	Application		5/26/2015		2707612	EM	HANDLE
84191576	Application		5/26/2015		2707570	EM	ROUTER
83964975	Granted	002423616-0002	3/12/2014	5/20/2014	2423616	EM	Front Bezel for an Uninterruptible Power systems (UPS) Rack and Tower
83120480	Granted	002094128-0002	8/29/2012	8/29/2012	002094128-0002	EM	A Removable Bezel of a Computing Device with an LCD Display
84044302	Granted	002621201-0001	1/27/2015	1/27/2015	2621201	EM	Eagle low-cost Small Form Factor Hard Drive Carrier – Design
84096659	Granted	002609719-0001	1/7/2015	7/1/2015	2609719	EM	ENCLOSURE
82897861	Granted	001967530-0001	12/22/2011	12/22/2011	1967530	EM	Hard Drive Carrier
83570666	Granted	002302711-0001	9/4/2013	9/4/2013	2302711	EM	Top Loading Fan Cartridge
83584417	Granted	23026120001	9/4/2013	9/4/2013	2302612	EM	BEZEL FOR A TOP LOADING SERVER CARTRIDGE
84044290	Granted	002610386-0001	1/8/2015	3/30/2015	2610386	EM	HOT PLUG BUTTON WITH AN IDENTIFYING COLORED STRIPE
84095591	Application		1/6/2015		2608877	EM	CABINET
84096776	Granted	002599589-0001	12/17/2014	12/17/2014	2599589	EM	A smart adapter that enables non-hot pluggable NGFF (M.2) drives to be placed in hot pluggable carriers and inserted into the adapter. The adapter is compatible with the standard small form factor hard drive bay.
84191546	Instructed					EM	RDX MicroServer Module
82211762	Granted	000580733-0001	8/21/2006	8/21/2006	000580733-0001	EM	Claimshell Package

PATENT
REEL: 038498 FRAME: 0087

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83112387	Granted	002094128-0001	8/29/2012	8/29/2012	002094128-0001	EM	A Removable Bezel of a Computing Device with an LCD Display
81982883	Published		12/17/2002		2258684.6	EP	Adapting Bayesian Network Parameters On-line In A Dynamic Environment
82062716	Published		7/3/2001		1305748.4	EP	Performance Of A Service On A Computing Platform
82065527	Published		12/19/2002		2258764.6	EP	System And Method For Partitioning A Storage Area Network Associated Data Library
82065536	Published		12/19/2002		2258808.1	EP	System And Method For Partitioning A Storage Area Network Associated Data Library Employing Element Addresses
82065545	Published		12/19/2002		2258773.7	EP	System And Method For Managing Access To Multiple Devices In A Partitioned Data Library
82065596	Published		12/19/2002		2258807.3	EP	Method For Using Partitioning To Provide Capacity On Demand In Data Libraries
82069349	Published		2/19/2001		1904210	EP	Address Mapping In Solid State Storage Device
82087202	Published		10/24/2003		3024603.7	EP	Enhanced Antenna Using Flexible Circuitry
82095317	Published		10/15/2004		4791235.7	EP	Voice Mark-up Language Having An Application Transfer Tag And Interpreter Therefore
82171163	Published		7/21/2006		6788134.2	EP	Quantum Information Conversion Between Matter And Light Representations
82172303	Published		5/7/2004		4252669.9	EP	Computer Service Using Automated Local Diagnostic Data Collection And Automated Remote Analysis
82176722	Published		9/18/2003		3292291.6	EP	Email Delivery In Telecommunications Networks
82180142	Published		5/10/2005		5252846	EP	Access Control Of Resources Using Tokens
82181402	Published		4/27/2005		5103468.4	EP	Tape Drive Apparatus
82188638	Published		4/28/2005		5741090.4	EP	Non-demolition Photon Detector That Preserves Input State Characteristics
82188764	Published		9/29/2005		5300785.2	EP	Remote Media Source Device Access
82191449	Published		1/19/2006		6100625	EP	Printer Voice Portal
82192268	Published		4/29/2004		4300243.5	EP	Content Delivery During Call Setup
82192841	Published		8/5/2005		5778411.8	EP	System, Method And Apparatus For Cryptography Key Management For Mobile Devices
82194956	Published		9/22/2005		5108751.8	EP	Method And System For Managing Memory
82201367	Published		10/6/2005		5021801.5	EP	Incremental Backup Operations In Storage Networks
82202501	Published		8/3/2006		6254076	EP	Collecting Information At A Remote Site
82204559	Published		3/13/2006		6300224	EP	Communication System And Method
82205009	Published		10/19/2005		5796980	EP	IMPROVEMENTS IN OR RELATING TO TELECOMMUNICATIONS
82205570	Published		3/17/2006		6738742.3	EP	Message Exchange Between Software Components
82206449	Published		10/7/2005		5300801.7	EP	Prediction Of Service Level Compliance In IT Infrastructures

PATENT
REEL: 038498 FRAME: 0088

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82207007	Published		1/19/2006		6707760.2	EP	TRANSACTION PROXY IN A TELECOMMUNICATIONS OR MESSAGING SYSTEM AND RELATED METHODS
82210193	Published		4/25/2005		5300314.1	EP	STATE MACHINE-DRIVEN INTERACTIVE SYSTEM AND ASSOCIATED METHODS
82213364	Published		2/15/2007		7750745.7	EP	COMPOSITE EVANESCENT WAVEGUIDES AND ASSOCIATED METHODS
82214438	Published		1/3/2007		7703595.4	EP	Improvements In Or Relating To Group Communications
82218545	Published		5/22/2006		6300508.6	EP	DETECTION OF CLONED IDENTIFIERS IN COMMUNICATION SYSTEMS
82220612	Published		7/19/2007		7112796.3	EP	System And Method Of Managing A Computer Network Using Hierarchical Layer Information
82222724	Published		8/9/2007		7836740.6	EP	Data-object-related-request Routing In A Dynamic, Distributed Data-storage System
82222907	Published		7/10/2007		7112204.8	EP	Call Routing
82225235	Published		1/30/2007		7101449.2	EP	Software Failure Analysis Method And System
82227173	Published		3/20/2008		8153133.7	EP	Configuration Management Database And System
82227605	Published		4/4/2008		8745102.7	EP	APPARATUS AND METHODS FOR ADAPTIVE THROTTLING OF TRAFFIC ACROSS MULTIPLE NETWORK NODES
82228025	Published		4/16/2007		7106253.3	EP	Method Of Supplying Advertising Content
82228727	Published		1/23/2008		8728109.3	EP	METHODS FOR PROVIDING SECURE Ecommerce TRANSACTIONS
82229777	Published		1/29/2008		8708350.7	EP	CONFIGURATION OF MOBILE COMMUNICATION DEVICES
82230338	Published		7/2/2008		8252246.7	EP	Data Skew Insensitive Parallel Join Scheme
82231406	Published		8/28/2007		7827544.3	EP	Method And Apparatus For Multimedia Data Management On Mobile Devices
82231661	Published		10/23/2008		8842402.3	EP	Integrated Circuit With Optical Interconnect
82234529	Published		6/16/2008		8768550.9	EP	Misalignment Tolerant Free Space Optical Transceiver
82237856	Published		2/15/2008		8730044.8	EP	Changing Power States Of Data-handling Devices To Meet Redundancy Criterion
82238165	Published		4/28/2008		8779594.4	EP	Adjustable Server-transmission Rates Over Fixed-speed Backplane Connections Within A Multi-server Enclosure
82239095	Published		4/2/2008		8744892.4	EP	Disk Drive Data Encryption
82240226	Published		11/16/2007		7301555.4	EP	Method And Apparatus For Accessing A Network
82240589	Published		2/28/2008		8726257.2	EP	Method And Apparatus For Converting AC Power To DC Power
82240604	Published		3/10/2008		8743751.3	EP	Cable Management Module
82240658	Published		3/3/2008		8731254.2	EP	Software-based Power Capping
82240832	Published		4/30/2008		8747191.8	EP	POWER SUPPLY ASSEMBLY FOR SERVER RACK AND METHOD FOR MOUNTING POWER SUPPLY FOR SERVER RACK

PATENT
REEL: 038498 FRAME: 0089

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0090

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82242089	Published		2/15/2008		8716895.1	EP	METHOD AND COMPUTER PROGRAM PRODUCT FOR CHANGING AN IT SYSTEM
82242536	Published		3/10/2008		8726645.8	EP	Two-phase Optical Communication Methods And Optical Bus Systems For Implementing The Same
82242710	Application		5/1/2008		8754977	EP	Storing Checkpoint Data In Non-volatile Memory
82243652	Published		1/9/2009		9150283.1	EP	SHARING STATUS INFORMATION ACROSS A PLURALITY OF COMMUNICATION NETWORKS
82244897	Published		6/19/2008		8771441.6	EP	Capacity Planning
82246721	Published		7/1/2008		6846647.3	EP	System And Method For Automated And Assisted Resolution Of IT Incidents
82247069	Published	2166703	9/21/2009		9170876.8	EP	Method And System For Managing A Hierarchical Information Base With An Application Layer Protocol
82247453	Published		9/29/2008		8873292	EP	Neuromorphic Circuit
82247828	Published		5/6/2008		8755090.1	EP	FABRICATION OF THIN PELLICLE BEAM SPLITTERS
82252082	Published		4/19/2000		926146.2	EP	ATM Video Advertising
82253336	Published		10/10/2002		2757780.8	EP	Method And Apparatus For Processing Financial Transactions
82254086	Published		5/29/2008		8769771	EP	TESTING DISASTER RECOVER ELEMENTS
82254146	Published		6/12/2003		3760284.4	EP	Multi-tiered Enterprise Management System And Method Including A Presentation Services Unit External To The Enterprise
82254809	Published		2/26/2004		4715059.4	EP	Administering A Security System
82255625	Published		8/3/2004		4779919.2	EP	Method And System For Effecting Payment By Checks Through The Use Of Image Replacement Documents
82256144	Published		11/19/2004		4817857.8	EP	ENCRYPTION/DECRYPTION PAY PER USE WEB SERVICE
82256195	Published		6/15/2005		5762596.4	EP	Virtual User Interface For Multiple User Devices
82256318	Application		9/6/2006		6814186	EP	SYSTEMS AND METHODS FOR THE PROVISION OF DATA PROCESSING SERVICES TO MULTIPLE ENTITIES
82256432	Published		10/25/2005		5816016.9	EP	METHOD AND SYSTEM FOR NETWORK INTRUSION PREVENTION
82256684	Published		1/17/2006		6718603.1	EP	ENTERPRISE DIGITAL ASSET MANAGEMENT SYSTEM AND METHOD
82256699	Published		1/26/2006		6719653.5	EP	System And Method For Securing Information Accessible Using A Plurality Of Software Applications
82256744	Published		7/8/2005		5769551.2	EP	SYSTEM AND METHOD FOR UPDATING SOFTWARE ON A COMPUTER
82256759	Published		10/20/2005		5816326.2	EP	System And Method For Tracking Individuals
82256771	Allowed		10/17/2005		5814810.7	EP	SYSTEM AND METHOD FOR SIGNALING STATUS OF TRAFFIC FLOW
82256948	Published		3/20/2006		6739093	EP	Validating Application Resources

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82257023	Published		9/18/2006		6803794.4	EP	Locating Documents Supporting Enterprise Goals
82257143	Application		3/26/2007		7754054	EP	Determining Processing Times At Stations In An Assembly System
82257518	Published		4/9/2009		9730420.8	EP	APPARATUS, AND ASSOCIATED METHOD, FOR ALLOCATING PROCESSING AMONGST DATA CENTERS
82257563	Published		4/20/2009		9158277.5	EP	System And Method For Application And Environment Portability
82257626	Published		7/24/2009		9803416.8	EP	SYSTEM AND METHOD FOR A VIRTUALIZATION INFRASTRUCTURE MANAGEMENT ENVIRONMENT
82257752	Published		7/21/2009		9820945.5	EP	System And Method For Electronic Data Security
82274858	Published		12/14/2007		7254877.9	EP	Network Traffic Redirection in Bi-Planar Networks
82405606	Published		5/8/2008		8780608.9	EP	Hierarchical Passive Networks
82554383	Published		5/23/2008		8756236.9	EP	Optical Interconnect
82554397	Published		6/20/2008		8771588.4	EP	LOW LEVEL INITIALIZER
82554426	Published		6/20/2008		8771579.3	EP	DOMAIN MANAGEMENT PROCESSOR
82579352	Published		4/3/2007		7760047.6	EP	Merging Multi-Line Log Entries
82579369	Published		10/25/2007		7868579.9	EP	Tracking Changing State Data To Assist In Computer Network Security
82579544	Published		12/28/2007		7870034.1	EP	Storing Log Data Efficiently While Supporting Querying To Assist in Computer Network Security
82584158	Application		8/4/2009		9807071.7	EP	BOOKMARKS FOR FLEXIBLE INTEGRATED ACCESS TO PUBLISHED MATERIAL
82584164	Published		8/4/2009		9807072.5	EP	APPARATUS, AND ASSOCIATED METHOD, FOR DETECTING FRAUDULENT TEXT MESSAGE
82620391	Published		8/8/2008		8795141.4	EP	Method And Systems For Implementing High-radix Switch Topologies On Relatively Lower-radix Switch Physical Networks
82621149	Published		8/8/2008		8814827.5	EP	Independently Controlled Virtual Memory Devices In Memory Modules
82629484	Application		8/8/2008		8795140.6	EP	Independently Controllable And Reconfigurable Virtual Memory Devices In Memory Modules That Are Pin-compatible With Standard Memory Modules
82631609	Published		10/30/2008		8877869.1	EP	RECONFIGURING A MODEL
82631731	Published		8/4/2009		9805412.5	EP	End-to-end Network Access Analysis
82651150	Published		9/23/2009		9840564	EP	MEMORY MODULE INCLUDING VOLTAGE SENSE MONITORING INTERFACE
82653939	Published		1/30/2009		9839423.2	EP	SYSTEM AND METHOD FOR INTEGRATING CAPACITY PLANNING AND WORKLOAD MANAGEMENT
82654454	Published		9/4/2008		8799132.9	EP	Dielectric Waveguide Intersection With Reduced Losses

PATENT
REEL: 038498 FRAME: 0091

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82654465	Published		8/27/2008		8798754.1	EP	Performing Zone Based Workload Scheduling According To Environmental Conditions
82665385	Published		10/27/2009		9824065.8	EP	Telecommunication Systems
82671798	Published		9/3/2009		9782563.2	EP	Program Guide And Apparatus
82671978	Application		12/9/2008		8878800.5	EP	Power Circuit
82676469	Published		10/21/2009		9826517.6	EP	DATA CENTER AND DATA CENTER DESIGN
82676538	Published		10/14/2008		8825408.1	EP	Managing Event Traffic In A Network System
82678092	Published		7/22/2009		9780919.8	EP	QKD Transmitter And Transmission Method
82691757	Published		9/4/2009		9812310.2	EP	Storing Log Data Efficiently While Supporting Querying
82716609	Published		10/30/2008		8877873.3	EP	BIT Inversion For Communication Interface
82716666	Published		10/31/2008		8877896.4	EP	Device For Opticaly Coupling Photonic Elements
82716715	Published		10/31/2008		8877838.6	EP	Optical Broadcast With Buses With Shared Optical Interfaces
82718593	Published		1/27/2010		10701247.8	EP	REVERSE CHARGE CALLING IN A COMMUNICATIONS NETWORK
82728099	Published		12/19/2008		8879034	EP	Redundant Data Storage For Uniform Read Latency
82750060	Application		12/19/2008		8878866.6	EP	Document Information Selection Method And Computer Program Product
82752235	Published		1/23/2009		9839002.4	EP	System And Methods For Allocating Shared Storage Resources
82772044	Published		1/29/2009		9839407.5	EP	Loading A Plurality Of Appliances Into A Blade
82774437	Published		1/7/2009		9837735.1	EP	PHOTONIC WAVEGUIDE
82790102	Published		1/9/2009		9837744.3	EP	SYSTEM AND METHODS FOR ROUTING OPTICAL SIGNALS
82790816	Published		1/23/2009		9839001.6	EP	Verifying Virtual Machines
82808642	Published		1/30/2009		9839418.2	EP	Dynamically Applying A Contol Policy To A Network
82819010	Published		3/31/2009		9842813.9	EP	Determining Power Topology Of Plurality Of Computer Systems
82837116	Published		11/25/2009		9797223.6	EP	MODULAR QUERY OPTIMIZER
82844163	Published		3/23/2009		9842416.1	EP	INDIRECT-BANDGAP-SEMICONDUCTOR, LIGHT-EMITTING DIODE
82848365	Application		5/8/2009		9844210.6	EP	ACCESS CONTROL OF DISTRIBUTED COMPUTING RESOURCES SYSTEM AND METHOD
82849066	Published		6/29/2009		9846928.1	EP	MEMORY AGENT TO ACCESS MEMORY BLADE AS PART OF THE CACHE COHERENCY DOMAIN
82849083	Published		4/17/2009		9843464	EP	Method And System For Reducing Trace Length And Capacitance In A Large Memory Footprint Background
82850377	Published		4/28/2010		10770275.5	EP	IMPROVEMENTS IN OR RELATING TO DATA CENTERS
82852392	Published		7/14/2009		9847426.5	EP	Determining A Seasonal Effect In Temporal Data
82852404	Published		7/31/2009		9847922.3	EP	Compression Of XML Data
82853056	Published		4/27/2009		9844137.1	EP	Energy-efficient Standby Mode In A Switching Power Supply

PATENT
REEL: 038498 FRAME: 0092

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82853113	Published		12/18/2009		9852394.7	EP	Proxy Agents In A Network
82853972	Published		4/17/2009		9843460.8	EP	Power Capping System And Method
82856363	Published		6/1/2010		10722363.8	EP	METHOD AND APPARATUS FOR ASSOCIATING A SUBSCRIBER DIRECTORY IDENTIFIER TO A SUBSCRIBER IDENTIFIER
82856371	Published		9/15/2010		10822410.6	EP	NETWORK ACCESS CONTROL
82866141	Published		5/19/2009		9844740.2	EP	Network Traffic Rate Limiting System And Method
82866203	Published		7/10/2009		9844742.8	EP	Location Determined Network Access
82873385	Published		6/29/2009		9846927.3	EP	HYPERVISOR-BASED MANAGEMENT OF LOCAL AND REMOTE VIRTUAL MEMORY PAGES
82878738	Published		12/20/2011		11306707.8	EP	SYSTEMS AND METHODS FOR MONITORING COMPLIANCE STATUS BASED ON TIME-ORDERED REFERENCE PERIODS
82879674	Published		4/30/2009		9844180.1	EP	OPTICAL APPARATUS, SYSTEM AND METHOD EMPLOYING AN ENDOHEDRAL METALLOFULLERENE
82885914	Published		6/18/2009		9846290.6	EP	PROCESSOR TOPOLOGY SWITCHES
82890403	Published		5/29/2009		9845348.3	EP	System And Method For Allocating Resources Of A Server To A Virtual Machine
82892226	Published		7/24/2009		9847655.9	EP	Virtual-machine-based Application-service Provision
82892367	Published		7/15/2009		9847433.1	EP	Shared Video Management Subsystem
82914637	Published		7/28/2009		9847903.3	EP	INSTANTIATING AN INFORMATION TECHNOLOGY SERVICE IN LIGHT OF MAINTENANCE REQUIREMENTS
82919353	Published		8/11/2009		9848325.8	EP	Online Search Base On Geography Tagged Recommendations
82922921	Published		12/14/2009		9847948.8	EP	SELECTIVITY-BASED OPTIMIZED-QUERY-PLAN CACHING
82924234	Published		3/17/2010		10848102.9	EP	UNIFIED INFORMATION BUS
82924245	Published		3/30/2010		10849122.6	EP	SYSTEM AND METHOD FOR OUTER JOINS ON A PARALLEL DATABASE MANAGEMENT SYSTEM
82926258	Published		9/25/2009		9849910.6	EP	SILICON-GERMANIUM, QUANTUM-WELL, LIGHT-EMITTING DIODE
82928811	Published		1/29/2010		10844883.8	EP	Configuration Of Network Links In A Virtual Connection Environment
82929595	Published		10/15/2009		9850474.9	EP	HETEROGENEOUS DATA SOURCE MANAGEMENT
82929724	Published		1/27/2011		11737663.2	EP	Memory Access Methods And Apparatus
82930245	Published		9/14/2010		10817709.8	EP	Automatic Selection Of Agent-based Or Agentless Monitoring
82930283	Published		9/29/2010		10825384	EP	Method And System For Discovering A Pure Hub-and-spoke Topology
82930388	Published		10/8/2010		10768000.1	EP	METHOD AND SYSTEM FOR PRINTING
82930492	Published		11/30/2009		9851760	EP	REMAPPING FOR MEMORY WEAR LEVELING
82931173	Published		3/10/2010		10847319	EP	Data Protection

PATENT
REEL: 038498 FRAME: 0093

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0094

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82931301	Published		10/29/2009		9850966.4	EP	SWITCH THAT MONITORS FOR FINGERPRINTED PACKETS
82931325	Published		10/29/2009		9850965.6	EP	NETWORK SWITCH CONNECTED TO A SENSOR
82931444	Published		3/19/2010		10848106	EP	OPTICAL STAR COUPLER
82931450	Published		3/31/2010		10849136.6	EP	WAVEGUIDE SYSTEM AND METHODS
82933817	Published		10/28/2009		9850959.9	EP	METHOD AND APPARATUS FOR VIRUS THROTTLING WITH RATE LIMITING
82934009	Published		1/11/2010		10842371.6	EP	SYSTEM INCLUDING DRIVER CIRCUIT FOR ELECTRICAL SIGNALING AND OPTICAL SIGNALING
82938321	Published		12/14/2009		9852382.2	EP	MODIFYING COMPUTER MANAGEMENT REQUEST
82939726	Published		1/28/2011		11737715	EP	QUANTUM KEY DISTRIBUTION METHOD AND APPARATUS
82941437	Published		1/29/2010		10844871.3	EP	Wireless Network System And Method Configured To Mitigate Co-channel Interference
83003347	Published		11/9/2010		10829280.6	EP	Enabling Full-Text Searching Using A Structured Data Store
83007560	Published		11/27/2007		12171526.2	EP	SYSTEM SYNTHESIS TO MEET AN EXERGY LOSS TARGET VALUE
83034261	Published		5/19/2010		10851573.5	EP	SYSTEM AND METHOD FOR WEB PAGE SEGMENTATION USING ADAPTIVE THRESHOLD COMPUTATION
83034270	Published		5/20/2010		10851886.1	EP	SWITCHING IN A NETWORK DEVICE
83055106	Published		2/22/2011		11706128.3	EP	DATABASE DESIGNER
83093242	Published		6/23/2010		10853793.7	EP	Authorization Control
83108418	Published		4/7/2010		10849588.8	EP	SYSTEM AND METHOD FOR AUTOMATED DISCOVERY OF CUSTOMER-EDGE DEVICES AND INTERFACE CONNECTIONS IN A VIRTUAL-PRIVATE-NETWORKING ENVIRONMENT
83108479	Published		4/9/2010		10849593.8	EP	Method And System For Comparing And Locating Projects
83108496	Application		4/9/2010		10849594.6	EP	PROJECT CLUSTERING AND RELATIONSHIP VISUALIZATION
83116284	Published		2/14/2011		11766301.3	EP	SYSTEM AND METHOD FOR PROCESSING DATA
83118658	Application		5/26/2010		10852293.9	EP	GRAPH AUTHORIZATION
83118729	Application		5/12/2010		10851506.5	EP	METHODS, APPARATUS AND ARTICLES OF MANUFACTURE TO UPDATE VIRTUAL MACHINE TEMPLATES
83120659	Published		5/28/2010		10852314.3	EP	INITIALIZING A MEMORY SUBSYSTEM OF A MANAGEMENT CONTROLLER
83123501	Published		5/13/2010		10851515.6	EP	FILE SYSTEM MIGRATION
83127145	Published		6/22/2010		10853787.9	EP	METHODS AND SYSTEMS FOR PLANNING APPLICATION DEPLOYMENT
83127159	Published		6/22/2010		10853789.5	EP	A METHOD AND SYSTEM FOR DETERMINING A DEPLOYMENT OF APPLICATIONS
83130010	Published		7/21/2010		10855099.7	EP	Accessing A Local Storage Device Using An Auxiliary Processor

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83131971	Published		5/20/2011		11787160.8	EP	SECURITY THREAT DETECTION ASSOCIATED WITH SECURITY EVENTS AND AN ACTOR CATEGORY MODEL
83132406	Published		7/30/2007		12192462.5	EP	AUTOMATIC VERTICAL-DATABASE DESIGN
83134885	Published		6/16/2010		10853358.9	EP	Computer Racks
83135455	Published		8/17/2010		10856233.1	EP	ENCRYPTION KEY MANAGEMENT
83135749	Application		6/16/2010		10853357.1	EP	SYSTEM FOR INFORMATION MANAGEMENT PROTECTION AND ROUTING
83135881	Published		7/29/2010		10855439.5	EP	A Device And Method For Egress Packet Forwarding Using Mesh Tagging
83137321	Published		3/24/2010		10848589.7	EP	Power Capping Feedback Normalization
83138143	Application		6/9/2010		10853005.6	EP	DETERMINING SIMILARITY SCORES OF ANOMALIES
83139121	Published		7/13/2010		10854819.9	EP	METHODS, APPARATUS AND ARTICLES OF MANUFACTURE TO ARCHIVE DATA
83139805	Application		6/30/2010		10854218.4	EP	SYSTEM AND METHOD FOR COLLABORATIVE INFORMATION SERVICES
83163735	Published		9/14/2010		10857369.2	EP	COMPUTER SYSTEM FABRIC SWITCH
83165230	Application		7/22/2010		10855103.7	EP	Context-based Item Bookmarking
83166226	Published		7/22/2010		10855106	EP	SQL Enumerator
83166321	Published		7/26/2010		10855418.9	EP	A System Including A Module
83166389	Published		7/30/2010		10855459.3	EP	LOCATION-INDEXED AUDIO CONTENT
83184691	Published		7/30/2010		10855450.2	EP	INFORMATION TECHNOLOGY SERVICE MANAGMENT
83184698	Published		7/30/2010		10855466.8	EP	SYSTEMS AND METHODS FOR CREDENTIALING
83187253	Allowed		8/25/2010		10856515.1	EP	Transferring Files
83189166	Published		10/6/2010		10858236.2	EP	METHOD AND SYSTEM FOR PROCESSING EVENTS
83196413	Published		9/7/2010		10857071.4	EP	SYSTEM AND METHOD FOR AUTOMATED DEPLOYMENT OF MULTI-COMPONENT COMPUTER ENVIRONMENT
83200407	Published		9/23/2010		10857611.7	EP	METHODS, APPARATUS AND SYSTEMS FOR MONITORING LOCATIONS OF DATA WITHIN A NETWORK SERVICE
83208805	Published		9/10/2010		10857079.7	EP	SYSTEM AND METHOD FOR INTERPRETING AND GENERATING INTEGRATION FLOWS
83209077	Published		10/19/2010		10858739.5	EP	METHODS AND SYSTEMS FOR GENERATION OF AUTHORIZED VIRTUAL APPLIANCES
83210416	Application		12/1/2010		EP10859683.4	EP	DISPLAYING SYSTEM PERFORMANCE INFORMATION
83210557	Application		10/29/2010		10858801.3	EP	Software Application Recognition
83214684	Published		10/11/2010		10858482.2	EP	SYSTEM AND METHOD FOR QUERYING A DATA STREAM
83215486	Published		9/27/2010		10857972.3	EP	DEVICE STRUCTURE FOR LONG ENDURANCE MEMRISTORS
83220845	Published		3/28/2013		13305384.3	EP	Filter Regular Expression
83221589	Published		10/8/2010		10858256	EP	AUTOMATED NEGOTIATION
83222129	Published		10/29/2010		10859086	EP	GENERATING A TAXONOMY FROM UNSTRUCTURED INFORMATION

PATENT
REEL: 038498 FRAME: 0095

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83222713	Published		11/10/2010		10859425	EP	SEED SET EXPANSION
83224723	Published		2/24/2011		11859288	EP	SYSTEM AND METHOD FOR ERROR REPORTING IN A NETWORK
83224935	Published		10/15/2010		10858508.4	EP	SYSTEM AND METHOD FOR PROVIDING A SERVICE
83229099	Published		10/19/2010		10858745.2	EP	Managing Content From Structured And Unstructured Data Sources
83231547	Published		10/27/2010		10859070.4	EP	SYSTEMS, METHODS, AND APPARATUS FOR ENABLING AUDIO TRANSMISSION WITHIN A COMMUNICATIONS SESSION
83235191	Application		10/22/2010		10858770	EP	DISTRIBUTED NETWORK INSTRUMENTATION SYSTEM
83255609	Application		1/27/2011		11857343.5	EP	ELECTRONIC BOOK WITH CHANGEABLE PATHS
83255657	Published		2/28/2011		11840766.7	EP	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83256527	Published		1/31/2011		11841124.8	EP	Method and Circuit for Switching a Memristive Device in an Array
83262519	Published		12/3/2010		10860188.1	EP	SYSTEMS AND METHODS FOR PERFORMING A NESTED JOIN OPERATION
83262536	Application		12/10/2010		10860412.5	EP	MANAGING RECORDS DISPLAYED IN A TREE LIST
83262556	Published		1/27/2011		11856921.9	EP	IMPORTANCE CLASS BASED DATA MANAGEMENT
83262567	Published		1/25/2011		11856881.5	EP	ANALYTICAL DATA PROCESSING
83264001	Published		11/30/2010		10860185.7	EP	CHANGE MESSAGE BROADCAST ERROR DETECTION
83265983	Published		12/11/2010		10860464.6	EP	COMPUTER NETWORK NODE DISCOVERY
83271698	Published		1/31/2011		11857705.5	EP	METHODS FOR HANDLING CONFLICTS IN A MULTICAST ROUTING ELECTION
83410697	Published		1/9/2011		11855220.7	EP	COMPUTER NETWORK NODE DISCOVERY SEQUENCING
83417892	Application		1/24/2011		11879173	EP	A SYSTEM AND METHOD FOR ACCESSING A SERVICE
83421539	Published		1/20/2011		11856070.5	EP	CHIP CARRIER SUPPORT SYSTEMS
83422021	Published		1/20/2011		11855929.3	EP	COMPOSITE PROCESSORS
83422058	Published		1/31/2011		11857735.2	EP	CABLE HARNESS SWITCHES
83422493	Published		8/17/2011		11866806	EP	METHOD OF MANAGING USAGE RIGHTS IN A SHARE GROUP OF SERVERS
83422619	Published		2/2/2011		11857498.7	EP	ESTIMATING A PERFORMANCE CHARACTERISTIC OF A JOB USING A PERFORMANCE MODEL
83498559	Published		3/11/2011		11860872.8	EP	Sampling Network Traffic
83507396	Published		3/1/2012		12754402.1	EP	METHODS AND SYSTEMS FOR FULL PATTERN MATCHING IN HARDWARE
83515791	Application		2/1/2011		11857761.8	EP	NEGATIVE DIFFERENTIAL RESISTANCE DEVICE
83543185	Published		3/3/2011		11860078.2	EP	TESTING INTEGRATED BUSINESS SYSTEMS
83546342	Published		2/10/2011		11858313.7	EP	GRATING-BASED POLARIZERS AND OPTICAL ISOLATORS
83584528	Published		3/15/2011		11861195.3	EP	USABILITY TESTING

PATENT
REEL: 038498 FRAME: 0096

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83593353	Published		6/2/2011		11867048.8	EP	NETWORK VIRTUALIZATION
83663171	Published		4/7/2011		11862966.6	EP	GRAPHICAL OBJECT CLASSIFICATION
83680932	Published		3/16/2011		11861282.9	EP	SYSTEMS AND METHODS FOR FINE GRANULARITY MEMORY SPARING
83680989	Published		4/19/2011		11864027.5	EP	SCHEDULING MAP AND REDUCE TASKS FOR JOBS FOR EXECUTION ACCORDING TO PERFORMANCE GOALS
83681479	Allowed		3/21/2011		11861390	EP	DATA BACKUP PRIORITIZATION
83692281	Application		10/31/2013		13306496.4	EP	METHODS TO UPDATE PORTALS
83699841	Published		10/31/2011		11866959.7	EP	NETWORK ASSET INFORMATION MANAGEMENT
83700262	Published		7/25/2011		11870090.5	EP	Transferring a Conference Session Between Conference Servers Due to Failure
83701130	Published		10/14/2011		11874029.9	EP	PERFORMING A REPLICATION OPERATION IN RESPONSE TO MOVEMENT OF A VIRTUAL DATA CONTAINER
83714208	Published		5/31/2011		11866677.5	EP	APPLICATION SECURITY TESTING
83721252	Published		6/3/2011		11866517.3	EP	RATING ITEMS
83730049	Published		7/30/2011		11741391.4	EP	SIDEWAYS INFORMATION PASSING
83731365	Application		6/14/2011		11867933.1	EP	DEDUPLICATION IN DISTRIBUTED FILE SYSTEMS
83731892	Published		5/27/2011		11866770.8	EP	TRANSACTION GATEWAY
83733020	Published		8/8/2011		11870810.6	EP	Fabric Chip Having Trunked Links
83735421	Published		6/28/2011		11868835.7	EP	SHIFTABLE MEMORY
83766021	Published		10/31/2011		11875125.4	EP	IMPLEMENTING AN ENERGY PROPORTIONAL NETWORK ARCHITECTURE FROM DESIRED NETWORK CRITERIA
83769027	Published		7/27/2011		11870039.2	EP	Efficient Data-Storage Devices that Include Memory Elements Characterized by Potentially Large Switching Latencies
83769075	Published		7/27/2011		11869906.5	EP	Method and System for Reducing Write-Buffer Capacities within Memristor-Based Data-Storage Devices
83769098	Published		7/11/2011		11869198.9	EP	VIRTUAL MACHINE PLACEMENT
83778739	Published		7/1/2011		11869103.9	EP	METHOD OF AND SYSTEM FOR MANAGING COMPUTING RESOURCES
83783393	Application		7/27/2011		11870148.1	EP	MAINTAINING AND UTILIZING A REPORT KNOWLEDGEBASE
83783995	Published		7/12/2011		11869201.1	EP	AUDIO SAMPLE
83784112	Published		10/20/2011		11872086.1	EP	SYSTEMS AND METHODS FOR EVALUATION OF EVENTS BASED ON A REFERENCE BASELINE ACCORDING TO TEMPORAL POSITION IN A SEQUENCE OF EVENTS
83786522	Published		7/22/2011		11870141.6	EP	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83786717	Published		12/13/2011		11877577.4	EP	STORAGE CONTROLLER WITH HOST COLLABORATION FOR INITIALIZATION OF A LOGICAL VOLUME

PATENT
REEL: 038498 FRAME: 0097

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0098

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83787661	Published		8/1/2012		12819296	EP	ASSET MODEL IMPORT CONNECTOR
83791157	Published		7/29/2011		11870354.5	EP	OPTICAL POWER SPLITTERS
83793407	Published		9/28/2011		11873283.3	EP	IMPLEMENTING A SWITCH FABRIC RESPONSIVE TO AN UNAVAILABLE PATH
83793438	Published		9/28/2011		11872965.6	EP	MANAGING A SWITCH FABRIC
83799684	Application		7/31/2011		11870431.1	EP	INCIDENT HANDLING
83806241	Published		9/7/2012		12830781.6	EP	VISUAL COMPONENT AND DRILL DOWN MAPPING
83806359	Published		1/31/2014		14290022.4	EP	DISPLAYING A DASHBOARD BASED ON CONSTRAINTS OF A USER DEVICE
83810410	Published		8/17/2011		11870999.7	EP	TRACING DATA BLOCK OPERATIONS
83815233	Published		8/26/2011		11871717.2	EP	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83816832	Published		11/2/2011		11874975.3	EP	METHOD OF SEARCHING AND GENERATING A RELEVANT SEARCH STRING
83817966	Published		11/18/2011		11875745.9	EP	QUERY SUMMARY GENERATION USING ROW-COLUMN DATA STORAGE
83820425	Published		2/24/2014		14305256.1	EP	PROVIDING POLICY INFORMATION
83821210	Published		8/31/2011		11871599.4	EP	MULTIMODE FIBER FOR MODULATABLE SOURCE
83822514	Application		3/24/2014		14305421.1	EP	WEB APPLICATION LAUNCH APPLICATION PROGRAMMING INTERFACE
83832710	Published		12/2/2011		11876552.8	EP	Topic Extraction And Video Association
83834199	Published		9/2/2011		11871484.9	EP	APPARATUS TO STORE DATA AND METHODS TO READ MEMORY CELLS
83834205	Published		4/10/2010		14157058	EP	INJECTION OF DATA INTO A SOFTWARE APPLICATION
83835753	Published		9/6/2011		11872062.2	EP	MECHANICALLY ALIGNED OPTICAL ENGINE
83852053	Published		9/30/2011		11873381.5	EP	OPTICAL POWER SPLITTER INCLUDING A ZIG-ZAG
83854666	Published		9/30/2011		11873379.9	EP	EXTENDING A CONVERSATION ACROSS APPLICATIONS
83857912	Published		10/12/2011		11874063.8	EP	SELECT DEVICE FOR CROSS POINT MEMORY STRUCTURES
83862108	Published		10/28/2011		11874593.4	EP	METAL-INSULATOR PHASE TRANSITION FLIP-FLOP
83862165	Published		11/1/2011		11875113	EP	DIRECT MODULATED LASER
83862743	Application		10/7/2011		11873708.9	EP	MAPPING PERSISTENT STORAGE
83862998	Application		10/10/2011		11873859	EP	METHODS AND SYSTEMS FOR IDENTIFYING ACTION FOR RESPONDING TO ANOMALY IN CLOUD COMPUTING SYSTEM
83863044	Application		11/4/2011		11874998.5	EP	DECODER CIRCUITS HAVING METAL-INSULATOR-METAL THRESHOLD SWITCHES
83863453	Application		1/6/2012		12864664.3	EP	WIRELESS ACCESS POINT ASSIGNMENT
83875490	Published		10/27/2011		11874746.8	EP	SHIFTABLE MEMORY SUPPORTING ATOMIC OPERATION

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83883797	Application		10/10/2011		11873977	EP	Methods And Systems For Planning Execution Of An Application In A Cloud Computing System
83928319	Application		10/31/2011		11874903.5	EP	Reducing TCP Timeouts due to Incast Collapse at a Network Switch
83929405	Published		10/31/2011		11875179.1	EP	REMOTE SOFTWARE DEPOLYMENT ACROSS A NETWORK
83929654	Published		12/17/2011		11877247.4	EP	Determining Rack Position of Device
83930298	Published		12/9/2011		11879168	EP	Optical Connections
83933540	Published		10/27/2011		11874849	EP	Aligning Annotation of Fields of Documents
83933604	Published		10/31/2011		11874908.4	EP	EMAIL TAGS
83946421	Published		3/8/2012		12870678.5	EP	DATA SAMPLING DEDUPLICATION
83946487	Published		4/27/2012		12875136.9	EP	COLLABORATIVE CACHING
83948709	Published		1/9/2012		12865204.7	EP	Optical Connections
83948829	Published		1/12/2012		12864761.7	EP	INTEGRATED SUB-WAVELENGTH GRATING SYSTEM
83951308	Published		2/22/2012		12869527.7	EP	MULTIPLEXER FOR SIGNALS ACCORDING TO DIFFERENT PROTOCOLS
83951471	Published		1/18/2012		12866321.8	EP	HIGH DENSITY LASER OPTICS
83951531	Published		1/27/2012		12866666.6	EP	Glass-Silicon Wafer-Stacked Opto-Electronic Platforms
83952192	Published		4/30/2012		12875929.7	EP	PREVENTING A HYBRID MEMORY MODULE FROM BEING MAPPED
83952330	Published		3/15/2012		12871109	EP	Accessing And Replicating Backup Data Objects
83958117	Application		8/14/2014		14306276.8	EP	CORRELATION ENGINE COMPRISING ROOT CAUSE AND SERVICE IMPACT ANALYSES
83959810	Published		1/31/2012		12867223.5	EP	COMBINATION UNDERFILL-DAM AND ELECTRICAL-INTERCONNECT STRUCTURE FOR AN OPTO-ELECTRONIC ENGINE
83959946	Published		1/31/2012		12867225	EP	APPARATUS FOR USE IN OPTOELECTRONICS
83964312	Published		1/25/2012		12866488.5	EP	STORAGE SYSTEM DEVICE MANAGEMENT
83969750	Published		3/30/2012		12872471.3	EP	AUTHORIZATION CACHE
83974288	Published		1/30/2012		12867204.5	EP	ESTABLISHING CONNECTIVITY OF MODULAR NODES IN A PRE-BOOT ENVIRONMENT
83985635	Published		2/21/2012		12869329.8	EP	MAINTAINING SYSTEM FIRMWARE IMAGES REMOTELY USING A DISTRIBUTE FILE SYSTEM PROTOCOL
83987008	Published		2/29/2012		12870271.9	EP	UNIDIRECTIONAL RING LASERS
83988357	Published		4/24/2012		12875065	EP	IDENTIFYING NETWORK COMMUNICATION PATTERNS
83991310	Published		3/2/2012		12869720.8	EP	VERSIONED MEMORIES USING A MULTI-LEVEL CELL
83991356	Application		1/27/2012		12866955.3	EP	INTELLIGENT EDGE DEVICE
83991382	Published		1/31/2012		12867028.8	EP	DETERMINATION OF SPOOFING OF A UNIQUE MACHINE IDENTIFIER

PATENT
REEL: 038498 FRAME: 0099

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83991440	Published		4/30/2012		12875912.3	EP	NETWORK ACCESS APPARATUS HAVING A CONTROL MODULE AND A NETWORK ACCESS MODULE
83991565	Published		4/27/2012		12875252.4	EP	LOCAL CHECKPOINTING USING A MULTI-LEVEL CELL
83991603	Application		1/26/2012		12866445.5	EP	IMAGE-BASED APPLICATION AUTOMATION
83991625	Published		2/27/2012		12870159.6	EP	METHOD AND SYSTEM FOR VEHICLE PERSONALIZATION
83991697	Application		1/26/2012		12866909	EP	IMAGE-BASED APPLICATION AUTOMATION
83991734	Published		1/29/2012		12866701.1	EP	BEST-DEAL LIST GENERATION
83992341	Published		4/11/2012		12874138.6	EP	ROUTING OPTICAL SIGNALS
83992633	Application		1/31/2012		12867306.8	EP	CONTINUOUS DEPLOYMENT OF CODE CHANGES
83992771	Published		4/25/2012		12875444.7	EP	FILE TRANSFER USING XML
83992802	Acknowledged		5/15/2015		12889665.1	EP	BINDING OF APPLICATION AND INFRASTRUCTURE BLUEPRINTS
83992842	Application		4/23/2012		12875367	EP	INFLUENCE SCORES FOR SOCIAL MEDIA PROFILES
83995338	Published		4/30/2012		12875780.4	EP	BLOCK LEVEL STORAGE
83995429	Published		4/9/2012		12874325.9	EP	CREATING AN ARCHIVAL MODEL
83995625	Application		4/27/2012		12875160.9	EP	MAPPING APPLICATION DEPENDENCIES AT RUNTIME
83996289	Published		4/30/2012		12875739	EP	OBJECT DEPENDENCY MANAGEMENT
83996346	Published		4/26/2012		12875130.2	EP	INCREASING A DATA TRANSFER RATE
84014754	Application		6/29/2012		12880021.6	EP	RULE-BASED AUTOMATED TEST DATA GENERATION
84017517	Published		2/29/2012		12870087.9	EP	CONTROL OF FREQUENCY CHANNEL BETWEEN WIRELESS ACCESS POINTS ACCORDING TO SEQUENCE
84017562	Published		3/26/2012		12873087.6	EP	FRAME PASSING BASED ON ETHERTYPE
84020488	Published		4/25/2012		12875510.5	EP	NONLINEAR MEMRISTORS
84020533	Published		4/30/2012		12875835.6	EP	HYBRID MOS OPTICAL MODULATOR
84020622	Published		7/30/2012		12874891	EP	VIRTUAL COMPUTING RESOURCE ORCHESTRATION
84031233	Application		10/29/2014		14306728.8	EP	PROVIDING DATA FROM DATA SOURCES
84037075	Application		3/8/2012		12870625.6	EP	MODIFYING VIRTUAL MACHINE COMMUNICATIONS
84038223	Published		5/30/2012		12877746.3	EP	PARAMETER ADJUSTMENT FOR PATTERN DISCOVERY
84043276	Application		11/26/2014		14306890.6	EP	WEB BROWSER EMULATOR
84046856	Published		3/30/2012		12872611.4	EP	ASSOCIATING AN APPLICATION WITH AN APPLICATION FILE
84049813	Application		3/14/2012		12871431.8	EP	REPLACEABLE MODULAR OPTICAL CONNECTION ASSEMBLY
84049830	Published		3/14/2012		12870972.2	EP	Allocating Bandwidth in a Network
84071978	Application		6/8/2012		12878477.4	EP	VERSION MANAGEMENT FOR APPLICATIONS
84072891	Application		7/16/2012		12881266.6	EP	WORKFLOW COMPILATION
84072957	Published		6/8/2012		12878487.3	EP	REPLACING A CHUNK OF DATA WITH A REFERENCE TO A LOCATION
84072994	Application		7/31/2012		12882458.8	EP	Supporting Multi-Tenancy in a Federated Data Management System

PATENT
REEL: 038498 FRAME: 0100

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84073059	Published		7/31/2012			EP	Constructing test-centric model of application
84074285	Published		5/30/2012		12877932.9	EP	SERVER PROFILE TEMPLATES
84075965	Published		7/27/2012		12881788.9	EP	SYSTEMS AND METHODS FOR DETECTING A DIMM SEATING ERROR
84076326	Published		7/20/2012		12881312.8	EP	MIGRATING APPLICATIONS BETWEEN NETWORKS
84076343	Application		6/25/2012		12879622.4	EP	TRANSLATED SESSION INFORMATION TO PROVISION A NETWORK PATH
84077513	Published		7/30/2012		12882164.2	EP	PROVIDER BRIDGED NETWORK COMMUNICATION
84077596	Published		7/31/2012		12882261.6	EP	SYSTEM ARCHITECTURE GENERATION
84077608	Published		7/31/2012		12882152.7	EP	MANAGING AN INTERFACE BETWEEN AN APPLICATION AND A NETWORK
84077645	Published		7/20/2012		12881503.2	EP	POLICY-BASED SCALING OF NETWORK RESOURCES
84077685	Published		7/31/2012		12882465.3	EP	GENERATING SERVICE REQUEST MESSAGE TO OBTAIN WIRELESS SERVICES USING A MINIMAL SET OF SERVICES THAT ARE DESIGNATED BY DEFAULT FOR A ROAMING CONDITION
84077877	Published		7/10/2012		12880743.5	EP	LIST SORT STATIC RANDOM ACCESS MEMORY
84078885	Published		6/8/2012		12878542.5	EP	PATIENT INFORMATION INTERFACE
84079509	Published		7/25/2012		12881603	EP	DETERMINING APPLICATION VULNERABILITIES
84079534	Published		7/26/2012		12881886.1	EP	APPLICATION SECURITY TESTING
84079552	Published		5/31/2012		12877909.7	EP	ESTABLISHING TRUST BETWEEN PROCESSOR AND SERVER
84079594	Published		5/15/2012		12876711.8	EP	QUERY PROCESSING
84080533	Published		7/31/2012		12882473.7	EP	RECEIVING INPUT POWER MEASUREMENTS TO MANAGE A RECTIFIER
84080808	Published		4/30/2012		12875809.1	EP	Determining Virtual Machine Placement
84084131	Published		4/25/2012		12874965.2	EP	DYNAMIC MEMORY ALLOCATION
84084214	Published		4/30/2012		EP12875848.9	EP	Globally managed rate-limit assignment for multi-tenant segregation using distributed rate limiters
84086247	Application		6/29/2012		12880264.2	EP	Wireless Network with Coordinated Sectors to Mitigate Interference
84094531	Published		8/29/2012		12 883 723.4	EP	CIRCUIT-SWITCHED CALL DELIVERY
84094653	Application		5/1/2012		12876066.7	EP	CONFIGURABLE CLOS NETWORK
84097630	Application		10/31/2014		14306752.8	EP	Silicon Photonics based optical circuit switch
84100733	Application		6/30/2012		12 880 133.9	EP	SYSTEM AND METHOD FOR VIRTUAL REPLICATION OF A MOBILE PHONE
84100831	Published		5/11/2012		12876432.1	EP	SERVER SELECTION
84101323	Published		5/25/2012		12877499.9	EP	PROVIDING A MODEL OF IMPACT OF A COOLING INFRASTRUCTURE
84106332	Published		6/29/2012		12880122.2	EP	GENERATION OF ACCESS POINT CONFIGURATION CHANGE BASED ON A GENERATED COVERAGE MONITOR

PATENT
REEL: 038498 FRAME: 0101

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84106350	Published		6/27/2012		12880028.1	EP	BATTERY TO PROVIDE VOLTAGE TO POWER MODULES
84107976	Application		11/14/2014		14 306 814.6	EP	DYNAMICALLY ADJUSTING A MODEL FOR A SECURITY OPERATIONS CENTER
84110996	Published		7/27/2012		12881726.9	EP	STORING MEMORY WITH NEGATIVE DIFFERENTIAL RESISTANCE MATERIAL
84112922	Published		7/30/2012		12882147.7	EP	OPTICAL WAVEGUIDE
84116402	Published		6/1/2012		12878169.7	EP	SHARING INFORMATION ABOUT RESOURCES IN A COLLABORATIVE ENVIRONMENT
84117619	Application		6/29/2012		12879840.2	EP	PERSONALIZING SHARED COLLABORATION CONTENT
84118238	Published		6/28/2012		12880177.6	EP	Multi-Level Cell Memory
84118578	Published		7/3/2012		12880628.8	EP	MANAGING A CLOUD SERVICE
84118612	Published		7/3/2012		12880717.9	EP	MANAGING A HYBRID CLOUD SERVICE
84118664	Published		7/3/2012		12880390.5	EP	MANAGING A MULTITENANT CLOUD SERVICE
84123198	Published		7/31/2012		12882154.3	EP	ABSTRACTION MODELS FOR MONITORING OF CLOUD RESOURCES
84126206	Published		7/9/2012		12880952.2	EP	SITE MODEL SELECTION FOR A WIRELESS ACCESS POINT
84126495	Published		7/17/2012		12881354	EP	SYSTEM AND METHOD FOR OPERATING SYSTEM AGNOSTIC HARDWARE VALIDATION
84126787	Application		1/31/2013		13873375.3	EP	MAGNETIC TAPE PROCESSING
84137061	Published		7/31/2012		12882206.1	EP	SYSTEMS AND METHODS FOR CONTROLLING ACCESS TO A SHARED DATA STRUCTURE WITH READER-WRITER LOCKS USING MULTIPLE SUB-LOCKS
84137295	Published		10/10/2012		12886202.6	EP	IDENTIFYING REPORTS TO ADDRESS NETWORK ISSUES
84138269	Published		7/30/2012		12882428.1	EP	COMPILATION SYSTEM FOR EXECUTABLE OBJECTS
84139614	Application		10/31/2012		12887324,7	EP	EXECUTABLE SOFTWARE SPECIFICATION GENERATION
84139963	Application		9/27/2012		12885444.5	EP	CAPTURING AN APPLICATION STATE IN A CONVERSATION
84140104	Published		10/30/2012		12887772.7	EP	ANALYZING DATA WITH COMPUTER VISION
84140132	Published		10/31/2012		12887808.9	EP	Combined Block-Style Error Correction
84140147	Published		10/30/2012		12887594.5	EP	SMART MEMORY BUFFERS
84140879	Published		9/6/2012		12884030.3	EP	Scalable File System
84141088	Published		9/10/2012		12884306.7	EP	USE OF PRIMARY AND SECONDARY CONNECTION TABLES
84141157	Published		10/31/2012		12887476.5	EP	CATALOGING BACKUP DATA
84141197	Application		12/19/2012		12890441.4	EP	NVRAM PATH SELECTION
84141280	Application		1/21/2013		13871841.6	EP	PALLETIZED LOAD REACTANT REGULATION HEATING
84141292	Published		7/31/2012		12882513	EP	Pattern Consolidation To Identify Malicious Activity
84141335	Application		12/21/2012		12890251.7	EP	MEMORY MODULE HAVING ERROR CORRECTION LOGIC
84153339	Published		7/31/2012		12882340.8	EP	UNAUTHORIZED USER CLASSIFICATION

PATENT
REEL: 038498 FRAME: 0102

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84156159	Published		8/29/2012		12883884.4	EP	Querying Structured And Unstructured Databases
84158938	Published		8/28/2012		12883648.3	EP	HIGH PERFORMANCE PERSISTENT MEMORY
84159545	Application		1/31/2013		13874118.6	EP	CONTROLLED HEAT DELIVERY
84160124	Published		8/16/2013		13832360.5	EP	NETWORK SYSTEM FOR IMPLEMENTING A CLOUD PLATFORM
84162671	Published		8/29/2012		12883502.2	EP	SECURITY SCAN BASED ON DYNAMIC TAINT
84164229	Application		3/18/2013		13838535.6	EP	VISUALIZING CONDITIONS OF INFORMATION TECHNOLOGY ENVIRONMENTS
84164254	Application		9/19/2012		12883040.3	EP	METADATA TREE OF A PATIENT WITH LOCKBOXES
84168250	Application		8/21/2012		12883129.4	EP	CONGESTION NOTIFICATION IN A NETWORK
84173795	Published		9/28/2012		12885741.4	EP	LOCATION BASED ADVERTISING
84179609	Published		8/31/2012		12883899.2	EP	SELECTING A RESOURCE TO BE USED IN A DATA BACKUP OR RESTORE OPERATION
84182204	Published		9/28/2012		12885510.3	EP	Application Security Testing
84184512	Published		9/27/2012		12885196,1	EP	TRANSMIT SPECIFIC TRAFFIC ALONG BLOCKED LINK
84185033	Published		9/14/2012		12884359.6	EP	DETERMINING A LOAD DISTRIBUTION FOR DATA UNITS AT A PACKET INSPECTION DEVICE
84191740	Application		9/25/2012		12885193.8	EP	NOTIFICATION OF ADDRESS RANGE INCLUDING NON-CORRECTABLE ERROR
84192678	Application		10/31/2012		E12887787.5	EP	MODULAR RACK SYSTEM
84193763	Application		1/18/2013		13871450.6	EP	INTERCONNECTION ARCHITECTURE FOR MULTILAYER CIRCUITS
84195008	Application		1/28/2013		13872449.7	EP	RADIUSED ALIGNMENT POST FOR SUBSTRATE MATERIAL
84196700	Published		9/28/2012		12885210	EP	APPLICATION RANDOMIZATION
84198283	Application		11/23/2012		12885657.2	EP	Dynamic Management Of A Cloud Computing Infrastructure
84215509	Application		4/30/2013		13883838.8	EP	GROUPING CHUNKS OF DATA INTO A COMPRESSION REGION
84215523	Application		3/28/2013			EP	DATA FLUSH OF GROUP TABLE
84215535	Application		3/28/2013		13879713.9	EP	ADDRESS RANGE TRANSFER FROM FIRST NODE TO SECOND NODE
84217905	Published		10/19/2012		12886518.5	EP	ASYNCRHONOUS CONSISTENT SNAPSHOTS IN PERSISTENT MEMORY STORES
84217962	Published		11/14/2012		12888283.4	EP	Updating Statistics in Distributed Databases
84223043	Application		10/19/2012		12886565.6	EP	Performing A Search Based On Entity-Related Criteria
84223933	Application		6/2/2015		13881439.7	EP	SATA INITIATOR ADDRESSING AND STORAGE DEVICE SLICING
84224873	Application		3/28/2013		13879729.5	EP	COORDINATING REPLICATION OF DATA STORED IN A NON-VOLATILE MEMORY-BASED SYSTEM

PATENT
REEL: 038498 FRAME: 0103

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84226550	Published		10/26/2012		12886958.3	EP	PRODUCT INTELLIGENCE ENGINE
84237773	Application		5/5/2015		12887799	EP	Patient oriented hospital care approach and system
84237916	Application		5/5/2015		12887326.2	EP	GENERATING AN OUTPUT BASED ON COLLECTING INFORMATION RELATING TO A CASE
84245419	Application		11/19/2012		12888596.9	EP	ELECTRICAL CONNECTORS FOR POWER SUPPLIES
84252609	Acknowledged		6/1/2015		12889521.6	EP	ASYNCHRONOUS FRAMEWORK FOR MANAGEMENT OF IAAS
84252652	Application		12/19/2012		12890336.6	EP	MULTI-CHANNEL CONVERSATION
84264437	Application		11/29/2012		12889279.1	EP	Image Analysis
84265739	Published		11/30/2012		12889263.5	EP	Distributed Pattern Discovery
84273643	Application		12/7/2012		12889689.1	EP	CREATING MULTIMODAL OBJECTS OF USER RESPONSES TO MEDIA
84274035	Published		6/4/2015		12889605.7	EP	Displaying Information Technology Conditions with Heat Maps
84275145	Acknowledged		12/19/2012		12890444.8	EP	HEAT REMOVAL ASSEMBLY
84291321	Application		1/21/2013		13871412.6	EP	POWER FACTOR CORRECTOR POWER SHARING
84291336	Acknowledged		1/29/2013			EP	ASSIGNING PROCESSORS TO MEMORY MAPPED CONFIGURATION
84292962	Application		1/31/2013		13873374.6	EP	UPDATING A COMMIT LIST TO INDICATE DATA TO BE WRITTEN TO A FIRMWARE INTERFACE VARIABLE REPOSITORY
84299276	Application		4/29/2013		13883570.7	EP	RECORDING UNSTRUCTURED EVENTS IN CONTEXT
84301892	Application		3/28/2013		13879778.2	EP	Implementing Coherency with Reflective Memory
84301953	Application		3/28/2013		13880647.6	EP	APPARATUS AND METHOD FOR STORAGE DEVICE READING
84304242	Application		2/26/2013		13876278.6	EP	FEDERATED SOCIAL MEDIA ANALYSIS SYSTEM AND METHOD THEREOF
84304266	Application		5/28/2013		13885828.7	EP	MOBILE AUGMENTED REALITY FOR MANAGING ENCLOSED AREAS
84304374	Application		7/9/2015		13870798.9	EP	Characterizing Risks in Resource Distribution Systems
84304385	Application		7/10/2015		13871522.2	EP	Vertically-Tiered Client-Server Architecture
84304455	Application		7/10/2015		13874163.2	EP	NON-VOLATILE MULTI-LEVEL-CELL MEMORY WITH DECOUPLED BITS FOR HIGHER PERFORMANCE AND ENERGY EFFICIENCY
84306364	Application		7/20/2015		13872566.8	EP	BARCODE DEVICE
84306418	Acknowledged		2/28/2013		13876588.8	EP	THREE-PHASE PARALLEL POWER CONVERTER LOAD ADJUSTMENT
84310698	Application		7/24/2015		13713494.6	EP	PREDICTIVE CACHE APPARATUS AND METHOD OF CACHE PREDICTION
84312500	Application		7/30/2015		13876146.5	EP	Sending a Request to a Management Service

PATENT
REEL: 038498 FRAME: 0104

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84312667	Application		1/18/2013		13871895.2	EP	PREVENTING AN INPUT/OUTPUT BLOCKING ATTACK TO A WIRELESS ACCESS POINT
84312773	Application		1/29/2013		13874102	EP	ANALYZING STRUCTURE OF WEB APPLICATION
84312942	Application		7/17/2015		13876148.1	EP	PROVIDING CODE CHANGE JOB SETS OF DIFFERENT SIZES TO VALIDATORS
84312973	Application		7/24/2015		13881066.8	EP	EXPLORATION MAPS FOR VISUALIZING SOFTWARE PRODUCT KNOWLEDGE
90001175	Application		2/27/2013		13876359.4	EP	DETERMINING EVENT AND INPUT COVERAGE METRICS FOR A GRAPHICAL USER INTERFACE CONTROL INSTANCE
90016455	Application		1/24/2013		13873068.4	EP	Address Resolution In Software-Defined Networks
90017108	Application		1/30/2013		13873958.6	EP	CONTROLLING A TOPOLOGY OF A NETWORK
90017162	Application		1/31/2013		13874117.8	EP	NETWORK CONTROLLER PROVISIONED MACSEC KEYS
90022852	Application		8/7/2015		13874644.1	EP	Formatting Semi-Structured Data in a Database
90025969	Application		3/28/2013		13879854.1	EP	Shared Memory System
90028906	Application		4/1/2013		13881361.3	EP	External Memory Controller
90028918	Application		4/2/2013		13881264.9	EP	STATE-RETAINING LOGIC CELL
90028935	Application		4/3/2013		13881272.2	EP	Cartridge Interdependence Switch
90031036	Application		3/15/2013		13877870.9	EP	Sending Encrypted Data to a Service Provider
90031117	Application		9/4/2015		13881803.4	EP	AUTOMATED CONTEXTUAL-BASED SOFTWARE LOCALIZATION
90041281	Application		3/13/2013		13878062.2	EP	COUPLED RING RESONATOR SYSTEM
90041304	Application		3/13/2013		13878349.3	EP	BACKLIGHT HAVING COLLIMATING REFLECTOR
90041324	Application		8/28/2015		13881834.9	EP	MODE CONVERSION FOR OPTICAL ISOLATION
90043614	Application		3/11/2013		13877542.4	EP	EVENT CORRELATION BASED ON CONFIDENCE FACTOR
90049327	Application		3/26/2013		13880248.3	EP	TOP LOADING CARTRIDGE
90049353	Application		3/26/2013		13880354.9	EP	TOP LOADING CARTRIDGE
90049368	Application		3/26/2013		13880430.7	EP	TOP LOADING CARTRIDGE
90049387	Application		3/28/2013		13880256.6	EP	MAKING MEMORY OF COMPUTE AND EXPANSION BLADE DEVICES AVAILABLE FOR USE BY AN OPERATING SYSTEM
90051005	Application		3/7/2013		13877091.2	EP	CLOUD APPLICATION BANDWIDTH MODELING
90051526	Application		3/28/2013		13880294.7	EP	IDENTIFYING MEMORY OF A BLADE DEVICE FOR USE BY AN OPERATING SYSTEM OF A PARTITION INCLUDING THE BLADE DEVICE
90051548	Application		3/29/2013		13880271.5	EP	SHARING FIRMWARE AMONG AGENTS IN A COMPUTING NODE
90052805	Application		3/14/2013		13877967.3	EP	MULTIVERSIONED NONVOLATILE MEMORY HIERARCHY FOR PERSISTENT MEMORY
90053632	Application		4/3/2013		13880943.9	EP	ZONEABLE POWER REGULATION
90056369	Application		4/3/2013		13881062.7	EP	MICROCONTROLLER AT A CARTRIDGE OF A CHASSIS
90056901	Acknowledged		4/3/2013			EP	Managing Firmware Updates

PATENT
REEL: 038498 FRAME: 0105

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90056959	Application		3/15/2013		13878171.1	EP	CLOUD-BASED CONNECTIVITY
90056990	Acknowledged		6/14/2013			EP	LOOP-FREE HYBRID NETWORK
90068094	Acknowledged		3/29/2013			EP	BATCHING TUPLES
90068701	To Be Filed		4/16/2013			EP	DISTRIBUTED EVENT CORRELATION SYSTEM
84174518	Published		9/26/2012		12885454.4	EP	MULTICAST MESSAGE UPDATE
83747177	Published		7/20/2011		11869642.6	EP	POWER SUPPLY SYSTEM WITH DYNAMIC FILTERING
83995821	Published		4/20/2012		12874521.3	EP	VOLTAGE REGULATOR CONTROL SYSTEM
82235324	Published		2/15/2008		8743482.5	EP	Coolant Pulsing For Computer System
82240571	Published		2/26/2008		8726106.1	EP	Improved Fan And Colling Device
83854682	Published		10/28/2011		11874565.2	EP	Fan Impeller with Multiple Blades Shaped and Disposed to Provide High Air-Power Efficiency
83995715	Published		2/9/2012		12867753.1	EP	HEAT DISSIPATING SYSTEM
84274117	Application				13866878.5	EP	SYSTEMS AND METHODS FOR PREDICTIVE POWER MANAGEMENT IN A COMPUTING CENTER
90022717	Application		3/27/2013		13880644.3	EP	Non-Volatile Memory Based Synchronous Logic
90024609	Application		3/25/2013		13880334.1	EP	MEMORY DEVICE HAVING ERROR CORRECTION LOGIC
90048545	Application		4/30/2013		13883828.9	EP	Coalescing Memory Access Requests
83127184	Published		10/13/2010		10858499.6	EP	DASHBOARD DISPLAY METHOD AND APPARATUS
82585362	Published		8/4/2009		9807074.1	EP	APPARATUS, AND ASSOCIATED METHOD, FOR TRACKING AIRCRAFT STATUS
84306291	Application		1/22/2013		13872715.1	EP	DETERMINING A REMEDIAL ACTION FOR A MOTORIZED VEHICLE BASED ON SENSED VIBRATION
83501092	Published		2/23/2011		11859470.4	EP	METHOD AND APPARATUS FOR MANAGING DEVICES
84078669	Published		5/24/2012		12877339.7	EP	Fiber Connector Assembly
84104743	Published		8/17/2012		12882890.2	EP	CONNECTION INCLUDING FLANGE IN COOPERATION WITH RESILIENT MEMBER TO ENGAGE AND DISENGAGE REMOVABLE PRINTED CIRCUIT ASSEMBLY
82672074	Published		10/8/2008		8824871.1	EP	Firmware Storage Medium With Customized Image
83952223	Published		5/1/2012		12875997.4	EP	PREARRANGING DATA TO COMMIT TO NON-VOLATILE MEMORY
84106320	Published		6/29/2012		12879889.9	EP	RE-VERIFICATION OF A DEVICE
82068257	Published		6/8/2005		5105012.8	EP	Power Management Method For Use In A Wireless Local Area Network (LAN)
82243688	Published		4/2/2009		9004917.2	EP	System And Method For Securing A Network From Zero-day Vulnerability Exploits
82884863	Published		5/15/2009		9844739.4	EP	A Method And Apparatus For Policy Enforcement Using A Tag
82931338	Published		10/31/2009		9850988.8	EP	MALICIOUS CODE DETECTION
83733005	Published		8/8/2011		11870535.9	EP	FABRIC CHIP HAVING A PORT RESOLUTION MODULE
83977172	Application		12/21/2011		11877730,9	EP	PROPER INSTALLATION DETERMINATION BASED ON RFID

PATENT
REEL: 038498 FRAME: 0106

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83991410	Published		4/26/2012		12875506.3	EP	MULTICAST ROUTING PATH CHECK
84140054	Application		10/31/2012		12887666.1	EP	SIGNALING EXISTENCE OF A NETWORK NODE THAT IS IN A REDUCED-POWER MODE
84016717	Published		2/29/2012		12870035.8	EP	INFORMATION TRANSMISSION FROM WIRELESS ACCESS POINT
84017584	Application		4/27/2012		EP 12875419.9	EP	HOME NETWORK PACKET DELIVERY
84302003	Application		3/31/2013			EP	SCHEDULE FOR ACCESS TO SHARED WIRELESS MEDIUM BASED ON PROFILE DATA
90016431	Application		1/23/2013		13872576.7	EP	Balancing Access Point Workloads
90056866	Acknowledged		3/15/2013			EP	MULTIBAND OPERATION OF A SINGLE WI-FI RADIO
83952429	Published		5/1/2012		12876047.7	EP	SEGMENT COMBINING FOR DEDUPLICATION
82065572	Published		12/19/2002		2258806.5	EP	System And Method For Securing Drive Access To Data Storage Media Based On Medium Identifiers
84306377	Application		1/30/2013		13873802.6	EP	SYSTEMS AND METHODS FOR DETERMINING COMPATIBILITY BETWEEN SOFTWARE LICENSES
83814330	Application		10/28/2011		11874526.4	EP	METHOD AND SYSTEM FOR SINGLE POINT OF FAILURE ANALYSIS AND REMEDIATION
82238069	Published		3/6/2008		8726501.3	EP	Prediction Of Systems Location Inside A Data Center By Using Correlation Coefficients
84141242	Application		10/31/2012		12887824.6	EP	THERMAL STABILIZATION SHIPPING SYSTEM AND METHOD
83442157	Application		3/3/2011		11859701.2	EP	RECORDS MANAGEMENT SYSTEM
84079565	Published		5/15/2012		12876868.6	EP	PATTERN MINING BASED ON OCCUPANCY
84289440	Application		6/19/2015		13874092.3	EP	STORING BACKUP DATA SEPARATE FROM CATALOG DATA
84312540	Application		7/20/2015		13876637.3	EP	SELECTING A BACKUP TYPE BASED ON CHANGED DATA
82241753	Published		11/13/2008		8852536.5	EP	AUTOMATED RE-ORDERING OF COLUMNS FOR ALIGNMENT TRAP REDUCTION
82176515	Published		3/22/2005		5251733.1	EP	Remote Software Support Agent System
83217749	Application		10/27/2010		10859064,7	EP	SYSTEMS AND METHODS FOR SCHEDULING CHANGES
83719059	Application		5/20/2011		11866356.6	EP	SYSTEM AND METHOD FOR CONFIGURATION POLICY EXTRACTION
82852878	Published		10/26/2009		9848853.9	EP	Automatic Redundant Logical Connections
83141957	Application		6/30/2010		10854217.6	EP	Tracking A Server Request
83681555	Published		3/30/2011		11862280.2	EP	TIME FRAME BASED DATA ANALYSIS
82239071	Application		2/29/2008		8731110.6	EP	Identification Of Elements Of Currently-executing Component Script
83498530	Application		2/18/2011		11858666.8	EP	GENERATING TEST DATA
83543316	Published		3/8/2011		11860667.2	EP	CREATING A TEST CASE
83701561	Application		5/3/2011		11864892,2	EP	AUTOMATIC CLASSIFICATION ADJUSTMENT OF RECORDED ACTIONS FOR AUTOMATION SCRIPT
83987162	Published		1/23/2012		12866734.2	EP	IDENTIFYING A POLLING COMMUNICATION PATTERN

PATENT
REEL: 038498 FRAME: 0107

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0108

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84071965	Application		4/23/2012		EP12875334.0	EP	SOFTWARE DEFECT VERIFICATION
84312703	Application		2/28/2013		13876193.7	EP	DETERMINING COVERAGE OF DYNAMIC SECURITY SCANS USING RUNTIME AND STATIC CODE ANALYSES
82250624	Published		4/8/2010		10159418.2	EP	Policy-provisioning
83140168	Application		6/30/2010		10854216.8	EP	SYSTEM AND METHOD FOR SELF-SERVICE CONFIGURATION OF AUTHORIZATION
83195279	Published		10/13/2010		10858500.1	EP	CREATING A CONFIGURATION FILE TEMPLATE
84092609	Application		6/8/2012		12878465.9	EP	CLOUD APPLICATION DEPLOYMENT
84148238	Application		8/13/2012		12891384.5	EP	PERFORMANCE TESTS IN A CONTINUOUS DEPLOYMENT PIPELINE
84252640	Application		12/3/2012		12889437.5	EP	CLOUD SERVICE MANAGEMENT SYSTEM
82211162	Published		7/1/2005		5300547.6	EP	A Method Or Apparatus For Routing Signaling Messages In A Network
82215659	Published		7/11/2006		6300791.8	EP	Method And System Of Processing Presence Information In A Communications System
82235822	Published		11/15/2007		7301551.3	EP	Communication Methods And Systems
82251182	Published		7/20/2009		9290575.1	EP	Methods And Apparatus For Bookmarking
82789283	Published		1/28/2010		10736399.6	EP	Conference-call System And Conference-specific Access Codes
83271675	Application		3/30/2011		11862484	EP	SYSTEMS AND METHODS FOR GENERATING A SHORTENED NOTIFICATION OF AN INCOMING CALL
83692295	Application		10/31/2013		13306499.8	EP	TILE-BASED GRAPHICAL EXPLORATION OF COLLECTIONS OF OBJECTS
83694960	Published		10/24/2011		11868774.8	EP	PROVIDE SERVICES USING UNIFIED COMMUNICATION CONTENT
83960049	Application		7/25/2014		14178638.4	EP	Website Framework
83769043	Published		6/29/2011		11868534.6	EP	Application Migration with Dynamic Operating System Containers
83114197	Application		4/29/2010		10850871.4	EP	DOCUMENT REGISTRY SYSTEM
83229093	Published		10/14/2010		10858507.6	EP	CONTINUOUS QUERYING OF A DATA STREAM
83566619	Application		3/1/2011		11859084.3	EP	Pattern Recognition
84162971	Application		8/30/2012		12891380.3	EP	ENCRYPTED DATA STORE FOR RECORDS
84304333	Application		3/15/2013		13877639.8	EP	MAP MATCHING
90016560	Application		1/29/2013		13873869.5	EP	METHODS AND SYSTEMS FOR SHARED FILE STORAGE
90068041	Acknowledged		3/28/2013			EP	Generating a Feature Set
83193693	Published		9/30/2010		10803245.9	EP	Virtual Machines
83518885	Published		5/2/2011		11859384.7	EP	Digital Signatures
83776059	Published		7/29/2011		11870379.2	EP	CREDENTIAL VALIDATION
84312826	Application		1/31/2013		13873289.6	EP	TARGETED SECURITY ALERTS

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83099507	Published		4/19/2010		10850362.4	EP	NANOSCALE SWITCHING DEVICES WITH PARTIALLY OXIDIZED ELECTRODES
83933010	Published		12/12/2011		11877460.3	EP	MEMRISTORS AND METHODS OF FABRICATION
84078603	Published		7/31/2012		12882243.4	EP	NON-VOLATILE RESISTIVE MEMORY CELLS
83130015	Published		6/29/2010		10853815.8	EP	Tentant Isolation In A Multi-tent Clound System
84077627	Published		7/31/2012		12882394.5	EP	IMPLEMENTING A TRANSITION PROTOCOL IN WHICH A FIRST RULE SET FOR ROUTING PACKETS RECEIVED BY A GROUP OF SWITCHES DURING A FIRST TIME PERIOD IS UPDATED TO A SECOND RULE SET
84312643	Application		1/18/2013		13871956.2	EP	PREVENTING A MEMORY ATTACK TO A WIRELESS ACCESS POINT
82174139	Published		4/28/2005		5743382.3	EP	Quantum Optical State Converter
82242566	Published		3/11/2008		8726728.2	EP	Optoelectronic Switches Using On-chip Optical Waveguides
82247621	Published		4/29/2009		9743297.5	EP	OPTICAL WAVEGUIDES AND METHODS OF MAKING THE SAME
82405577	Published		5/9/2008		8754323.7	EP	Optically Enabled Broadcast Bus
82573995	Published		6/17/2008		8768539.2	EP	Optical Broadcast Systems And Methods
82879622	Published		4/28/2009		9844148.8	EP	ANGLED COUPLING FOR OPTICAL FIBERS
82930502	Published		1/6/2010		10842367.4	EP	OPTICAL INTERCONNECT
83858306	Published		10/21/2011		11874278.2	EP	GRATING COUPLERS WITH DEEP-GROOVE NON-UNIFORM GRATINGS
83932074	Published		12/9/2011		11879161.5	EP	Optical Connections
83992426	Published		4/25/2012		12875327.4	EP	ANALYZING LIGHT BY MODE INTERFERENCE
83992446	Published		4/26/2012		12875430.6	EP	OPTICAL SLAB
84057418	Published		10/31/2008		14188845.3	EP	Optical Beam Couplers And Splitters
84076004	Published		5/29/2012		12877675.4	EP	DEVICES INCLUDING INDEPENDENTLY CONTROLLABLE ABSORPTION REGION AND MULTIPLICATION REGION ELECTRIC FIELDS
84113021	Published		7/30/2012		12882354.9	EP	COMPACT PHOTONIC PLATFORMS
82919304	Published		8/3/2009		9848120.3	EP	LINKING MODEL INSTANCES TO PACKAGES
83696815	Published		6/30/2011		11868747.4	EP	SYSTEMS AND METHODS FOR MERGING PARTIALLY AGGREGATED QUERY RESULTS
84141268	Published		7/31/2012		12882247.5	EP	VULNERABILITY VECTOR INFORMATION ANALYSIS
82938311	Published		12/8/2009		9852129.7	EP	Managing Errors In A Data Processing System
82836834	Published		7/30/2007		7799915.9	EP	QUERY OPTIMIZER
84079625	Published		6/1/2012		12878146.5	EP	MERGING DATA FROM A SOURCE LOCATION INTO A TARGET LOCATION
84079648	Published		6/4/2012		12887850.1	EP	MANAGING AN ANALYTIC FUNCTION TO BE PERFORMED ON DATA STORED IN AN INPUT BLOCK

PATENT
REEL: 038498 FRAME: 0109

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82256864	Published		1/26/2006		6733930.9	EP	System, Method, And Computer Program Product For Byte-based Utility Computing Pricing
83991656	Published		4/30/2012		EP12876027.9	EP	AUTOMATED EVENT MANAGEMENT
84279576	Application		12/11/2012		12889906.9	EP	Provisioning Tools for Application Development
84237827	Application		12/11/2012		12889809.5	EP	Data Operation in Shift Register Ring
82925925	Published		1/28/2010		11737662.4	EP	Interface Methods And Apparatus For Memory Devices
83681014	Published		3/14/2011		11860733.2	EP	MEMORY INTERFACE
83789129	Published		9/14/2011		11872383.2	EP	IMPARTING DURABILITY TO A TRANSACTIONAL MEMORY SYSTEM
83988390	Published		4/25/2012		12875141.9	EP	NETWORK MANAGEMENT
84201013	Published		9/28/2012		12885229	EP	System and Method for Dynamically Selecting Between Memory Error Detection and Error Correction
84217950	Published		11/6/2012		12887963.2	EP	ENHANCED GRAPH TRAVERSAL
84304439	Application		7/10/2015		13873873.7	EP	RECOVERING PAGES OF A DATABASE
90053557	Acknowledged		3/28/2013			EP	STORING DATA FROM CACHE LINES TO MAIN MEMORY BASED ON MEMORY ADDRESSES
82065563	Published		12/19/2002		2258789.3	EP	System And Method For Securing Drive Access To Media Based On Medium Identification Numbers
82083860	Published		4/5/2005		5007420.2	EP	Methods And Apparatus For Providing Menu Data To A Storage Automation Library
84138405	Published		9/27/2012		12885276.1	EP	ALLOCATING WORKLOADS BASED ON AIR FLOW PRIORITY
84192574	Published		9/28/2012		12885470	EP	COOLING ASSEMBLY
84262627	Application		1/30/2013		13873972.7	EP	CONTROLLING ERROR PROPAGATION DUE TO FAULT IN COMPUTING NODE OF A DISTRIBUTED COMPUTING SYSTEM
83230338	Published		10/28/2010		10859082.9	EP	ZONING DATA TO A VIRTUAL MACHINE
84072039	Published		6/28/2012		12880270.9	EP	MEMORY MODULE WITH A DUAL-PORT BUFFER
84224851	Application		3/29/2013		13879997.8	EP	PERFORMANCE RULES AND STORAGE UNITS
82892394	Published		7/17/2009		9847442.2	EP	Virtual Hot Inserting Functions In A Shared I/O Evironment
83094377	Published		5/28/2010		10852313.5	EP	DISABLING A DISPLAY REFRESH PROCESS
84119012	Published		8/13/2012		12891410.8	EP	TRANS-IMPEDANCE AMPLIFIERS (TIA) THERMALLY ISOLATED FROM OPTICAL MODULES
84050565	Published		3/30/2012		12873041.3	EP	DEFINING A PERIMETER TO MONITOR A WIRELESS DEVICE FOR A VIOLATION OF THE PERIMETER
84191761	Published		8/9/2013		13840348	EP	QR CODE UTILIZATION IN SELF-REGISTRATION IN A NETWORK
82273715	Published		5/16/2002		2769763	EP	AUTHENTICATION METHOD
82715732	Published		10/31/2008		8877898	EP	Method And Apparatus For Network Intrusion Detection

PATENT
REEL: 038498 FRAME: 0110

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0111

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82931283	Published		8/9/2009		9848321.7	EP	Illuminable Indicator Of Electronic Device Being Enabled Based At Least On User Presence
82939693	Published		10/28/2009		9850960.7	EP	Method And Apparatus For Tracing A Multicast Flow
83161101	Published		7/26/2010		10855422.1	EP	Mitigation Of Detected Patterns In A Network Device
83425454	Published		2/18/2011		11859001.7	EP	METHODS FOR CONTROLLING ELECTIONS IN A MULTICAST NETWORK
83698841	Published		7/18/2011		11869560	EP	Optical Interconnect
83991398	Application		4/25/2012		12875654.1	EP	INTER DOMAIN LINK FOR FIBRE CHANNEL
84168269	Published		8/21/2012		12883292	EP	CONGESTION NOTIFICATION IN A NETWORK
90017132	Application		1/31/2013		13874175.6	EP	NETWORK SWITCH STIMULATION
83421813	Published		6/28/2011		11868819.1	EP	METHOD OF ASSOCIATING A CLIENT WITH AN ACCESS POINT IN A WIRELESS LOCAL AREA NETWORK
83782545	Published		11/4/2011		11875149.4	EP	Fault Processing in a System
83952377	Application		5/1/2012		12876001.4	EP	DETERMINING SEGMENT BOUNDARIES FOR DEDUPLICATION
83973127	Published		4/24/2012		12871225.4	EP	Determining A Schedule For A Job To Replicate An Object Stored On A Storage Appliance
83992755	Published		3/29/2012		12872632	EP	A Conceptual Services Implementation Platform
83929635	Published		11/15/2011		11875849.9	EP	Mobilized Sensor System
82585293	Published		10/12/2009		9821078.4	EP	SYSTEMS AND PROCESSES FOR SECURING SENSITIVE INFORMATION
82858557	Published		4/28/2010		10770283.9	EP	IMPROVEMENTS IN OR RELATING TO COOLING
83210541	Application		10/25/2010		10859048	EP	PROVIDING INFORMATION MANAGEMENT
83487904	Published		3/17/2011		11860892.6	EP	DATA SOURCE ANALYTICS
84142527	Published		7/12/2012		12880789.8	EP	PROVIDING DATA TO BE RETRIEVED
82675566	Application		10/13/2008		8877461.7	EP	Trend Determination And Identification
82195607	Published		11/8/2005		5300906.4	EP	ALARM CONSOLIDATION IN IT INFRASTRUCTURES
82676605	Published		10/16/2008		8877470.8	EP	Performance Analysis Of Applications
83136080	Application		6/1/2010		10852611.2	EP	Methods, Apparatus, And Articles Of Manufacture To Deploy Software Applications
83691267	Application		4/4/2011		11863207.4	EP	CREATING A CORRELATION RULE DEFINING A RELATIONSHIP BETWEEN EVENT TYPES
84116994	Application		6/22/2012		12879356.9	EP	OPTIMAL ASSIGNMENT OF VIRTUAL MACHINES AND VIRTUAL DISKS USING MULTIARY TREE
82244366	Published		2/11/2005		5723013.8	EP	System And Method For Testing Web Applications With Recursive Discovery And Analysis
83681492	Published		5/6/2011		11865318.7	EP	IMAGE-BASED AUTOMATION SYSTEMS AND METHODS
83991756	Application		1/31/2012		12867378.7	EP	IDENTIFCATION OF A FAILED CODE CHANGE
84071853	Application		4/20/2012		EP12874895.1	EP	TESTING SYSTEM FOR AN INTEGRATED SOFTWARE SYSTEM
84139985	Application		7/31/2012		12882067.7	EP	INSTRUMENTED FILE DEPLOYMENT

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84202587	Application		11/28/2012		12889336.9	EP	REGULATING APPLICATION TASK DEVELOPMENT
82581168	Published		5/12/2005		5748199.6	EP	APPARATUS AND METHOD FOR DEVELOPING, TESTING AND MONITORING SECURE SOFTWARE
83998474	Published		2/29/2012		12869680.4	EP	NETWORK SERVICE INTERFACE ANALYSIS
83139750	Application		6/21/2010		10853786.1	EP	SYSTEM FOR TESTING AND CERTIFYING A VIRTUAL APPLIANCE ON A CUSTOMER COMPUTER SYSTEM
83141931	Application		6/30/2010		10854213.5	EP	SYSTEM AND METHOD FOR SERVICE RECOMMENDATION SERVICE
83992735	Application		1/31/2013		13873442.1	EP	DEFINING A DESIGN PLAN
84072855	Application		6/8/2012		12878445	EP	TEST AND MANAGEMENT FOR CLOUD APPLICATIONS
84121734	Application		7/31/2012		12882420.8	EP	MONITORING FOR MANAGED SERVICES
90000092	Application		1/31/2013		13873308.4	EP	PHYSICAL RESOURCE ALLOCATION
90031141	Application		9/10/2015		13883689.5	EP	Coordinating Application Deployment with a Platform Tier
82189115	Published		7/1/2005		5856213.3	EP	Improvements In Or Relating To Electronic Document Browsing
82229762	Published		1/29/2008		8708353.1	EP	Service Routing For Communication Systems
82241183	Published		1/20/2009		9150969.5	EP	Data Processing Method And System
82247681	Published		1/30/2009		9305087	EP	Communications System And Method
82906148	Published		1/26/2010		10701365.8	EP	Communications System And Method
83881371	Published		10/13/2011		12840571.9	EP	PROVISIONING A TELEPHONY NETWORK IN RESPONSE TO AN ELECTRONIC DEVICE ATTACHING TO THE NETWORK
83990814	Application		4/20/2012		12874503.1	EP	Unified User Profiles
84031275	Application		10/29/2014		14306730.4	EP	RENDERING A USER INTERFACE
82214462	Published		12/11/2007		7870546.4	EP	Computer System And Method Of Control Thereof
83698801	Application		4/19/2012		12845582.1	EP	File Lock Preservation
84063609	Published		4/30/2012		12875767.1	EP	CONFIGURABLE COMPUTER MEMORY
82253048	Published		4/18/1997		97922333.6	EP	System And Method For Automated Retrieval Of Information
83941225	Application		4/30/2014		14305651.3	EP	METHOD AND SYSTEM FOR INVENTORY AVAILABILITY PREDICTION
82253111	Published		3/7/2001		1916443.3	EP	Method and System for Modeling a Legacy Computer System
82255916	Published		9/20/2004		4784507.8	EP	TRANSACTION PROCESSING ARCHITECTURE
82256231	Published		4/21/2005		5729153.6	EP	METHOD AND SYSTEM FOR STORING SELF-DESCRIPTIVE TABULAR DATA WITH ALPHANUMERIC AND BINARY VALUES
82257605	Published		4/21/2009		9158356.7	EP	APPARATUS, AND ASSOCIATED METHOD, FOR FACILITATING DATA-CENTER MANAGEMENT
82208912	Published		4/28/2006		6758863.2	EP	Providing Training Information For Training A Categorizer
83053676	Application		5/11/2010		10844908.3	EP	Software Application Testing

PATENT
REEL: 038498 FRAME: 0112

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84163277	Application		9/12/2012		12882895.1	EP	VALIDATING A METADATA TREE USING A METADATA INTEGRITY VALIDATOR
84164187	Application		9/12/2012		12891393.6	EP	METADATA TREE WITH KEY ROTATION INFORMATION
90016637	Application		1/31/2013		13873548.5	EP	SYNTHETIC HEALTHCARE DATA GENERATION
82069622	Published		9/17/1999		99307380.8	EP	Operation Of Trusted State In Computing Platform
82195739	Published		10/27/2005		5817261	EP	Methods And Systems For Controlling The Admission Of Media Content Into A Network
83255742	Published		1/31/2011		11842148.6	EP	Method and Circuit for Switching a Memristive Device
83992317	Published		3/16/2012		12871063.9	EP	VARIED MULTILAYER MEMRISTIVE DEVICE
82924270	Published		2/1/2010		EP10844901.8	EP	Deep Sleep Mode Management For A Network Switch
83721277	Published		6/7/2011		11867520.6	EP	A SCALABLE MULTI-TENANT NETWORK ARCHITECTURE FOR VIRTUALIZED DATACENTERS
82217396	Published		8/11/2006		6801268.1	EP	Quantum Repeater
82234946	Published		7/30/2008		8794893.1	EP	Microresonator Systems And Methods Of Fabricating The Same
82405591	Published		5/9/2008		8769411.3	EP	Methods For Fabrication Of Large Core Hollow Waveguides
82859845	Published		4/29/2009		9844126.4	EP	OPTICAL MEMORY EXPANSION
82884777	Published		5/6/2009		9844441.7	EP	BUS-BASED SCALABLE OPTICAL FABRICS
82922736	Published		7/17/2009		9847443	EP	NON-PERIODIC GRATING REFLECTORS WITH FOCUSING POWER AND METHODS FOR FABRICATING THE SAME
82925999	Published		7/31/2009		9847927.2	EP	PHOTONIC QUANTUM SYSTEM ALIGNMENT USING MULTIPLE BEAMS
82926254	Published		9/18/2009		9849626.8	EP	LIGHT-EMITTING DIODE INCLUDING A METAL-DIELECTRIC-METAL STRUCTURE
82930496	Published		12/21/2009		9852671.8	EP	CIRCUIT SWITCHED OPTICAL INTERCONNECTION FABRIC
82930539	Published		9/23/2009		9849901.5	EP	OPTICAL DEVICES BASED ON DIFFRACTION GRATINGS
82931432	Published		1/29/2010		10844886.1	EP	VERTICAL-CAVITY SURFACE-EMITTING LASERS WITH NON-PERIODIC GRATINGS
83699780	Published		4/20/2011		11863987.1	EP	SUB-WAVELENGTH GRATING-BASED OPTICAL ELEMENTS
83706046	Published		4/20/2011		11864014.3	EP	LIGHT-DETECTION SYSTEMS
83734822	Published		5/23/2011		11866034.9	EP	OPTICAL TRANSMISSION SYSTEM
83835844	Published		9/15/2011		11872532.4	EP	VERTICAL-CAVITY SURFACE-EMITTING LASERS
83883372	Published		10/28/2011		11874725.2	EP	DEVICES INCLUDING A DIAMOND LAYER
83948782	Published		1/10/2012		12865019.9	EP	OPTICAL CONNECTORS
84076101	Published		7/25/2012		12881867.1	EP	Avalanche Photodiodes with Defect-assisted Silicon Absorption Regions
84112889	Published		7/30/2012		12882153.5	EP	OPTICAL COUPLING SYSTEM AND METHOD FOR FABRICATING THE SAME

PATENT
REEL: 038498 FRAME: 0113

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84202604	Application		5/19/2015		12888997.9	EP	RUNNING AGENTS TO EXECUTE AUTOMATION TASKS IN CLOUD SYSTEMS
83713431	Published		5/25/2011		11865997.8	EP	IMPLEMENTATION OF NETWORK DEVICE COMPONENTS IN NETWORK DEVICES
84136971	Published		7/31/2012		12882301	EP	NETWORK TRAFFIC PROCESSING SYSTEM
83131987	Published		6/10/2011		11793250.9	EP	QUERY PIPELINE
83137583	Published		6/1/2011		11790329.4	EP	Dynamic Multidimensional Schemas for Event Monitoring
83422188	Published		10/11/2011		11862410.5	EP	Network Topology Discovery
84192657	Published		10/8/2012		12886274.5	EP	ROBUST HARDWARE FAULT MANAGEMENT SYSTEM, METHOD AND FRAMEWORK FOR ENTERPRISE DEVICES
84292946	Application		1/31/2013		13873763	EP	RAM REFRESH RATE
90024185	Application		2/28/2013		13876308.1	EP	RECOVERY PROGRAM USING DIAGNOSTIC RESULTS
84116619	Published		6/4/2012		12878246.3	EP	USER-DEFINED LOADING OF DATA ONTO A DATABASE
83194915	Published		8/15/2011		11818627.9	EP	STORING ELECTRONIC CONTENT WITH TIME-VARYING PROPERTIES
83782568	Published		12/22/2011		11869688.9	EP	CRYPTOGRAPHIC INFORMATION ASSOCIATION TO MEMORY REGIONS
83784165	Published		1/31/2012		12814537.2	EP	Access to Memory Region Including Confidential Information
82184309	Published		8/18/2005		5789083.2	EP	Mapping Power System Componets
82223390	Published		7/11/2007		7796813.9	EP	Defect-and-failure-tolerant Demultiplexer Using Series Replication And Error-control Encoding
82242500	Published		9/19/2008		8831712.8	EP	Generating A Parallel Recovery Plan For A Data Storage System
82933739	Published		11/13/2009		9851339.3	EP	PARALLELIZED CHECK POINTING USING Mats AND THROUGH SILICON Vias (tsvs)
83034234	Published		4/28/2010		10850860.7	EP	Protecting The Information Encoded In A Bloom Filter Using Encoded Bits Of Data
83164702	Published		7/30/2010		10855178.9	EP	Method For Selecting User Desirable Content From Web Pages
84115720	Published		6/8/2012		12878588.8	EP	ACCESSING MEMORY
84304410	Application		1/23/2013		13872320	EP	SHARED RESOURCE CONTENTION
90052824	Application		9/15/2015		EP13878260.2	EP	CO-PROCESSOR-BASED ARRAY-ORIENTED DATABASE PROCESSING
83854696	Published		10/26/2011		11874616.3	EP	Device for Cooling an Electronic Component in a Data Center
83995732	Application		3/12/2012		EP12871455.7	EP	LIQUID TEMPERATURE CONTROL COOLING
82680223	Published		10/24/2008		8877605.9	EP	Magnetic-tape Drive And Magnetic-tape Head Compatible With Multiple Tape Formats

PATENT
REEL: 038498 FRAME: 0114

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82240682	Published		3/25/2008		8732801.9	EP	Locking Mechanism With Movable And Fixed Members Each Having Single And Double Locking Features
82400882	Published		6/19/2008		8795938.3	EP	Multi-blade Interconnector
83163774	Published		9/16/2010		10857386.6	EP	Power Capping System
83416915	Published		2/28/2011		11859926.5	EP	A SPRING LOADED LID
84139561	Published		9/28/2012		12885775.2	EP	PLENUMS FOR REMOVABLE MODULES
84292917	Application		1/31/2013		13873193	EP	LIQUID COOLING
83167830	Published		10/16/2010		10858513.4	EP	DEVICE HARDWARE AGENT
83543627	Published		4/7/2011		11863230.6	EP	SYSTEMS AND METHODS FOR DETERMINING A POWER PHASE AND/OR A PHASE ROTATION
83952268	Application		5/1/2012		12876041	EP	PACKAGED MEMORY DIES THAT SHARE A CHIP SELECT LINE
84124745	Application		1/30/2013		13873588.1	EP	FAILOVER IN RESPONSE TO FAILURE OF A PORT
83137199	Published		1/29/2010		10844878.8	EP	Methods And Systems For An Interposer Board
84067642	Published		4/30/2012		12876008.9	EP	REFLECTIVE MEMORY BRIDGE FOR EXTERNAL COMPUTING NODES
84076301	Published		7/27/2012		12881801	EP	OPTICALLY CONNECTING A CHIP PACKAGE TO AN OPTICAL CONNECTOR
83220857	Published		10/26/2010		10859056.3	EP	METHODS AND SYSTEMS FOR DETECTING SUSPECTED DATA LEAKAGE USING TRAFFIC SAMPLES
84306468	Acknowledged		3/15/2013		13877509.3	EP	ENERGY BASED NETWORK RESTRUCTURING
82746394	Published		12/30/2008		8879315.3	EP	Storing Network Flow Information
82808598	Published		1/29/2009		9839411.7	EP	Managing Security In A Network
83133020	Published		6/1/2010		10852609.6	EP	MULTIPLEXED SERIAL MEDIA INDEPENDENT INTERFACE
83222068	Published		10/27/2010		10859062.1	EP	PATTERN DETECTION
83425385	Published		2/10/2011		11858294.9	EP	SYSTEMS, METHODS, AND APPARATUS TO AUTHENTICATE COMMUNICATIONS MODULES
83991369	Application		1/30/2012		12867032	EP	REDUNDANT NON-LOOPING PATHS
82934005	Published		1/31/2010		10844898.6	EP	METHOD AND SYSTEM FOR MANAGEMENT OF SAMPLED TRAFFIC DATA
82256408	Published		9/16/2005		5797409.9	EP	REPORTING OF ABNORMAL COMPUTER RESOURCE UTILIZATION DATA
82257470	Published		6/27/2008		8772097.5	EP	APPARATUS, AND AN ASSOCIATED METHODOLOGY, FOR FACILITATING AUTHENTICATION USING A DIGITAL MUSIC AUTHENTICATION TOKEN
82817463	Application		3/13/2009		9841630.8	EP	A PLURALITY OF SENSORS COUPLED TO A SERIES OF SWITCHING DEVICES
82930241	Published		9/23/2009		9849903.1	EP	PROVIDING IN RUSH CURRENT TOLERANCE TO AN ELECTRONIC DEVICE

PATENT
REEL: 038498 FRAME: 0115

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84312565	Application		2/28/2013		13876297.6	EP	REDUCING POWER FOR STORAGE DEVICES
82852866	Published		7/31/2009		9847933	EP	Method And System To Recognize And Inventory Applications
82919272	Published		6/15/2010		10799525	EP	Method And System For Verifying Data Accuracy
83118739	Application		5/27/2010		10852302.8	EP	Bundling Configuration Items Into A Composite Configuration Item
83584506	Published		3/9/2011		11860194.7	EP	PERFORMING A CHANGE PROCESS BASED ON A POLICY
83184707	Published		8/6/2010		10855713.3	EP	SYSTEM AND METHODS FOR APPORTIONING POWER CONSUMPTION
83185168	Published		8/26/2010		10856518.5	EP	ISOLATION OF PROBLEMS IN A VIRTUAL ENVIRONMENT
83617590	Published		3/17/2011		11861207.6	EP	SELF-ORGANIZATION OF A SATELLITE GRID
83963506	Published		1/20/2012		12865934.9	EP	STORAGE PROVISIONING NEGOTIATION
83991329	Application		1/26/2012		12866943.9	EP	IDENTIFYING A PUSH COMMUNICATION PATTERN
83995574	Published		2/7/2012		12867768.9	EP	TESTING A MOBILE APPLICATION
84202575	Application		5/4/2015		12888046.5	EP	ASSIMILATING BUSINESS RULES
90000083	Application		1/31/2013		13873446.2	EP	GENERATING SOFTWARE TEST SCRIPT FROM VIDEO
90000100	Application		2/1/2013		13873809.1	EP	TEST SCRIPT CREATION BASED ON ABSTRACT TEST USER CONTROLS
90031129	Application		9/4/2015		13883506.1	EP	DEPENDENCIES BETWEEN FEATURE FLAGS
82581179	Published		8/25/2006		6802528.7	EP	Apparatus and method for analyzing and supplementing a program to provide security
84312585	Acknowledged		7/10/2015		13875944.4	EP	PRESENTATION OF USER INTERFACE ELEMENTS BASED ON RULES
83117720	Application		6/7/2011		11811941.1	EP	METHOD AND SYSTEM FOR DEPLOYING Saas (software As A Service) SERVICE BUNDLES
83140445	Published		6/30/2010		10854215	EP	SYSTEM AND METHOD FOR AN AUTOMATED DATA DISCOVERY SERVICE
83995385	Application		2/28/2013		13876692.8	EP	AN INTERFACE FOR CREATING A PLAN ARTIFACT
84161934	Application		9/21/2012		12884906.4	EP	MONITOR USABLE WITH CONTINUOUS DEPLOYMENT
84252628	Acknowledged		5/22/2015		12889641.2	EP	CLOUD OBJECT
82071299	Published		4/23/2002		2354065.1	EP	Adaptor Module
82207277	Published		1/12/2006		6100311.7	EP	Provision Of Services Over A Common Delivery Platform Such As A Mobile Telephony Network
82228880	Published		3/31/2008		8718348.9	EP	Obtaining Feedback For An Accessed Information Item
82242425	Published		1/31/2008		8300063.8	EP	Method And System For Accessing Applications
82249859	Published		4/14/2010		10159857.1	EP	Packet Routing Method, Proxy Server And Apparatus
82562765	Application		8/4/2009		9807069.1	EP	FLEXIBLE INTEGRATED ACCESS TO PUBLISHED MATERIAL
83136930	Application		7/19/2012		12305878.6	EP	EDITING INFORMATION WITH SLIDER EDIT TOOLS
83940758	Application		4/30/2014		14305649.7	EP	NETWORK INFRASTRUCTURE MANAGEMENT
90023638	Application		8/6/2015		15306271.6	EP	DISTRIBUTED EVENT PROCESSING

PATENT
REEL: 038498 FRAME: 0116

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82207340	Published		3/3/2005		5733179.5	EP	A Method Of Predicting Availability Of A System
82811449	Allowed		1/29/2009		9839399.4	EP	CONNECTING PORTS OF ONE OR MORE ELECTRONIC DEVICES TO DIFFERENT SUBSETS OF NETWORKS BASED ON DIFFERENT OPERATING MODES
83160156	Published		7/30/2010		10855445.2	EP	METHOD AND SYSTEM OF CONTROLLING POWER CONSUMPTION OF AGGREGATED I/O PORTS
82934045	Published		10/26/2009		9850947.4	EP	SPARSE INDEX BIDDING AND AUCTION BASED STORAGE
83114225	Published		10/8/2010		10853378.7	EP	DATA DEDUPLICATION
84208486	Application		9/30/2012		12885625.9	EP	ELECTRONIC HEALTH RECORD SYSTEM WITH CUSTOMIZABLE COMPLIANCE POLICIES
84232797	Application		10/26/2012		12887144.9	EP	Summarization of a document
90016685	Application		1/31/2013		13873297.9	EP	Linking Media Access Between Devices
90068069	Acknowledged		3/29/2013			EP	QUERY FEATURES AND QUESTIONS
82176875	Published		5/21/2004		4734282.9	EP	Use Of Certified Secrets In Communication
82201475	Published		10/28/2005		5810957	EP	Virtual Computing Infrastructure
83728682	Published		6/16/2011		11867722.8	EP	System and Method for Policy Generation
83123545	Application		4/23/2010		10850383	EP	UPDATING A USER INTERFACE
83265935	Published		2/11/2011		11858017.4	EP	DETERMINING CHARACTERISTICS OF PARTICIPANTS IN A SOCIAL NETWORK
83974309	Published		1/31/2012		12867410.8	EP	SINGLE AND DOUBLE CHIP SPARE
90048527	Application		4/30/2013		13883675.4	EP	Memory Access Rate
82253786	Published		9/19/2006		6814952.5	EP	WORD RECOGNITION USING ONTOLOGIES
83738417	Published		7/29/2011		11870340.4	EP	SYSTEMS AND METHODS FOR DISTRIBUTED RULE-BASED CORRELATION OF EVENTS
83789818	Published		8/24/2012		12827937.9	EP	MULTIDIMENSION CLUSTERS FOR DATA PARTITIONING
83793359	Published		1/26/2012		12853508.5	EP	CLUSTERING EVENT DATA BY MULTIPLE TIME DIMENSIONS
83927130	Published		12/20/2011		11875015.7	EP	DISTRIBUTED EVENT PROCESSING
84079484	Published		5/30/2012		12877804	EP	FIELD SELECTION FOR PATTERN DISCOVERY
84139166	Published		7/31/2012		12882189.9	EP	CONJOINT VULNERABILITY IDENTIFIERS
83874544	Published		10/28/2011		11874544.7	EP	Management of A Computer
83965899	Published		1/30/2012		12867657.4	EP	BOOTING A SERVER USING A REMOTE READ-ONLY MEMORY IMAGE
84291297	Application		1/15/2013		13871582.6	EP	Dynamic Firmware Updating
82836839	Published		7/30/2007		7799914.2	EP	AUTOMATIC VERTICAL-DATABASE DESIGN
82919398	Published		7/14/2010		10735119.9	EP	DATABASE STORAGE ARCHITECTURE
84217938	Published		10/31/2012		12887437.7	EP	EXECUTING A QUERY HAVING MULTIPLE SET OPERATORS
84241556	Application		12/7/2012		12889572.9	EP	NETWORK RESOURCE MANAGEMENT
83701892	Published		2/8/2012		12814434.2	EP	TRANSITION BETWEEN STATES IN A PROCESSOR

PATENT
REEL: 038498 FRAME: 0117

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82105823	Published		9/8/2004		4783547.5	EP	Defect-Tolerant And Fault-Tolerant Circuit Interconnections
83858245	Published		10/21/2011		11874307.9	EP	MEMRISTIVE ELEMENT BASED ON HETERO-JUNCTION OXIDE
84020509	Published		4/26/2012		12875550.1	EP	CUSTOMIZABLE NONLINEAR ELECTRICAL DEVICES
84193713	Application		1/14/2013		13871190.8	EP	NONVOLATILE MEMORY ARRAY LOGIC
83034248	Published		4/30/2010		10850894.6	EP	Method For Routing Data Packets In A Fat Tree Network
83863154	Published		10/11/2011		11874065.3	EP	Authenticating a User's Location in a Femtocell-Based Network
82201412	Published		6/28/2005		5786324.3	EP	Quantum Coherent Systems And Operations
82230377	Published		6/16/2008		8768551.7	EP	OPTICAL INTERCONNECT
82243364	Published		10/23/2008		8841755.5	EP	Photonic Interconnects For Computer System Devices
82634169	Published		8/27/2008		8798820	EP	Dynamic Impedance Receiver Circuit For Ultrafast Low-power Photodetector
82654475	Published		9/24/2008		8823464.6	EP	Polarization Maintaining Large Core Hollow Waveguides
82716699	Published		10/31/2008		8877900.4	EP	Optical Connector Interconnection System And Method
82790075	Published		1/9/2009		9837742.7	EP	OPTICAL ENGINE FOR POINT-TO-POINT COMMUNICATIONS
82925993	Published		7/31/2009		9847935.5	EP	BEAM DIRECTION SENSOR
82931423	Published		1/29/2010		10844895.2	EP	GRATING-BASED OPTICAL FIBER-TO-WAVEGUIDE INTERCONNECTS
83123548	Published		5/6/2008		12193927.6	EP	FABRICATION OF THIN PELLICLE BEAM SPLITTERS
83821159	Published		8/31/2011		11871524.2	EP	Thermal Shunt
83948853	Published		1/18/2012		12866023	EP	INTEGRATED SUB-WAVELENGTH GRATING ELEMENT
83959971	Published		1/31/2012		12867273	EP	OPTICAL ARCHITECTURES, OPTICAL DISTRIBUTION MATRICES, AND METHODS OF MANUFACTURING OPTICAL STRUCTURES
84076052	Published		6/28/2012		12880104	EP	Optical Shuffling
84076172	Published		7/26/2012		12881884.6	EP	OPTICAL ENGINE
84158900	Published		9/13/2012		12884528.6	EP	CONTROLLING TEMPERATURES IN OPTICAL CIRCUITS
82914695	Published		7/28/2009		9847904.1	EP	CONTROLLING CLOUD SERVICES
82240994	Published		4/4/2008		8745153	EP	DC-TO-DC CONVERTER WITH INDEPENDENT COMPENSATION LOGIC
82405522	Published		5/28/2008		8769755.3	EP	Impedance Correction
83130000	Published		5/30/2010		10852607	EP	Virtual Machine Code Injection
84115697	Published		6/8/2012		12878548.2	EP	AUGMENTING MEMORY CAPACITY FOR KEY VALUE CACHE
84247404	Published		5/18/2015		12889067	EP	MEMORY CONTROLLERS TO FORM SYMBOLS BASED ON BURSTS
83566658	Published		8/25/2011		11871208.2	EP	Model-based stereoscopic and multiview cross-talk reduction

PATENT
REEL: 038498 FRAME: 0118

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84237929	Application		5/5/2015		12887323.9	EP	CASE MANAGEMENT USING ACTIVE ENTITIES IN A SOCIAL NETWORK
82203710	Published		10/28/2005		5801721.1	EP	Virtual Computing Infrastructure
82203839	Published		10/28/2005		5810956.2	EP	Virtual Computing Infrastructure
82929588	Published		10/15/2009		9850473.1	EP	A Hybrid Approach To Automated IT Change Planning
82929665	Published		10/26/2009		9748459.6	EP	Method And Apparatus For Selectively Routing Entanglement Building
90022879	Application		2/28/2013		13876217.4	EP	RESOURCE REFERENCE CLASSIFICATION
83818508	Published		11/16/2011		11876035.4	EP	Operation of Tape Drives
84019770	Application		4/27/2012		12875325.8	EP	DATA CENTER SERVICE ORIENTED NETWORKING
84105887	Published		5/22/2012		12877545.9	EP	ALTERNATING POWER SOURCES TO MANAGE INPUT POWER IN A CONVERTER
90016078	Application		1/30/2013		13873553.5	EP	UNIFIED CONTROL OF AN ELECTRONIC CONTROL SYSTEM AND A FACILITY CONTROL SYSTEM
90046360	Application		3/14/2013		13878273.5	EP	SUPPORT MEMBER
90056885	Application		4/3/2013		13880749	EP	Disabling Counterfeit Cartridges
82893478	Published		7/31/2009		9847931.4	EP	Controlling A Virtual Machine
83091099	Published		4/30/2010		10850884.7	EP	Management Data Transfer Between Processors
84076455	Published		7/30/2012		12881997.6	EP	Detecting Defects in a Processor Socket
84148300	Published		8/24/2012		12883108.8	EP	DEDICATING RESOURCES OF A NETWORK PROCESSOR
83507640	Published		3/15/2011		11861016.1	EP	Network Switching Device for Quantifying Available Service-Level Capacity of a Network For Projected Network Traffic
82933916	Published		10/28/2009		9850955.7	EP	Methods And Apparatus For Detection Of A Nat Device
83222076	Published		11/1/2010		10859347.6	EP	MANAGING MAC MOVES WITH SECURE PORT GROUPS
83588862	Published		4/19/2011		11863793.3	EP	Computing A Performance Characteristic Of A Network Device
83991426	Application		4/30/2012		12875996.6	EP	CONVERGED FABRIC FOR FCoE
83863420	Application		12/20/2011		11878301.8	EP	WIRELESS ACCESS POINT ALTERNATE SETTINGS
83972803	Published		2/2/2012		12867467.8	EP	SYSTEMS AND METHODS FOR DATA CHUNK DEDUPLICATION
82910272	Published		6/10/2010		10724506	EP	Cooling Apparatus
83164624	Published		7/20/2010		10855094.8	EP	FORMATTING SYSTEM MONITORING INFORMATION
82104947	Published		3/11/2004		4251408.3	EP	Data Search System And Method
83700286	Published		7/26/2011		11869913.1	EP	Job Plan Verification
84273867	Application		1/29/2013		13873662.4	EP	RESTORATION OF A FILE SYSTEM OBJECT FROM RAW IMAGE BACKUP DATA
83214671	Published		11/12/2010		10859444.1	EP	DETERMINE AUTHORIZATION OF A SOFTWARE PRODUCT BASED ON A FIRST AND SECOND AUTHORIZATION ITEM
83800111	Published		8/31/2011		11871685,1	EP	PROVIDING APPLICATION CONTEXT FOR A CONVERSATION
84041410	Published		3/26/2012		12873442.3	EP	TOPOLOGICAL QUERY IN MULTI-TENANCY ENVIRONMENT

PATENT
REEL: 038498 FRAME: 0119

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82060052	Published		3/23/2001		1107261.8	EP	Method, Computer System And Computer Program For Monitoring Services Of An Information Technology Environment
82821367	Application		6/1/2009		9845628.8	EP	System And Method For Collecting Application Performance Data
83209550	Published		12/20/2010		10860970.2	EP	METHOD OF PROVISIONING ADDITIONAL STORAGE TO COMPUTER APPLICATIONS
83789792	Application		7/29/2011		11870306.5	EP	MIGRATING VIRTUAL MACHINES
83816161	Published		9/21/2011		11872600.9	EP	AUTOMATED DETECTION OF A SYSTEM ANOMALY
84312516	Application		1/31/2013		13873828.1	EP	METHODS AND APPARATUS FOR DEBUGGING OF REMOTE SYSTEMS
82926130	Published		11/23/2009		9851543	EP	System And Method For Object Identification In A User Interface
83185159	Published		8/17/2010		10856232.3	EP	PROVIDING AUTOMATION CODE CONTAINING A REPRESENTATION OF ALTERNATIVE INTERPRETATIONS OF A USER ACTION
83992714	Application		1/30/2013		13874158.2	EP	ACQUIRING IDENTIFICATION OF AN APPLICATION LIFECYCLE MANAGEMENT ENTITY ASSOCIATED WITH SIMILAR CODE
83995671	Published		4/30/2012		12876000.6	EP	Prioritization of continuous deployment pipeline tests
84046826	Published		3/30/2012		12872619.7	EP	SOFTWARE DEVELOPMENT ACTIVITY
84125967	Application		7/27/2012		12881758.2	EP	RECORDING EXTERNAL PROCESSES
82578992	Application		6/13/2008		8771057	EP	Hierarchical Policy Management
83721322	Published		5/31/2011		11866810.2	EP	AUTOMATED SECURITY TESTING
84000271	Published		2/29/2012		12870217.2	EP	NETWORK SERVICE INTERFACE ANALYSIS
82580858	Published		1/29/2009		7812463.3	EP	STANDARD OPERATING PROCEDURE AUTOMATION IN DATABASE ADMINISTRATION
83140874	Application		6/30/2010		10854214.3	EP	SYSTEM AND METHOD FOR A SERIALIZED DATA SERVICE
83992823	Application		5/27/2015		12889568.7	EP	GENERIC RESOURCE PROVIDER FOR CLOUD SERVICE
83995608	Application		4/26/2012		12875211	EP	PLATFORM RUNTIME ABSTRACTION
84072001	Application		6/8/2012		12878517.7	EP	CLOUD APPLICATION DEPLOYMENT PORTABILITY
84072877	Application		7/31/2012		12882089.1	EP	Orchestrating Hybrid Cloud Services
84117059	Application		6/29/2012		12879662,0	EP	Optimizing Placement of Virtual Machines
84137265	Application		41190		12886486.5	EP	HYBRID CLOUD ENVIRONMENT
84155393	Application		8/30/2012		12883663.2	EP	GLOBAL FEATURE LIBRARY USEABLE WITH CONTINUOUS DELIVERY
82202090	Published		10/27/2004		4793016.9	EP	Data Distribution System, And Method Therefor
82219754	Published		1/3/2007		7703598.8	EP	Call Screening For VOIP Calls At Gateway

PATENT
REEL: 038498 FRAME: 0120

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82230491	Published		1/23/2008		8728110.1	EP	PAUSING CALL PROCESSING TO ENABLE THE PLAYBACK OF INFORMATION
83806291	Published		1/31/2014		14290023.2	EP	FILTERING DATA FROM A DATABASE
83958170	Application		6/4/2014		14 305 845.1	EP	PURCHASE SUPPORT
84114606	Application		1/23/2015		15305070.3	EP	ELABORATION OF A GRAPHICAL REPRESENTATION IN A MODULE OF A WEB PAGE
84272098	Application		7/30/2015		15306239.3	EP	Web-application-launch application programming interfaces
90035308	Acknowledged					EP	Flexible and user-friendly layouts and widgets management mechanism for assembling and configuring advanced dashboards and views inside a web front-end WYSIWYG Graphical User Interface editor
82651100	Published		9/30/2008		8824049.4	EP	Authentication Of Services On A Partition
82853026	Published		3/25/2009		9842420.3	EP	POWER DISTRIBUTION UNIT-DEVICE CORRELATION
82938304	Published		12/1/2009		9851930.9	EP	POWER-CAP SETTINGS
84118539	Application		12/11/2014		EP14197500.3	EP	IP fragment steering method in multicpu/execution thread systems, using IP layer information, and first fragment used destination
84210913	Application		1/27/2013		13872559.3	EP	SOCKET STATE TRANSFER
82917033	Published		6/4/2010		10802589.1	EP	APPARATUS, METHOD AND SYSTEM FOR MODIFYING PAGES
83127180	Published		10/12/2010		10858489.7	EP	TRANSACTION PROCESSING SYSTEM AND METHOD
82254029	Published		5/6/2003		3736548.3	EP	Payment System And Method
82255406	Published		5/21/2004		4785572.1	EP	SYSTEM AND METHOD FOR ELECTRONIC DOCUMENT SECURITY
83640286	Published		4/7/2011		11863212.4	EP	METHOD AND APPARATUS FOR MOVING A SOFTWARE OBJECT
82256531	Published		8/9/2006		6801158.4	EP	Enterprise Application Server System And Method
82195844	Published		4/26/2006		6758634.7	EP	Nanoscale Interconnection Interface
82924255	Published		9/4/2009		9849071.7	EP	MEMRISTORS BASED ON MIXED-METAL-VALENCE COMPOUNDS
83168700	Published		8/30/2010		10856793.4	EP	Multilayer Memory Array
83778614	Published		6/24/2011		11868115.4	EP	HIGH-RELIABILITY HIGH-SPEED MEMRISTOR
83807339	Published		8/3/2011		11870454.3	EP	NITRIDE-BASED MEMRISTORS
83960005	Published		2/29/2012		12869691.1	EP	Memristor with Channel Region in Thermal Equilibrium with Containing Region
84110962	Published		7/27/2012		12881700.4	EP	DYNAMIC SENSE CIRCUITRY
90055225	Acknowledged		3/13/2013			EP	MEMRISTORS WITH DOPANT-COMPENSATED SWITCHING
84103156	Application		6/15/2012		12878839.5	EP	COMMUNICATING DATA ASSOCIATED WITH DIFFERENT PERSONAS OF A USER

PATENT
REEL: 038498 FRAME: 0121

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82207391	Published		6/9/2006		6772824.6	EP	OPTICALLY COUPLED INTEGRATED CIRCUIT LAYERS
82230557	Published		6/16/2008		8779658.7	EP	Optical Interconnect
82573310	Published		5/6/2008		8755088.5	EP	SYSTEMS AND METHODS FOR ROUTING OPTICAL SIGNALS
82716633	Published		10/31/2008		8877841	EP	Variably Configurable Computer Buses
82805243	Published		1/30/2009		9839424	EP	PLASMONIC LIGHT EMITTING DIODE
82829674	Published		2/23/2009		9840536.8	EP	DYNAMIC IMPEDANCE PHOTODETECTOR RECEIVER CIRCUIT
82930481	Published		10/29/2009		9850968	EP	OPTICAL DATA BUS AND METHOD
82931417	Published		1/29/2010		10844884.6	EP	MULTIMODE VERTICAL-CAVITY SURFACE-EMITTING LASER ARRAYS
83791126	Published		7/29/2011		11870224	EP	FIBER OPTICS CONNECTORS
83930201	Published		12/9/2011		11877086.6	EP	Control of Light Wavefronts
83992365	Published		4/18/2012		12874747.4	EP	FLEXIBLE CIRCUIT CABLE WITH FLOATING CONTACT
84068283	Published		4/16/2012		12874816.7	EP	INTEGRATED OPTICAL SUB-ASSEMBLY
90022759	Application		7/31/2015		13873163.3	EP	RADIX ENHANCEMENT FOR PHOTONIC PACKET SWITCH
83682161	Published		4/29/2011		11864430.1	EP	SYSTEMS AND METHODS FOR IN-MEMORY PROCESSING OF EVENTS
84022143	Published		2/22/2012		12869523.6	EP	HIDING LOGICAL PROCESSORS FROM AN OPERATING SYSTEM ON A COMPUTER
84027722	Published		2/23/2012		12869269.6	EP	Firmware Package to Modify Active Firmware
84290787	Application		1/30/2013		13873871.1	EP	NON-VOLATILE MEMORY WRITE MECHANISM
83055175	Published		2/22/2011		11707954.1	EP	OPERATING ON TIME SEQUENCES OF DATA
90022819	Application		1/31/2013		13873960.2	EP	DETERMINING TRANSFERABILITY OF A COMPUTING RESOURCE TO A CLOUD COMPUTING ENVIRONMENT
90065896	Acknowledged		3/28/2013			EP	SHIELD FOR AN ELECTRONIC DEVICE
82172555	Published		5/13/2004		4752379	EP	Redundant Data Assigment In A Data Storage System
82232177	Published		7/30/2008		8794896.4	EP	Electronic System Having Free Space Optical Elements
82692033	Application		10/31/2008		8877842.8	EP	Prioritized Optical Arbritration Systems And Methods
82925884	Published		12/10/2009		9852137	EP	Fair Token Arbitration Systems And Methods
82929794	Published		3/7/2011		11753881.9	EP	DATA STORAGE APPARATUS AND METHODS
83164707	Published		7/30/2010		10855177.1	EP	VISUAL SEPARATOR DETECTION IN WEB PAGES USING CODE ANALYSIS
83168803	Published		8/20/2010		10856042.6	EP	SYSTEMS AND METHODS FOR FILTERING WEB PAGE CONTENTS
84077663	Application		5/31/2012		12877868.5	EP	LOCAL ERROR DETECTION AND GLOBAL ERROR CORRECTION
84077703	Published		6/8/2012		12878350.3	EP	CHECKPOINTING USING FPGA
84223030	Published		5/1/2015		12887804.8	EP	Selective Error Correcting Code and Memory Access Granularity Switching

PATENT
REEL: 038498 FRAME: 0122

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84140010	Published		9/11/2012		12884363.8	EP	Discovering IP Multicast Group Memberships In Software Defined Networks
84149044	Published		7/31/2012		12882035.4	EP	POWER EFFICIENT NETWORK WITH NETWORK CONTROLLER
82817497	Published		2/24/2009		9840904.8	EP	Method And System To Lower Power Consumption
83995797	Published		3/12/2012		12871555.4	EP	RACK COOLING SYSTEM WITH A COOLING SECTION
84072920	Published		7/24/2012			EP	INITIATING A HELP FEATURE
84156870	Application		9/25/2012		12885489	EP	DISPLAYING INBOX ENTITIES AS A GRID OF FACETED TILES
82066856	Granted	815677	1/17/1997	3/16/2005	97900685.5	FI	Multicarrier Communication System And Method For Peak Power Control
82168919	Granted	118199	4/29/2004	8/15/2007	20040611	FI	Multiple Protocol Database
82201811	Granted	1708459	3/29/2005	8/20/2008	5300226.7	FI	Routing Element With Special Functions
82991027	Granted	1725065	5/11/2006	5/23/2012	6113818.6	FI	Controlling Access To Communication Services
82211906	Granted	1869864	4/3/2006	8/6/2008	6749186	FI	Multimedia Transfer For Wireless Networks
82171190	Granted	118246	9/27/2004	8/31/2007	20041244	FI	Selective Message Discard
82133597	Granted	1188339	6/23/2000	11/24/2004	943160.2	FI	METHOD AND SYSTEM FOR PROVIDING TELECOMMUNICATION SERVICES ACROSS NETWORKS THAT USE DIFFERENT PROTOCOLS
82168940	Granted	123519	8/2/2004	6/14/2013	20041046	FI	Software Authentication For Mobile Communication Devices
82171682	Granted	119348	1/11/2005	10/15/2008	20050028	FI	Signal Gateway Aggregation
81957101	Granted	750254	6/11/1996	5/8/2002	96109347.3	FR	Method And Apparatus For Providing Topology Based Enterprise Management Services
82006844	Granted	2845175	5/23/2003	3/24/2006	306225	FR	A Method And System Of Switching Between Two Or More Images Of Firmware On A Host Device
82019714	Granted	903889	7/31/1998	4/4/2007	98306134.2	FR	Internet Enabled Computer System Management
82020962	Granted	838923	10/7/1997	3/29/2006	97307976.7	FR	Method And Apparatus For Automatic Device Segmentation And Port-to-segment Distribution
82025009	Granted	891064	6/9/1998	10/3/2007	98304565.9	FR	Automatic Internet Protocol (IP) Address Allocation And Assignment
82041692	Granted	961439	12/10/1998	3/8/2006	98123605.2	FR	Network Management Event Storage And Manipulation Using Relational Database Technology In A Data Warehouse
82043126	Granted	1037145	11/30/1999	8/10/2005	99123777.7	FR	Hybrid Just-in-time Compiler That Consumes Minimal Resource
82060085	Granted	1320217	12/14/2001	10/13/2004	1129865	FR	Method, System And Computer Program For Monitoring Objects In An It Network
82062833	Granted	1174728	7/10/2001	9/24/2008	1305936.5	FR	Location Data Diffusion And Location Discovery
82067762	Granted	957484	5/12/1998	10/5/2005	98303691.4	FR	Read After Write
82068080	Granted	1008048	8/28/1998	10/31/2001	98940428	FR	Data Backup And Recovery System

PATENT
REEL: 038498 FRAME: 0123

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82068533	Granted	938053	2/19/1999	8/20/2003	99301223.6	FR	Dynamic Index
82068641	Granted	1101164	8/6/1999	1/2/2003	99940291	FR	System For Improved Data Backup And Recovery
82069400	Granted	1054530	4/19/2000	1/11/2006	303325.5	FR	Loop Prevention In Networks
82070948	Granted	1309220	10/31/2001	8/5/2009	1410142.2	FR	Data Processing System And Method
82077320	Granted	901672	4/24/1997	11/12/2003	97922458.1	FR	System, Method And Article Of Manufacture For Network Electronic Authorization Utilizing An Authorization Instrument
82082576	Granted	1463049	10/17/2003	9/30/2009	3023651.7	FR	Media Storage System And Method For Identifying A Storage Location Therein
82085210	Granted	1460630	10/9/2003	12/13/2006	3022914	FR	High-density Media Storage System
82101548	Granted	1465440	4/3/2003	7/9/2008	3290837.8	FR	Methods And Apparatus For Controlling Processing Entities, Such As Distributed Signalling Gateways
82116089	Granted	723238	1/23/1996	9/19/2001	96300429.6	FR	RELATIONAL DATABASE SYSTEM AND METHOD WITH HIGH DATA AVAILABILITY DURING TABLE DATA RESTRUCTING
82126886	Granted	768599	10/4/1996	12/17/2003	96307279.8	FR	ON-LINE DISK ARRAY RECONFIGURATION
82127453	Granted	779579	12/12/1996	5/15/2002	96309071.7	FR	BUS ERROR HANDLER FOR PERR# & SERR# ON DUAL PCI BUS SYSTEM
82128833	Granted	854613	12/30/1997	11/17/2004	97310663.6	FR	A NETWORK SWITCH WITH A MULTIPLE BUS STRUC- TURE AND A BRIDGE INTERFACE FOR TRANSFERR- ING NETWORK DATA BETWEEN DIFFERENT BUSES
82165235	Granted	782301	12/23/1996	37706	96120819.6	FR	METHOD AND APPARATUS FOR RATE-BASED SCHEDULING USING A RELATIVE ERROR APPROACH
82171838	Application		9/29/2005		509932	FR	Processing Of Usage Data For First And Second Types Of Usage-based Functions
82182014	Granted	1548580	11/8/2004	6/13/2007	4256917.8	FR	Non-platform-specific Unique Identifier Generation
82186202	Granted	1757065	5/13/2005	12/5/2007	5752784.8	FR	Improvements In Message-based Communications
82187771	Granted	1784998	8/31/2005	2/18/2009	5784661	FR	COMMUNICATIONS INFRASTRUCTURE FOR CONTENT DELIVERY USING EDGE SERVERS
82189082	Granted	1775969	10/17/2005	5/5/2010	5300830.6	FR	Communication System And Method
82190408	Granted	1587106	3/17/2005	6/18/2008	5102120.2	FR	Use Of Write Pass Value To Enable Detection Of Tampering With WORM Data
82198433	Granted	1812990	11/18/2005	4/15/2009	5851812.7	FR	Composite Material With Controllable Resonant Cells
82199939	Granted	1681880	12/19/2005	11/18/2009	5027786.2	FR	Data Retrieval From Computing Systems
82200131	Granted	1777970	10/21/2005	7/28/2010	5300845.4	FR	Communication System And Method
82200692	Granted	1825654	10/31/2005	12/2/2009	5815495.6	FR	Routing A Service Query In An Overlay Network
82203203	Granted	1708428	3/31/2005	39946	5300239	FR	Multimedia Messaging During A Push-to-talk Session
82206002	Published		4/3/2006		602880	FR	Distributed-State-Information-Based Distributed Computing Systems And Methods And Protocols For Managing Distributed State Information

PATENT
REEL: 038498 FRAME: 0124

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82208984	Granted	1859602	10/31/2005	7/7/2010	5824597.8	FR	Distributed Storing Of Network Position Information For Nodes
82209071	Granted	1724971	3/10/2005	7/9/2008	5720467.9	FR	Server System, Server Device And Method Therefor
82211864	Granted	1941696	7/20/2006	2/3/2010	6787976.7	FR	Service Chaining
82215128	Granted	1892907	7/31/2006	4/22/2009	6300840.3	FR	Signalling Gateway
82216121	Granted	1943757	1/30/2007	5/13/2009	7762845.1	FR	Methods And Systems For Avoiding Transmission-channel Disruptions
82219847	Granted	1811724	12/29/2006	8/12/2009	6027116	FR	Determining Data Link (L2) Network Paths
82233221	Granted	1279100	4/3/2001	6/16/2004	1926566.9	FR	USE OF A SINGLE THREAT TO SUPPORT MULTIPLE NETWORK CONNECTIONS FOR SERVER LOAD TESTING
82251590	Granted	811211	2/12/1996	10/16/2002	96906429.4	FR	System and Method for Electronic Transfer of Funds Using An Automated Teller Machine to Dispense the Transferred Funds
82252397	Granted	890155	2/24/1997	6/30/2004	97906748.5	FR	Automated System for Selecting an Initial Computer Reservation System
82252880	Granted	935786	10/29/1997	5/11/2005	97946866.7	FR	Fail-Safe Event Driven Transaction Processing System and Method
82253648	Granted	1409191	7/19/2002	8/23/2006	2752474.3	FR	Method and System for Weld Process Monitoring
82254584	Granted	1545936	9/30/2003	8/4/2010	3799309.4	FR	DRIVE-BY-WIRELESS VEHICLE CONTROL
82255007	Granted	1573964	12/17/2003	6/21/2006	3814189.1	FR	METHOD OF GUARANTEED DELIVERY OF SNMP TRAPS ACROSS A WIDE AREA NETWORK
82256273	Granted	1745661	4/21/2005	9/1/2010	5737577.6	FR	INTERNET MICRO CELL
82256567	Granted	1761797	5/3/2005	7/9/2008	5761078.4	FR	System And Method For Wireless Asset Tracking
82267688	Granted	1040611	12/11/1998	6/5/2002	98967000.5	FR	A Forward Error Correction System For Packet Based Real Time Media
82268357	Granted	1076955	4/7/1999	1/21/2009	99915315.8	FR	Point-To-Point Protocol With A Signaling Channel
82271180	Granted	1060593	11/30/1999	7/1/2009	99965063.3	FR	Telecommunication Conferencing System And Method
82276988	Granted	1369766	6/4/2003	1/2/2008	3253538.7	FR	Propagation Of Viruses Through An Information Technology Network
82277795	Granted	1414227	10/24/2002	8/30/2006	2354169.1	FR	Event Detection For Multiple Voice Channel Communications
82277810	Granted	1379060	7/5/2002	3/4/2009	2354105.5	FR	Improvements In Or Relating To DTMF Control
82392459	Granted	1428125	9/18/2002	11/3/2010	2775864.8	FR	Monitoring In Component-based Systems At Runtime (as Amended)
82576655	Granted	1760968	1/4/2003	10/27/2010	6023983.7	FR	Network Units For Use In And Organisation Of Cascade Systems
82579295	Granted	1749386	5/4/2005	4/14/2010	5746753.2	FR	Pattern Discovery In A Network Security System
82603032	Granted	1665824	7/23/2004	3/2/2011	4766305.9	FR	Methods And Apparatus For Controlling Signalling Gateways
82635090	Granted	2013706	4/20/2007	7/6/2011	7755826	FR	Self-authenticating Quantum Random Bit Generators

PATENT
REEL: 038498 FRAME: 0125

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82644401	Granted	1460440	10/9/2003	12/8/2010	3022910.8	FR	Apparatus For Sensing The Presence Of An Inductive Load Driven By A Pulse Width Modulated Signal
82654150	Granted	1941701	7/20/2006	6/22/2011	6787972.6	FR	Telephony And Web Services Coordination
82672110	Granted	1540502	8/11/2003	3/2/2011	3785167.2	FR	Multi-level packet screening with dynamically selected filtering criteria
82675312	Granted	1632075	5/18/2004	9/14/2011	4733568.2	FR	Method And Apparatus For Load-balancing.
82683513	Granted	1274259	7/6/2001	6/29/2011	1410085.3	FR	Multi-service Telecommunications System And Associated Methods
82729619	Granted	1008859	11/15/1999	5/4/2011	99309055.4	FR	Private Arbitrated Loop Self-test Management For A Fibre Channel Storage Enclosure
82759497	Granted	1700446	11/5/2004	3/23/2011	4800797.5	FR	PREVENTING IDENTITY THEFT IN ELECTRONIC COMMUNICATIONS
82802866	Granted	1411703	10/11/2003	8/3/2011	3256431.2	FR	Propagation Of Viruses Through An Information Technology Network
82847504	Granted	1859346	3/4/2005	1/11/2012	5733005.2	FR	A Method And Apparatus For Facilitating Pipeline Throughput
82855470	Granted	2301277	6/12/2009	10/12/2011	9761506.6	FR	Improvements In Or Relating To Communications
82862039	Granted	2018734	4/18/2007	10/19/2011	7755684.3	FR	Providing Different Network Services To A Network Agent
82910729	Granted	2039121	7/10/2007	12/21/2011	7787337	FR	METHOD OF PROVIDING SERVICES IN A NETWORK, NETWORK ELEMENT
82924036	Granted	1839457	1/13/2006	1/11/2012	6704619.3	FR	IMPROVEMENTS IN OR RELATING TO COMMUNICATION SYSTEMS
82991029	Granted	1725065	5/11/2006	5/23/2012	6113818.6	FR	Controlling Access To Communication Services
83009775	Granted	1249965	3/26/2001	5/30/2012	1107514	FR	Method, Computer System, And Computer Program For Monitoring Objects Of An Information Technology Environment
83013557	Granted	1885138	7/11/2006	6/6/2012	6300790	FR	Signalling Gateway
83057023	Granted	1428149	9/20/2002	11/7/2012	2768873.8	FR	A System And Method For A Multi-node Environment With Shared Storage
83087105	Granted	942427	2/24/1999	6/27/2012	99301353.1	FR	EOD IN MIC
83087119	Granted	2047319	7/11/2007	11/7/2012	7796825.3	FR	Compact Systems For Generating Polarization-entangled Photons
83087142	Granted	2215539	11/27/2007	1/2/2013	7871581	FR	SYSTEM SYNTHESIS TO MEET AN EXERGY LOSS TARGET VALUE
83092452	Granted	1378093	4/9/2001	8/8/2012	1921066.5	FR	Authentication And Encryption Method And Apparatus For A Wireless Local Access Network
83115114	Granted	1825640	12/6/2004	9/5/2012	4805930.7	FR	Interconnect System For Supply Chain Management Of Virtual Private Network Services
83115125	Granted	2008220	3/21/2007	9/5/2012	7759004	FR	Service Management Framework
83136099	Granted	2015553	7/10/2008	11/28/2012	8160071	FR	Reverse Billing Of Messages Delivered To A Mobile Device

PATENT
REEL: 038498 FRAME: 0126

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83139205	Granted	1484682	6/2/2003	12/5/2012	3291306.3	FR	Method And Apparatus For Providing Support For An Electronic Device
83185302	Granted	1715488	12/17/1998	2/11/2009	6011296.8	FR	Tape Leader Pin Assembly And Method For Making The Same
83189524	Granted	1457007	12/17/2002	2/13/2013	2790678.3	FR	System For Supply Chain Management Of Virtual Private Network Services
83242868	Granted	EP2077029	9/18/2007	5/1/2013	7842678	FR	IDENTIFYING A SUBNET ADDRESS RANGE FROM DNS INFORMATION
83261199	Granted	913823	10/30/1998	5/22/2013	98308892.3	FR	Data encoding method and apparatus
83266003	Granted	2055073	7/10/2007	5/15/2013	7787333.9	FR	Interface Module
83277109	Granted	1929818	7/18/2006	6/5/2013	6787730.8	FR	Automated Application Server (AS) Permissions Provisioning
83538874	Granted	2255263	2/20/2008	7/31/2013	8730240.2	FR	Redriver With Two Reference Clocks And Method Of Operation Thereof
83683791	Granted	2427994	10/26/2009	9/25/2013	9743889.9	FR	Method And Apparatus For Creating Entanglements And Quantum Repeater Utilising The Same
83694927	Granted	2013708	4/20/2007	10/16/2013	7775953.8	FR	OPTICAL-BASED, SELF-AUTHENTICATING QUANTUM RANDOM NUMBER GENERATORS
83748538	Granted	1858266	5/18/2006	11/13/2013	6300494.9	FR	Method And Gateway For Sending Subsystem Allowed And Subsystem Prohibited SCCP Management Messages For Distributed SCCP Application Servers
83781759	Granted	1220088	12/19/2001	6/3/2009	1310644.8	FR	Circuit And Method For Supporting Misaligned Accesses In The Presence Of Speculative Load Instructions
83787161	Granted	2288996	4/28/2008	1/29/2014	8754129.8	FR	Virtual-interrupt-mode Interface And Method For Virtualizing An Interrupt Mode
83787624	Granted	2460074	7/31/2009	12/31/2014	9847921.5	FR	PROVIDING FAULT-TOLERANT SPREAD SPECTRUM CLOCK SIGNALS IN A SYSTEM
83808772	Granted	2245516	12/21/2007	2/12/2014	7869793.5	FR	Moisture Content Control System
83809802	Granted	1676420	7/6/2004	3/5/2014	4766134.3	FR	Improvements In Or Relating To Fault Tolerant Systems
83821044	Granted	1592004	4/27/2005	3/12/2014	5103461.9	FR	METHOD AND APPARATUS FOR RECORDING DATA ONTO A RECORDING MEDIUM INCLUDING WARNING OF THE APPROACH TO AN END OF MEDIUM POSITION
83874025	Granted	2248230	2/29/2008	4/16/2014	8731153.6	FR	Modular System And Retractable Assembly For Electronic Devices
83874314	Granted	2255291	2/18/2008	4/16/2014	8730074.5	FR	Systems And Methods Of Communicatively Coupling A Host Computing Device And A Peripheral Device
83928526	Granted	2359534	12/15/2008	5/7/2014	8879013.4	FR	Detecting An Unreliable Link In A Computer System
84022110	Granted	2260611	3/31/2008	8/20/2014	8742453.7	FR	Automated Power Topology Discovery
84038203	Granted	2386150	1/9/2009	9/17/2014	9837743.5	FR	CONFIGURABLE POINT-TO-POINT OPTICAL COMMUNICATIONS SYSTEM BETWEEN SERVERS

PATENT
REEL: 038498 FRAME: 0127

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84058055	Granted	2460105	7/30/2009	10/1/2014	9847912.4	FR	Constructing A Bayesian Network Based On Received Events Associated With Network Entities
84067463	Granted	2324440	8/7/2008	10/8/2014	8797322.8	FR	Providing Data Structures For Determining Whether Keys Of An Index Are Present In A Storage System
84105772	Granted	2480977	9/25/2009	11/5/2014	9849912.2	FR	MAPPING NON-PREFETCHABLE STORAGE LOCATIONS INTO MEMORY MAPPED INPUT/OUTPUT SPACE
84109791	Granted	1784962	7/26/2005	4/8/2015	5775235.4	FR	System, Method, And Computer Program Product For Content Delivery In A Push-to-talk Communication System
84118592	Granted	2277311	5/20/2009	2/25/2015	9751488.9	FR	Apparatus And Method For Recording Video Data
84119239	Granted	1748621	7/5/2006	42004	6253519	FR	Computer System Polling
84191605	Application	2166703	9/21/2009		9170876.8	FR	Method And System For Managing A Hierarchical Information Base With An Application Layer Protocol
84210534	Granted	EP1909178	6/6/2007	4/8/2015	7252277.4	FR	Transactional Shared Memory System And Method Of Control
84211159	Granted	2248029	2/26/2008	4/8/2015	8726109.5	FR	Method And Apparatus For Performing A Host Enumeration Process
84251694	Granted	2143259	1/29/2008	5/27/2015	8708351.5	FR	Method And System For Facilitating Multi-point Communications
84290586	Granted	2622487	40814	42200	11833057	FR	HOST BASED WRITE ORDERING FOR ASYNCHRONOUS REPLICATION
90031010	To Be Filed					FR	Release tracking based on Gerrit
90037712	Granted	2176773	39636	42249	8808136.9	FR	Data Packet Processing Method For A Multi Core Processor
90050982	Acknowledged					FR	Processing Of Usage Data For First And Second Types Of Usage-based Functions
82181885	Granted	2871256	5/17/2005	9/18/2009	504922	FR	Storage Device Flow Control
82127627	Granted	811931	6/4/1997	5/2/2003	97303797.1	FR	EXPANSION CARD INSERTION AND REMOVAL
82275410	Granted	916202	3/4/1998	8/29/2001	98910176.1	FR	System And Method For Determining End to End Characteristics Of A Data Communications Channel
82721357	Granted	985298	5/28/1998	3/30/2011	98923848	FR	Method And Apparatus For Providing Security In A Star Network Connection Using Public Key Cryptography
82068320	Granted	1066634	4/1/1998	12/12/2001	98913957.1	FR	AFN Append Point
82810949	Granted	1221609	1/3/2002	8/31/2011	2250028.4	FR	A Method For Sensing Humidity In A Tape Library
83240729	Granted	913825	10/30/1998	5/1/2013	98308912.9	FR	Data Encoding Scheme
82186751	Granted	1528745	10/30/2003	12/2/2009	3292712.1	FR	Communnication Method And Apparatus
82212599	Granted	1874065	6/30/2006	12/29/2010	6300735.5	FR	SIGNALLING SYSTEM AND METHOD
82230896	Granted	1986397	4/11/2008	8/4/2010	8103499.3	FR	REDUCING A NUMBER OF REGISTRATION TERMINATION MESSAGES IN A NETWORK FOR CELLULAR DEVICES
83192843	Granted	1875661	4/10/2006	2/27/2013	6743275.7	FR	IMPROVEMENTS IN OR RELATING TO COMMUNICATIONS

PATENT
REEL: 038498 FRAME: 0128

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82116143	Granted	723231	1/15/1996	7/11/2001	96300261.3	FR	METHOD AND APPARATUS FOR PREVENTING INADVERTENT CHANGES TO SYSTEM-CRITICAL FILES IN A COMPUTING SYSTEM
82229831	Granted	852910	4/30/2008	12/12/2014	852910	FR	PRE-CONFIGURED PARTITIONS WITH USE-RIGHTS LIMITATIONS
83146743	Granted	2352953	11/13/2009	1/2/2013	9775127.5	FR	Data Centre And Apparatus And Method For Data Centre Cooling
82004387	Granted	1495270	4/16/2003	3/12/2008	3724032.2	FR	Using Pattern Recognition Techniques For Energy Management In Large Data Centers
82042220	Granted	1056086	4/18/2000	6/22/2005	303272.9	FR	Modular Data Storage System Utilizing A Wireless Cartridge Access Device
82253492	Granted	1436956	10/15/2002	12/10/2008	2793789.5	FR	Method And System For Communicating Telematics Messages
82255868	Granted	1700286	10/29/2004	5/2/2007	4796875.5	FR	BOUNDARY DETECTION ALGORITHM FOR EMBEDDED DEVICES
82065197	Granted	1237332	3/2/2001	11/5/2003	1301921.1	FR	Beacon Based Web Services II
82105844	Granted	1471680	4/21/2004	6/21/2006	4252330.8	FR	Cryptographic Method And Apparatus
83835721	Granted	2126770	1/21/2008	3/19/2014	8702121.8	FR	TRUSTED COMPUTING ENTITIES
82218845	Granted	1977427	1/26/2007	3/3/2010	7709841.6	FR	Mixed-scale Electronic Interface
90031084	Granted	2686883	3/29/2011	7/1/2015	11862142.4	FR	DUAL-PLANE MEMORY ARRAY
83542271	Granted	2137888	4/2/2008	8/21/2013	8742575.7	FR	Available Bandwidth Estimation
82207418	Granted	1938429	7/21/2006	9/30/2009	6788057.5	FR	Method And Apparatus For Electromagnetic Resonance Using Negative Index Material
83593523	Granted	913824	10/30/1998	8/14/2013	98308901.2	FR	Generating appendable points in encoded data
82586618	Granted	1777875	10/21/2005	1/12/2011	5109861.4	FR	Graphical Arrangement Of IT Network Components
83217119	Granted	1394679	8/30/2002	5/29/2013	2354124.6	FR	Improvements Relating To Technical Support Systems
82103648	Granted	1560225	6/28/2004	2/4/2009	4015147.4	FR	Method And Apparatus For Reducing Soft Errors
82786340	Granted	869426	3/30/1998	7/13/2011	98302442.3	FR	APPARATUS AND METHOD FOR STORAGE SUBSYSTEM DRIVE MOVEMENT AND VOLUME ADDITION
82180940	Granted	2865089	1/10/2005	9/7/2007	500209	FR	Successful Transactions
84115803	Granted	2486487	10/7/2009	12/3/2014	9850311.3	FR	Notification Protocol Based Endpoint Caching Of Host Memory
82036910	Granted	967758	4/8/1999	11/30/2005	99302754.9	FR	Link Control State Machine For Controlling A Media Access Controller, A Serial Physical Layer Device And A Media Independent Interface Physical Layer Device
82266593	Granted	990206	5/28/1998	10/25/2006	98924930.5	FR	Multilayer Firewall System
82723764	Granted	1303100	8/13/2002	6/29/2011	2255636.9	FR	Reduced Pin-count System Interface For Gigabit Ethernet Physical Layer Devices
81978722	Granted	1195942	4/5/2001	11/14/2007	1108610.5	FR	Device Detection System And Method
82005005	Granted	1383121	7/11/2003	5/12/2010	3254395.1	FR	Intrusion Monitors For Media Storage Systems

PATENT
REEL: 038498 FRAME: 0129

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82251989	Granted	1108238	7/15/1999	1/17/2007	99934061.5	FR	System And Method For Selectively Defining Access To Application Features
83120016	Granted	2361465	10/15/2008	8/29/2012	8875183.9	FR	Retrieving Configuration Records From A Configuration Management Database
82071062	Granted	1309142	10/30/2001	6/20/2007	1410140.6	FR	Communication System And Method
82100465	Granted	1414194	10/22/2002	12/13/2006	2354168.3	FR	Method And Apparatus For Operating A Telecommunication Platform
82211909	Granted	1869864	4/3/2006	8/6/2008	6749186	FR	Multimedia Transfer For Wireless Networks
82051514	Granted	1130491	12/4/2000	3/8/2006	310771.1	FR	Method And Apparatus For Providing Field Confidentiality In Digital Certificates
82128182	Granted	811932	6/4/1997	4/9/2003	97303798.9	FR	CONNECTING EXPANSION CARDS
82277957	Granted	1526679	10/21/2003	6/27/2007	3292628.9	FR	Methods Relating To The Monitoring Of Computer Systems
82257107	Granted	2024950	4/27/2007	6/2/2010	7761477.4	FR	In-transit Two-way Route Communication Between A Handheld Positioning Device And A Service Provider
82208225	Granted	1720315	4/27/2006	7/9/2008	6113237.9	FR	Network Management And Administration
82277210	Granted	1378821	7/1/2003	1/28/2009	3254190.6	FR	Authentication Method And Apparatus Using Pairing Functions For The Elliptic Curves Based Cryptosystems
82810920	Granted	1961009	11/1/2006	1/4/2012	6844255.7	FR	Crossbar-array Designs And Wire Addressing Methods That Tolerate Misalignment Of Electrical Components With Wires At Wire Overlap Points
83087135	Granted	1805767	10/14/2005	12/5/2012	5810496.9	FR	Nanoscale Latches And Impedance-encoded Logic For Use In Nanoscale State Machines, Nanoscale Pipelines, And In Other Nanoscale Electronic Circuits
82729652	Granted	1558937	11/7/2003	8/24/2011	3783255.7	FR	Active Network Defense System and Method
83988218	Granted	2321934	10/28/2009	6/25/2014	9752028.2	FR	Distributed Packet Flow Inspection and Processing
82090715	Granted	1480223	1/19/2004	3/25/2009	4001012.6	FR	Modular Storage Library With Automatic Configuration
82903955	Granted	1684291	6/2/2005	4/11/2012	5104797.5	FR	Non Unique Fragment Number Identifiers
84155339	Granted	2497023	11/2/2009	2/25/2015	9850993.8	FR	Multiprocessing Computing With Distributed Embedded Switching
90064660	Granted	2465030	8/11/2009	10/7/2015	9848324.1	FR	Enclosure Airflow Controller
82129484	Granted	848316	12/11/1997	5/8/2002	97310024.1	FR	SYSTEM AND METHOD FOR SECURE INFORMATION OVER A NETWORK
84172780	Granted	2350842	10/30/2008	2/25/2015	8877865.9	FR	Redundant Array Of Independent Disks (RAID) Write Cache Sub-assembly
82266338	Granted	855115	10/11/1996	7/6/2005	96936429.8	FR	METHOD AND APPARATUS FOR TRANSPARENT INTERMEDIATE SYSTEM BASED FILTERING ON A LAN OF MULTICAST PACKETS
83050464	Granted	836306	10/10/1996	7/4/2012	96410106.7	FR	System Providing For Multiple Virtual Circuits Between Two Network Entities

PATENT
REEL: 038498 FRAME: 0130

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82274144	Granted	1527626	6/30/2003	6/2/2010	3762222.2	FR	System and Method for a Universal Wireless Access Gateway
81978902	Granted	1239479	1/28/2002	10/12/2005	2250543.2	FR	Apparatus And Method For Retrieving Data Cartridge Information External To A Media Storage System
83164607	Granted	1846867	1/20/2006	1/9/2013	6719098.3	FR	Non-invasive Method And System For Automated Administration Of Diverse Security Constrained Servers
82951108	Granted	2212806	11/13/2008	6/27/2012	8851440.1	FR	Allocation Of Resources For Concurrent Query Execution Via Adaptive Segmentation
83810193	Granted	1884872	7/13/2007	2/26/2014	7013794.8	FR	Method And System For Using Application Development Data To Instantiate Support Information
82060067	Granted	1257087	5/10/2001	9/12/2007	1111444.4	FR	Method, Computer System And Computer Program For Monitoring Objects In An IT Network
82186739	Granted	1706978	7/12/2004	9/10/2008	4766194.7	FR	Method And Apparatus For Load-balancing
82281446	Granted	1553723	1/5/2005	3/14/2007	5250014.7	FR	Method And System For Modelling A Communications Network
83538243	Granted	1592217		10/16/2013		FR	Method And Apparatus For Providing A Specialized Resource Function In A Telephone Network
82198538	Granted	1605626	6/6/2005	12/26/2007	5104894	FR	Cryptographic Method And Apparatus
82077356	Granted	907935	4/24/1997	8/24/2005	97922456.5	FR	A System And Method For Secure Network Electronic Payment And Credit Collection
83800541	Granted	2031822	12/12/2002	2/12/2014	8017098.8	FR	System And Method For Managing Wireless Vehicular Communications
82253225	Granted	1381945	4/23/2002	6/13/2007	2726784.8	FR	Method and System for Reporting XML Data Based on Precomputed Context and a Document Object Model
82128617	Granted	825536	8/13/1997	2/5/2003	97306154.2	FR	A SERVER CONTROLLER CONFIGURED TO SNOOP AND RECEIVE A DUPLICATIVE COPY OF DISPLAY DATA PRESENTED TO A VIDEO CONTROLLER
83985776	Granted	2368268	12/23/2008	7/9/2014	8879253.6	FR	Memristive Device And Methods Of Making And Using The Same
84022793	Granted	2374250	1/19/2009	10/29/2014	9838521.4	FR	Load Balancing
84016656	Granted	1977572	1/23/2007	8/27/2014	7762485.6	FR	Compute Clusters Employing Photonic Interconnections For Transmitting Optical Signals Between Compute Cluster Nodes
84212966	Granted	2080048	5/4/2009	3/4/2015	7839603.3	FR	Photonic-interconnect Systems For Reading Data From Memory Cells And Writing Data To Memory Integrated Circuits
82097837	Granted	1466234	11/21/2003	5/24/2006	3812445.9	FR	Cooling System With Evaporators Distributed In Series
83505402	Granted	2313830	8/13/2008	10/2/2013	8795330.3	FR	Dynamic Utilization Of Power-down Modes In Multi-core Memory Modules
82071353	Granted	1329809	1/18/2002	8/6/2008	2354007.3	FR	Distributed Computing System And Method

PATENT
REEL: 038498 FRAME: 0131

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82277132	Granted	1355445	3/28/2003	10/17/2007	3251967	FR	Method And Apparatus For Encrypting/decrypting Data
84038164	Application		10/31/2014		1460537	FR	MANAGEMENT OF CRYPTOGRAPHIC KEYS
82900680	Granted	1324172	12/19/2002	2/8/2012	2258777.8	FR	System And Method For Securing Fiber Channel Drive Access In A Partitioned Data Library
82071044	Granted	1265144	6/8/2001	3/29/2006	1410070.5	FR	A Method Of Providing Access To Computer Configuration Information To An Interested Party, An Arrangement Apparatus For Providing Remote Support To A Computer User, And Apparatus For Obtaining Remote Support For A Computer User
83874489	Granted	1741139	4/25/2005	7/16/2014	5740296.8	FR	Misalignment-tolerant Methods For Fabricating Multiplexing/demultiplexing Architectures
82102319	Granted	1413893	10/17/2003	9/28/2005	3256580.6	FR	System And Method Of Measuring Low Impedances
82128734	Granted	854611	12/30/1997	12/15/2004	97310656	FR	NETWORK SWITCH WITH MULTIPLE BUS ARCHITECTURE
82025402	Granted	907123	3/26/1998	5/26/2004	98105536.1	FR	System And Method For Reporting Available Capacity In A Data Storage System With Variable Consumption Characteristics
82066859	Granted	815677	1/17/1997	3/16/2005	97900685.5	FR	Multicarrier Communication System And Method For Peak Power Control
82037951	Granted	1014622	12/20/1999	8/3/2005	99310273	FR	Network Appliance Combining Asynchronous Notification With Interactive Network Transfer Protocol Server
82267331	Granted	964814	8/22/1996	1/24/1997	964814	FR	Enclosure For Electronic Circuitry
82061681	Granted	1162537	6/9/2000	9/26/2007	304891.5	FR	Utilization Of Unused Disk Space On Networked Computers
81996500	Granted	1385162	6/19/2003	9/12/2007	3253874.6	FR	Cartridge-handling Apparatus
82068482	Granted	945800	3/2/1998	7/16/2003	98301498.6	FR	Enhancing Reliability
83873530	Granted	2249542	4/8/2010	4/2/2014	10159409.1	FR	Communicating Confidential Information Between An Application And A Database
81956546	Granted	750253	6/11/1996	4/3/2002	96109337.4	FR	Method And Apparatus For Shared Management Information Via A Common Repository
82038020	Granted	961197	12/10/1998	8/13/2003	98123600.3	FR	User Interface Mechanism For Manipulating Context In Computer Management Applications
82062863	Granted	1215656	11/30/2001	6/15/2005	1310044.1	FR	Idiom Handling In Voice Service Systems
82097075	Granted	1757111	6/13/2005	4/28/2010	5754562.6	FR	Method And System For Establishing Communications
82133600	Granted	1188339	6/23/2000	11/24/2004	943160.2	FR	METHOD AND SYSTEM FOR PROVIDING TELECOMMUNICATION SERVICES ACROSS NETWORKS THAT USE DIFFERENT PROTOCOLS
82197653	Granted	1643777	10/4/2004	6/17/2009	4300652.7	FR	Methods And Apparatus For Controlling Signalling Gateways
82198595	Granted	1686813	1/31/2005	7/16/2008	5300075.8	FR	Signalling Point
82392128	Granted	1617410	7/11/2005	11/24/2010	5254326.1	FR	Allocation Of Speech Recognition Tasks And Combination Of Results Thereof

PATENT
REEL: 038498 FRAME: 0132

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83004398	Granted	1202176	10/31/2000	4/25/2012	410131.7	FR	Message-based Software System
83221475	Granted	1650990	10/20/2004	4/17/2013	4300698	FR	METHOD AND APPRATUS FOR ROUTING SHORT MESSAGES IN MOBILE TELEPHONE NETWORKS
83806254	Granted	1622349	7/12/2005	2/13/2014	5254353.5	FR	Teleconference Audio Quality Monitoring
83929723	Granted	1986409	3/13/2008	5/7/2014	8004715.2	FR	A Method, Apparatus And Software For Providing Communications Between A Packet Switched Network And A Public Switched Telephone Network
84196120	Granted	2597899	10/13/2011	4/1/2015	11306325.9	FR	Optimizing telephony numbers for Machine 2 Machine Communications using Round Robin Assignment Technique
82077476	Granted	919048	6/17/1997	8/25/2004	97933142.8	FR	A System, Method And Article Of Manufacture For Multiple-Entry Point Virtual Point Of Sale Architecture
82256843	Granted	1836693	1/10/2006	7/1/2009	6717875.6	FR	RFID VEHICLE MANAGEMENT SYSTEM AND METHOD
82254281	Granted	1504376	5/7/2003	40191	3726681.4	FR	Data Archive Recovery
82743832	Granted	1875476	4/25/2006	7/27/2011	6751576.7	FR	Three-dimensional Nanoscale Crossbars
82997365	Granted	2096672	1/26/2007	8/3/2011	9006878.4	FR	MIXED-SCALE ELECTRONIC INTERFACE
83781697	Granted	2311094	7/31/2008	1/1/2014	8794914.5	FR	MULTI-LAYER RECONFIGURABLE SWITCHES
82678694	Granted	2013707	4/20/2007	7/6/2011	7755829.4	FR	Optical-based, Self-authenticating Quantum Random Number Generators
82866219	Granted	1220092	12/19/2001	6/15/2011	1310645.5	FR	System And Method For Executing Variable Latency Load Operations In A Data Processor
81953474	Granted	735522	3/22/1996	5/19/1999	96302014.4	GB	Disk Data Recording Device
81970649	Granted	2390776	7/4/2003	9/21/2005	315749.2	GB	An Object-Oriented, Multi-Threaded Scheduler For Automated Network Discovery And Polling
81971756	Granted	2378787	4/29/2002	7/20/2005	209764	GB	Internet Transaction Performance Monitor
81971807	Granted	2377524	4/23/2002	6/22/2005	209246.8	GB	Method And Apparatus To Extract The Health Of A Service From A Host Machine
81977063	Granted	2380311	7/30/2002	10/12/2005	217627.9	GB	Disk Cartridge Data Storage Methods And Apparatus
81977369	Granted	2370720	10/17/2001	1/5/2005	124940.8	GB	System And Method For Determining Probable Network Paths Between Nodes In A Network Topology
81978698	Granted	1229448	1/9/2002	3/29/2006	2250150.6	GB	Redundant Backup Device
81980246	Granted	2376325	3/11/2002	5/4/2005	205682.8	GB	System And Method Utilizing On-chip Voltage Controlled Frequency Modulation To Manage Power Consumption
81985130	Granted	2375919	4/9/2002	6/16/2004	208167.7	GB	Method And System For Consolidating Network Topology In Duplicate IP Networks
81990623	Granted	1308955	10/25/2002	8/18/2010	2257423	GB	Virtual Electronic Data Library Supporting Mixed Drive Types Using Virtual Libraries Within A Single Library
81993038	Granted	2385205	9/24/2002	6/22/2005	222169.5	GB	Low Profile PCI Hot Plug Actuator Assembly
81993365	Granted	2380294	7/30/2002	9/14/2005	217622	GB	Dedicated Server Management Card With Hot Swap Functinoality

PATENT
REEL: 038498 FRAME: 0133

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81993533	Granted	2375632	3/8/2002	3/23/2005	205556.4	GB	Redundant Controller Data Storage System Having An On-Line Controller Removal System And Method
81993914	Granted	2380839	7/30/2002	9/14/2005	217626.1	GB	System And Method For Power Management In A Server System
81994799	Granted	1288937	8/22/2002	5/30/2007	2255883.7	GB	Systems And Methods For Providing Automatic Access To Data Media In A Data Storage System
81995789	Granted	2415530	6/20/2002	2/15/2006	518974.1	GB	System And Method For File System Mandatory Access Control
81996494	Granted	1385162	6/19/2003	9/12/2007	3253874.6	GB	Cartridge-handling Apparatus
82006040	Granted	2389459	4/2/2003	6/22/2005	307635.3	GB	Method And Apparatus For Supporting A Circuit Component
82006235	Granted	2387974	4/22/2003	1/4/2006	309114.7	GB	Wrap-Around Cooling Arrangement For Printed Circuit Board
82008596	Granted	2048315	6/21/1995	11/9/1995	2048315	GB	Control Module For A Computer Peripheral Such As A Media Autochanger
82019717	Granted	903889	7/31/1998	4/4/2007	98306134.2	GB	Internet Enabled Computer System Management
82020965	Granted	838923	10/7/1997	3/29/2006	97307976.7	GB	Method And Apparatus For Automatic Device Segmentation And Port-To-Segment Distribution
82025006	Granted	891064	6/9/1998	10/3/2007	98304565.9	GB	Automatic Internet Protocol (IP) Address Allocation And Assignment
82037360	Granted	1063648	5/23/2000	8/18/2004	111113.7	GB	Laterally Expandable Modular Data Storage System
82037378	Granted	997896	10/21/1999	1/4/2006	99308294	GB	Mail Slot Data Cartridge Exchange System For Use With A Data Storage System
82041695	Granted	961439	12/10/1998	3/8/2006	98123605.2	GB	Network Management Event Storage And Manipulation Using Relational Database Technology In A Data Warehouse
82043129	Granted	1037145	11/30/1999	8/10/2005	99123777.7	GB	Hybrid Just-in-time Compiler That Consumes Minimal Resource
82044560	Granted	1031977	2/24/2000	10/2/2002	301478.4	GB	Data Cartridge Exchange Apparatus
82046546	Granted	1049031	11/18/1999	9/3/2008	99122965.9	GB	Web Server With An Adaptive Load Control (amended 10/2000)
82047875	Granted	2085209	7/23/1999	1/5/2000	2085209	GB	Bezel For Rack Mounted Device
82049249	Granted	2362024	1/29/2001	1/21/2004	102237.5	GB	Media Handling Device Having Replaceable Modules
82049858	Granted	2351184	3/7/2000	6/18/2003	5491.6	GB	Cover For Standalone Chassis
82050917	Granted	2356762	8/2/2000	10/1/2003	18984.5	GB	Grouping Targets Of Management Policies
82060088	Granted	1320217	12/14/2001	10/13/2004	1129865	GB	Method, System And Computer Program For Monitoring Objects In An It Network
82061654	Granted	2357229	12/8/1999	3/17/2004	9929034.8	GB	Security Protocol
82061924	Granted	2360173	3/7/2000	4/7/2004	5315.7	GB	Image Transfer Over Mobile Radio Network
82062344	Granted	2362970	5/31/2000	12/29/2004	13041.9	GB	Improvements Relating To Information Storage

PATENT
REEL: 038498 FRAME: 0134

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82062536	Granted	1281269	5/8/2001	5/4/2005	1925726	GB	Charging For VAS Resource Usage In A Communications Infrastructure
82062650	Granted	2372187	10/29/2001	10/20/2004	125873	GB	Improvements Relating To Data Readers
82062770	Granted	2368225	10/17/2000	12/10/2003	25458.1	GB	Inviting Assistant Entity Into A Network Communication Session
82062788	Granted	2368246	10/17/2000	9/1/2004	25462.3	GB	Alert System For Information Page Server
82062839	Granted	1174728	7/10/2001	9/24/2008	1305936.5	GB	Location Data Diffusion And Location Discovery
82063526	Granted	2372594	2/23/2001	10/6/2004	104670.5	GB	Assessor For Monitoring Trusted Status In An Environment
82063541	Granted	2376764	6/19/2001	12/29/2004	114891.5	GB	A Platform Supporting Multiple Trusted Appliation Environments
82063583	Granted	2369466	7/12/2001	11/17/2004	116999.4	GB	Content Billing Engine For Aggregation Portals
82063607	Granted	2377043	6/27/2001	1/5/2005	115641.3	GB	Anonymous Storage
82063652	Granted	1309916	8/17/2001	10/18/2006	1958228.7	GB	A Computer System Operable To Revert To A Trusted State
82064018	Granted	2373348	3/7/2001	1/12/2005	105691	GB	Computer System
82064213	Granted	1294157	9/10/2002	11/23/2005	2256245.8	GB	Method And Apparatus For Identifying A Voice Caller
82064606	Granted	1280317	7/26/2002	9/13/2006	2255218.6	GB	Multi-domain Authorisation And Authentication
82065767	Granted	2382009	10/8/2002	4/14/2004	223257.7	GB	Traffic Manipulation On A Computer Network - II
82066268	Granted	2381173	10/4/2002	6/30/2004	222978.9	GB	A Method, Using Identity Based Encryption, To Permit A Sender Of A Message To Place Constraints On Who Can Read The Message
82067723	Granted	2335303	3/12/1999	1/2/2002	9905672.3	GB	Data Storage System
82067765	Granted	957484	5/12/1998	10/5/2005	98303691.4	GB	Read After Write
82067954	Granted	2368754	10/31/2000	5/19/2004	26624.7	GB	Error Detection And Correction
82068074	Granted	1008048	8/28/1998	10/31/2001	98940428	GB	Data Backup And Recovery System
82068335	Granted	2070020	10/23/1997	3/9/1998	2070020	GB	Front Panel
82068536	Granted	938053	2/19/1999	8/20/2003	99301223.6	GB	Dynamic Index
82068644	Granted	1101164	8/6/1999	1/2/2003	99940291	GB	System For Improved Data Backup And Recovery
82069094	Granted	2346229	1/29/1999	4/30/2003	9901857.4	GB	Web Usage
82069403	Granted	1054530	4/19/2000	1/11/2006	303325.5	GB	Loop Prevention In Networks
82070951	Granted	1309220	10/31/2001	8/5/2009	1410142.2	GB	Data Processing System And Method
82071335	Granted	1330099	1/21/2002	7/27/2005	2354011.5	GB	Method Of Brokering Network Services
82077323	Granted	901672	4/24/1997	11/12/2003	97922458.1	GB	System, Method And Article Of Manufacture For Network Electronic Authorization Utilizing An Authorization Instrument
82079960	Granted	2393330	8/28/2003	11/16/2005	320183.7	GB	Circuit Cooling Apparatus
82082573	Granted	1463049	10/17/2003	9/30/2009	3023651.7	GB	Media Storage System And Method For Identifying A Storage Location Therein
82083209	Granted	2393327	8/27/2003	1/25/2006	320061.5	GB	Heat Sink With Heat Pipe And Base Fins
82084814	Granted	2384137	12/31/2002	4/6/2005	230345.1	GB	Hardware Pay-Per-Use
82085000	Granted	2394122	9/23/2003	4/26/2006	322293.2	GB	Cooling Fan Control Based On Cabinet Intrusion

PATENT
REEL: 038498 FRAME: 0135

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82088006	Granted	2402813	5/19/2004	6/28/2006	411143.1	GB	Connector Having A Pypas Capacitor And Method For Reducing The Impedance And Length Of A Return-signal Path
82088696	Granted	2390747	6/30/2003	11/9/2005	315306.1	GB	Ejector Latch Connector
82091303	Granted	2393331	9/1/2003	9/21/2005	320443.5	GB	Composite Construction Baffle For Modular Electronic Systems
82093049	Granted	2393538	7/22/2003	8/31/2005	317125.3	GB	System And Method For Using An Operating System Defined Field In ACPI Support Multiple Operating Systems
82094387	Granted	2398712	1/20/2004	6/28/2006	401123.5	GB	Privacy Management Of Personal Data
82094633	Granted	2425680	4/27/2005	5/20/2009	508477.7	GB	Network Analysis
82095947	Granted	1432209	11/3/2003	5/6/2009	3256934.5	GB	Method And Architecture To Provide Client Session Failover
82096241	Granted	2398897	2/6/2004	11/16/2005	402656.3	GB	Improved Diagnostic Exerciser And Methods Therefor
82096487	Granted	2404792	7/29/2004	12/27/2006	416956.1	GB	Heat Sink Fan Management Based On Performance Requirements
82097069	Granted	1757111	6/13/2005	4/28/2010	5754562.6	GB	Method And System For Establishing Communications
82098254	Granted	2398200	1/12/2004	12/14/2005	400593	GB	Method And Apparatus For Processing Network Topology Data
82098311	Granted	2399474	2/17/2004	12/14/2005	403523.4	GB	Method And System For Managing A Device Within A Private Network Using A Management Device External To The Private Network
82098428	Granted	2455452	8/28/2007	11/3/2010	903491.9	GB	Computer System Indicator Panel With Exposed Indicator Edge
82098434	Granted	2469953	8/28/2007	5/4/2011	1012251.3	GB	Computer System Indicator Panel With Exposed Indicator Edge
82099607	Granted	1763260	9/12/2005	6/17/2009	5300740.7	GB	Context-based Event Processing
82100255	Granted	2406673	9/27/2004	1/17/2007	421462.3	GB	A Rack Equipment Management Information Coordination System And Method
82100567	Granted	2406935	10/1/2004	7/5/2006	421932.5	GB	Central Processing Unit With Multiple Clock Zones And Operating Method
82101551	Granted	1465440	4/3/2003	7/9/2008	3290837.8	GB	Methods And Apparatus For Controlling Processing Entities, Such As Distributed Signalling Gateways
82101605	Granted	2399434	3/10/2004	3/22/2006	405428.4	GB	An Integrated Circuit
82101734	Granted	2398669	2/10/2004	3/26/2008	402873.4	GB	A Method For Improving Tape Drive Streaming Performance By Monitoring And Controlling Data Compression
82101977	Granted	2411313	2/21/2004	7/26/2006	403931.9	GB	NETWORK CONNECTION CONTROL
82102127	Granted	2404761	8/5/2004	10/11/2006	417496.7	GB	Multiprocessor System With Interactive Synchronization Of Local Clocks
82103564	Granted	2410846	2/2/2005	11/29/2006	502157.1	GB	Redundant Input Power System

PATENT
REEL: 038498 FRAME: 0136

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82103867	Granted	2407892	11/5/2004	9/27/2006	424561.9	GB	System And Method For Testing A Comonent In A Computer System Using Frequency Margining
82105847	Granted	1471680	4/21/2004	6/21/2006	4252330.8	GB	Cryptographic Method And Apparatus
82106051	Granted	2397909	1/2/2004	12/21/2005	400020.4	GB	Methods And Apparatus For Managing Temporary Capacity In A Computer System
82116092	Granted	723238	1/23/1996	9/19/2001	96300429.6	GB	RELATIONAL DATABASE SYSTEM AND METHOD WITH HIGH DATA AVAILABILITY DURING TABLE DATA RESTRUCTING
82126889	Granted	768599	10/4/1996	12/17/2003	96307279.8	GB	ON-LINE DISK ARRAY RECONFIGURATION
82127456	Granted	779579	12/12/1996	5/15/2002	96309071.7	GB	BUS ERROR HANDLER FOR PERR# & SERR# ON DUAL PCI BUS SYSTEM
82128260	Granted	811937	6/4/1997	1/19/2005	97303808.6	GB	AUTOMATICALLY PREFETCHING DATA IN A COMP-
82128836	Granted	854613	12/30/1997	11/17/2004	97310663.6	GB	A NETWORK SWITCH WITH A MULTIPLE BUS STRUC- TURE AND A BRIDGE INTERFACE FOR TRANSFERR- ING NETWORK DATA BETWEEN DIFFERENT BUSES
82165238	Granted	782301	12/23/1996	3/26/2003	96120819.6	GB	METHOD AND APPARATUS FOR RATE-BASED SCHEDULING USING A RELATIVE ERROR APPROACH
82169219	Granted	2416954	7/30/2004	10/31/2007	417139.3	GB	Method Of, And Apparatus For, Monitoring Traffic Emanating From A Source In A Network
82170164	Granted	2408379	11/18/2004	2/20/2008	425469.4	GB	Method And Apparatus For Storing Data On Magnetic Tape
82171235	Granted	2408412	11/8/2004	7/26/2006	424630.2	GB	A Method And System For Connecting Calls
82171667	Granted	2406746	9/28/2004	6/28/2006	421546.3	GB	Method And System For Responding To Network Intrusions
82172291	Granted	2407414	10/13/2004	10/4/2006	422724.5	GB	Fault-toleratn Multi-core Microprocessing
82174652	Granted	2410546	1/13/2005	7/23/2008	500732.3	GB	Airflow Distribution Control System For Usage In A Raised-floor Data Center
82174772	Granted	2413709	3/29/2005	10/31/2007	506339.1	GB	Liquid Loop With Multiple Pump Assembly
82177352	Granted	2403374	6/10/2004	4/12/2006	413006.8	GB	Method And System For Determining A Source Of A Virtual Circuit Fault
82177517	Granted	2401012	4/22/2004	7/6/2005	408892.8	GB	Cryptographic Method And Apparatus
82177523	Granted	2401014	4/22/2004	9/14/2005	408903.3	GB	Cryptographic Method And Apparatus
82178213	Granted	2413045	3/31/2005	11/29/2006	506547.9	GB	Key-configured Topology With Connection Management
82178531	Granted	2410406	1/19/2005	3/7/2007	501119.2	GB	Node Management In High-availability Cluster
82179035	Granted	1716733	2/17/2005	8/18/2010	5723213.4	GB	Airflow Detection System Having An Airflow Indicating Device
82180205	Granted	2409917	1/11/2005	11/22/2006	500498.1	GB	Memory Controller Connection To RAM Using Buffer Interface
82180952	Granted	2409949	1/11/2005	7/19/2006	500499.9	GB	Enablement Of Route Table Entries
82182017	Granted	1548580	11/8/2004	6/13/2007	4256917.8	GB	Non-platform-specific Unique Identifier Generation
82185143	Granted	2413687	5/3/2005	1/10/2007	508966.9	GB	Tape Guide System
82185965	Granted	2431755	10/30/2006	5/11/2011	621589.1	GB	Method And Apparatus For Selecting A Primary Resource In A Redundant Subsystem

PATENT
REEL: 038498 FRAME: 0137

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0138

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82186208	Granted	1757065	5/13/2005	12/5/2007	5752784.8	GB	Improvements In Message-based Communications
82187774	Granted	1784998	8/31/2005	2/18/2009	5784661	GB	COMMUNICATIONS INFRASTRUCTURE FOR CONTENT DELIVERY USING EDGE SERVERS
82189085	Granted	1775969	10/17/2005	5/5/2010	5300830.6	GB	Communication System And Method
82189388	Granted	2423573	1/13/2006	6/30/2010	600716.5	GB	Thermal And Power Management Apparatus
82190213	Granted	2416885	7/12/2005	3/4/2009	514306	GB	Run-time Updating Of Prediction Hint Instructions
82190396	Granted	2412228	3/18/2005	2/22/2006	505530.6	GB	Application Sends A Key To The Drive On WORM Medium Initialisation That Enables Later Medium Re-setting
82190450	Granted	2419026	10/8/2004	5/6/2009	422339.2	GB	Embed A Tape Drive's Serial Number In The Subcode Area Of The Data Blocks Written By The Tape Drive
82190456	Granted	2418770	10/2/2004	4/22/2009	421950.7	GB	Dual Tape Log To Prevent Corruption When Problems Occur During Log Update
82190636	Granted	2422476	1/21/2005	5/23/2007	501243	GB	Enhanced Tape Log To Include Drive Identifier And Tape Alert Flags To Create A Recent History Over The Last 'X' Tape Loads
82192007	Granted	2425378	4/11/2006	7/15/2009	607170.8	GB	Reduntant I/O Interface Management
82192016	Granted	2425690	4/11/2006	11/4/2009	607238.3	GB	Remote Detection Employing RFID
82194590	Granted	2415579	6/23/2004	12/20/2006	414062	GB	Cryptographic Method And Apparatus
82194821	Granted	2418274	8/26/2005	7/16/2008	517470.1	GB	System And Method For Allocating Computing Resources For A Grid Virtual System
82196438	Granted	2425380	4/12/2006	9/2/2009	607291.2	GB	Computing With Both Lock-step And Free Step Processor Modes
82197149	Granted	2419729	10/28/2004	3/28/2007	424025.5	GB	Multiple Cartridge Loading Mechanism For DAT160
82197401	Granted	2421101	11/11/2005	11/12/2008	523073.5	GB	Distributed Lock
82198436	Granted	1812990	11/18/2005	4/15/2009	5851812.7	GB	Composite Material With Controllable Resonant Cells
82199324	Granted	2427334	6/1/2006	10/6/2010	610862.5	GB	Method And Apparatus For Automatic And Secure Distribution Of A Symmetric Key Security Credential In A Utility Computing Environment
82199513	Granted	2429805	8/14/2006	12/22/2010	616145.9	GB	Memory Correction System And Method
82199942	Granted	1681880	12/19/2005	11/18/2009	5027786.2	GB	Data Retrieval From Computing Systems
82200134	Granted	1777970	10/21/2005	7/28/2010	5300845.4	GB	Communication System And Method
82201256	Granted	2431843	10/24/2006	7/6/2011	621169.2	GB	System, Method And Utility To Format Images Retrieved From A Device
82202678	Granted	2431847	10/24/2006	6/29/2011	621177.5	GB	DEVICE STORING VECTOR IMAGE WITH HANDLES IDENTIFYING PORTIONS OF THE DEVICE, AND METHODS AND COMPUTER PROGRAMS TO AID IN MAPPING OR CORRELATING PORTIONS
82202867	Granted	2418326	9/17/2004	4/11/2007	420664.5	GB	Network Virtualization
82203677	Granted	2422217	1/14/2005	12/23/2009	500715.8	GB	Use Of Common User Repository Identity In A Service Delivery Platform

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82204244	Granted	2422216	1/14/2005	12/9/2009	500714.1	GB	A Common Service Repository With Multiple Service Bindings
82204253	Granted	2422219	1/14/2005	1/6/2010	500717.4	GB	A Common Service Repository For Use With A State Based Execution Environment
82204502	Granted	2421602	11/21/2005	7/1/2009	523670.8	GB	System And Method For Replacing An Inoperable Master Workload Management Process
82204511	Granted	2423607	2/28/2006	7/29/2009	603921.8	GB	Computer System And Method For Transferring Executables Between Partitions
82206008	Granted	2424974	4/3/2006	7/8/2009	606614.6	GB	Distributed-state-information-based Distributed Computing Systems And Methods And Protocols For Managing Distributed State Information
82206308	Granted	2439868	3/9/2006	10/6/2010	719791.6	GB	Embedded Web-based Management Method
82206320	Granted	2425645	4/11/2006	2/2/2011	607173.2	GB	Drive Bezels For Computer Storage Systems
82207682	Granted	2427317	6/16/2006	5/19/2010	611900.2	GB	Quantum Key Distribution Apparatus & Method
82208558	Granted	2442308	9/12/2007	7/20/2011	717794.2	GB	Sequencer
82208690	Granted	2438546	3/1/2005	6/17/2009	716388.4	GB	Packet Forwarding System And Packet Forwarding Device
82208858	Granted	2432088	11/1/2006	6/9/2010	621776.4	GB	Method For Controlling Data Transfers Through A Computer System
82209074	Granted	1724971	3/10/2005	7/9/2008	5720467.9	GB	Server System, Server Device And Method Therefor
82209176	Granted	2446241	10/5/2007	3/9/2011	719537.3	GB	Memory Control Systems With Directory Caches And Methods For Operation Thereof
82209239	Granted	2426841	6/4/2005	7/14/2010	511438.4	GB	Memory Controller
82209872	Granted	2441435	8/29/2007	3/16/2011	716775.2	GB	Directory Caches, And Methods For Operation Thereof
82210691	Granted	2431748	10/31/2005	12/22/2010	522221.1	GB	Data Back-up And Recovery
82211429	Granted	2428863	7/29/2005	8/8/2007	515730	GB	Cartridges For Data Transfer Apparatus
82212488	Granted	2430778	9/19/2006	10/27/2010	618421.2	GB	System And Method For Throttling Memory Accesses
82212608	Granted	2431321	10/12/2005	6/9/2010	520712.1	GB	PROPAGATION OF MALICIOUS CODE THROUGH AN INFORMATION TECHNOLOGY NETWORK
82212629	Granted	2437624	4/20/2007	8/24/2011	707685.4	GB	Array-based Memory Abstraction
82212632	Granted	2431316	10/12/2005	5/21/2008	520711.3	GB	PROPAGATION OF MALICIOUS CODE THROUGH AN INFORMATION TECHNOLOGY NETWORK
82212866	Granted	2011007	4/25/2007	3/24/2010	7756009.2	GB	Method And System For Scaleable, Distributed, Differential Electronic-data Backup And Archiving
82214114	Granted	2429308	7/29/2005	8/1/2007	515734.2	GB	Hardware Encryption Using An Encryption Configuration Tape To Enhance Security In A Tape Drive Backup Solution
82214120	Granted	2434896	7/29/2005	11/21/2007	708191.2	GB	Data Transfer Device
82214936	Granted	2428533	6/24/2005	8/22/2007	512832.7	GB	Determining Data Flows In A Network
82215371	Granted	2431741	10/27/2005	11/3/2010	521898.7	GB	A METHOD OF DIGITALLY SIGNING DATA AND A DATA REPOSITORY STORING DIGITALLY SIGNED DATA
82216061	Granted	2449037	1/17/2007	4/13/2011	815639	GB	Multilayer Distributed Processing System

PATENT
REEL: 038498 FRAME: 0139

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82216124	Granted	1943757	1/30/2007	5/13/2009	7762845.1	GB	Methods And Systems For Avoiding Transmission-channel Disruptions
82216181	Granted	2430850	9/20/2006	12/1/2010	618481.6	GB	METHOD AND SYSTEM USING ONE-TIME PAD DATA TO EVIDENCE THE POSSESSION OF A PARTICULAR ATTRIBUTE
82216496	Granted	2450869	7/9/2007	4/25/2012	713200.4	GB	ESTABLISHING A TRUST RELATIONSHIP BETWEEN COMPUTING ENTITIES
82216553	Granted	2431770	10/31/2005	9/21/2011	522227.8	GB	Emulated Tape-based Storage Media
82216997	Granted	2434888	2/2/2006	7/13/2011	602020	GB	Restoring A Client Device
82217477	Granted	2431252	10/11/2005	6/9/2010	520604	GB	Data Transfer Device
82217810	Granted	2436209	3/1/2007	3/30/2011	704005.8	GB	Methods And Systems For Hierarchical Management Of Distributed Data
82218239	Granted	2437105	3/1/2007	6/15/2011	704004.1	GB	Consistency Methods And Systems
82218848	Granted	1977427	1/26/2007	3/3/2010	7709841.6	GB	Mixed-scale Electronic Interface
82219358	Granted	2427337	6/19/2006	1/20/2010	611946.5	GB	Quantum Key Distribution Method And Apparatus
82219364	Granted	2430848	10/31/2005	6/2/2010	522092.6	GB	Device With Multiple One-time Pads And Method Of Managing Such A Device
82219370	Granted	2430845	10/28/2005	3/24/2010	521933.2	GB	Method Of Provisioning Devices With One-time Pad Data And A Device For Use In Implementing The Method
82219376	Granted	2430775	10/31/2005	6/23/2010	522141.1	GB	Method Of Managing One-time Pad Data And Device Implementing This Method
82219670	Granted	2446183	1/31/2007	7/20/2011	701811.2	GB	Method And Apparatus For Controlling Motion Of Storage Media
82219814	Granted	2435333	2/1/2006	7/14/2010	602012.7	GB	Data Transfer Device
82219850	Granted	1811724	12/29/2006	8/12/2009	6027116	GB	Determining Data Link (L2) Network Paths
82222103	Granted	2440561	7/28/2006	3/30/2011	615018.9	GB	Data Storage System
82225226	Granted	2443446	10/30/2006	11/30/2011	621469.6	GB	A METHOD OF IDENTIFYING AN EXTRACTABLE PORTION OF A SOURCE MACHINE-READABLE DOCUMENT
82228031	Granted	2446172	1/30/2007	1/21/2009	701685	GB	Control Of Data Transfer
82229981	Granted	2462961	5/21/2008	3/7/2012	921280.4	GB	END-TO-END FLOW CONTROL IN A NETWORK BACKGROUND
82230479	Granted	2466579	10/25/2007	12/26/2012	1000243.4	GB	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82230899	Granted	1986397	4/11/2008	8/4/2010	8103499.3	GB	REDUCING A NUMBER OF REGISTRATION TERMINATION MESSAGES IN A NETWORK FOR CELLULAR DEVICES
82233029	Granted	2466751	9/19/2008	9/26/2012	1007154.6	GB	Hardware Device Interface (as Amended)
82233224	Granted	1279100	4/3/2001	6/16/2004	1926566.9	GB	USE OF A SINGLE THREAT TO SUPPORT MULTIPLE NETWORK CONNECTIONS FOR SERVER LOAD TESTING
82233293	Granted	2466581	10/25/2007	1/9/2013	1000248.3	GB	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA

PATENT
REEL: 038498 FRAME: 0140

Schedule A of Patent Assignment

PATENT
REEL: 038498 FRAME: 0141

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82235645	Granted	2472520	4/25/2008	11/21/2012	1015473	GB	DATA PROCESSING APPARATUS AND METHOD OF DEDUPLICATING DATA FOR DATA BACKUP
82238654	Granted	2467721	1/28/2008	6/12/2013	1010537.7	GB	DEPLOYMENT OF BOOT IMAGES IN DISKLESS SERVERS
82242722	Granted	2458154	3/7/2008	5/29/2012	804253.3	GB	Routing Across A Virtual Network
82243037	Granted	2460252	5/21/2008	9/26/2012	809227.2	GB	QKD System Alignment
82243406	Granted	2459433	3/7/2008	6/6/2012	804263.2	GB	Distributed Network Connection Policy Management
82243763	Granted	GB2460412	5/28/2008	9/19/2012	809589.5	GB	Information Sharing
82244522	Granted	2455496	10/31/2007	5/30/2012	721310.1	GB	Error Detection Method And Apparatus
82245632	Granted	2473759	4/30/2008	3/27/2013	1018296.2	GB	Intentionally Skewed Optical Cloack Signal Distribution
82247402	Granted	2446454	2/7/2007	9/21/2011	702424.3	GB	Cool Design Data Center
82247897	Granted	2464966	10/31/2008	8/29/2012	819995.2	GB	Policy Enforcement In Trusted Platforms
82249265	Granted	2466071	12/15/2008	11/13/2013	822726.6	GB	Associating A Signing Key With A Software Component Of A Computing Platform
82250189	Published		5/8/2009		907936.9	GB	Quantum Repeater And System And Method For Creating Extended Entanglements
82250192	Granted	2470081	6/30/2009	42214	911271.5	GB	Quantum Repeater And System And Method For Creating Extended Entanglements
82250693	Granted	2467975	2/24/2009	9/10/2014	903104.8	GB	Authentication Method And Apparatus Using One Time Pads
82252391	Granted	890155	2/24/1997	6/30/2004	97906748.5	GB	Automated System for Selecting an Initial Computer Reservation System
82252874	Granted	935786	10/29/1997	5/11/2005	97946866.7	GB	Fail-Safe Event Driven Transaction Processing System and Method
82253651	Granted	1409191	7/19/2002	8/23/2006	2752474.3	GB	Method and System for Weld Process Monitoring
82254587	Granted	1545936	9/30/2003	8/4/2010	3799309.4	GB	DRIVE-BY-WIRELESS VEHICLE CONTROL
82255010	Granted	1573964	12/17/2003	6/21/2006	3814189.1	GB	METHOD OF GUARANTEED DELIVERY OF SNMP TRAPS ACROSS A WIDE AREA NETWORK
82255871	Granted	1700286	10/29/2004	5/2/2007	4796875.5	GB	BOUNDARY DETECTION ALGORITHM FOR EMBEDDED DEVICES
82260365	Granted	2474300	10/12/2009	5/30/2012	917801.3	GB	METHOD AND SYSTEM FOR PRINTING
82265756	Granted	2310978	12/19/1995	2/2/2000	9710461.6	GB	RADIO BASED COLLISION DETECTION FOR WIRELESS COMMUNICATION SYSTEM
82265864	Granted	2344499	5/9/1996	10/18/2000	9930727.4	GB	Bridge Router for High Performance Scalable Networking
82265867	Granted	2344498	5/9/1996	10/18/2000	9930726.6	GB	Bridge Router for High Performance Scalable Networking
82265870	Granted	2316843	5/9/1996	5/31/2000	9724996.5	GB	Bridge Router for High Performance Scalable Networking
82265936	Granted	2317543	7/12/1996	4/26/2000	9800046.6	GB	Architecture For Managing Traffic In A Virtual LAN Environment
82266314	Granted	873625	7/24/1996	9/14/2005	96925499.4	GB	METHOD AND APPARATUS FOR ASYNCHRONOUS PPP SYNCHRONOUS PPP CONVERSION

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82266566	Granted	2330285	7/15/1997	5/30/2001	9900960.7	GB	Virtual Network Architecture For Connectionless LAN BAckbone
82267052	Granted	2340004	5/1/1998	12/12/2001	9926176	GB	Method and Apparatus For Multipoint Trunking
82267325	Granted	2054390	2/23/1996	6/18/1996	2054390	GB	Enclosure For Electronic Circuitry
82267691	Granted	1040611	12/11/1998	6/5/2002	98967000.5	GB	A Forward Error Correction System For Packet Based Real Time Media
82268360	Granted	2352148	4/7/1999	7/16/2003	24195	GB	Point-To-Point Protocol With A Signaling Channel
82268807	Granted	2336079	1/25/1999	11/27/2002	9901376.5	GB	Scalable Logical Lan
82271183	Granted	1060593	11/30/1999	7/1/2009	99965063.3	GB	Telecommunication Conferencing System And Method
82273868	Granted	2386524	8/29/2002	3/17/2004	220013.7	GB	Stackable Networks Units with Resilience Facility
82274357	Granted	2405288	11/6/2003	2/20/2008	325923.1	GB	System and method for distributed multicast routing
82274414	Granted	2409601	4/22/2004	3/22/2006	408947	GB	Stackable Routers Employing a Routing Protocol
82274489	Granted	2418110	9/14/2004	9/6/2006	420428.5	GB	Method and apparatus for controlling traffic between different entities on a network
82274606	Granted	2441351	9/1/2006	12/8/2010	617232.4	GB	Positionally dependent pattern checking in character strings using deterministic finite automata
82274612	Granted	2443240	10/27/2006	5/6/2009	621356.5	GB	Signature checking using deterministic finite state machines
82274618	Granted	2452420	10/27/2006	5/6/2009	819142.1	GB	Signature checking using deterministic finite state machines
82276358	Granted	2388760	5/16/2003	10/6/2004	311279.4	GB	A Method Of Calculating An Estimate Of Reliability Of Bit Information In A OFDM Receiver And A Receiver Operating In Accordance With The Method
82276622	Granted	2393083	9/9/2003	5/10/2006	321028.3	GB	Authentication And Service Provision
82276922	Granted	2389479	6/7/2002	12/28/2005	213072.2	GB	Local Policy Monitoring For Server Farms
82276991	Granted	1369766	6/4/2003	1/2/2008	3253538.7	GB	Propagation Of Viruses Through An Information Technology Network
82277366	Granted	2401959	5/23/2003	2/22/2006	311874.2	GB	Data Log For Peer-to-peer Network
82277798	Granted	1414227	10/24/2002	8/30/2006	2354169.1	GB	Event Detection For Multiple Voice Channel Communications
82277813	Granted	1379060	7/5/2002	3/4/2009	2354105.5	GB	Improvements In Or Relating To DTMF Control
82584178	To Be Filed					GB	Hierarchical Policy Management
82586620	Granted	1777875	38646	40555	5109861.4	GB	Graphical Arrangement Of IT Network Components
82663198	Published		4/26/2011		1106932.5	GB	Digital Signature Method And System
82721366	Granted	985298	5/28/1998	40632	98923848	GB	Method And Apparatus For Providing Security In A Star Network Connection Using Public Key Cryptography
82723768	Granted	1303100	8/13/2002	6/29/2011	2255636.9	GB	Reduced Pin-count System Interface For Gigabit Ethernet Physical Layer Devices
82759500	Granted	1700446	11/5/2004	3/23/2011	4800797.5	GB	PREVENTING IDENTITY THEFT IN ELECTRONIC COMMUNICATIONS
82775203	Granted	1355466	4/18/2002	11/3/2010	2252744.4	GB	Status Transfer Using Frequency

PATENT
REEL: 038498 FRAME: 0142

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82810924	Granted	1961009	11/1/2006	1/4/2012	6844255.7	GB	Crossbar-array Designs And Wire Addressing Methods That Tolerate Misalignment Of Electrical Components With Wires At Wire Overlap Points
82810953	Granted	1221609	1/3/2002	8/31/2011	2250028.4	GB	A Method For Sensing Humidity In A Tape Library
82844226	Granted	2481771	4/29/2009	8/28/2013	1118765.5	GB	Printed Circuit Board Cooling Assembly
82866221	Granted	1220092	12/19/2001	6/15/2011	1310645.5	GB	System And Method For Executing Variable Latency Load Operations In A Data Processor
82891313	Granted	2484423	7/29/2009	12/24/2014	1122169.4	GB	INTERFACING CLIMATE CONTROLLERS AND COOLING DEVICES
82900882	Granted	2484428	7/31/2009	12/10/2014	1200039.4	GB	COMMISSIONING OF SENSORS
82901623	Granted	2069879	8/1/2007	11/30/2011	7836443.7	GB	Cooling Fan Module
82901709	Published		1/29/2010		1200851.2	GB	Managing Electric Energy Distribution To Multiple Loads Using Selective Capping
82903959	Granted	1684291	6/2/2005	41010	5104797.5	GB	Non Unique Fragment Number Identifiers
82924040	Granted	1839457	1/13/2006	1/11/2012	6704619.3	GB	IMPROVEMENTS IN OR RELATING TO COMMUNICATION SYSTEMS
82936594	Published		10/5/2009		1204945.8	GB	Adjusting A Transducer Head For Transferring Data
82938220	Granted	2491733	1/26/2010	41612	1212820.3	GB	Heat Sink With Multiple Vapor Chambers
82938269	Published		2/26/2010		1202059	GB	RESTORING STABILITY TO AN UNSTABLE BUS
82938295	Granted	2487845	12/2/2009	42046	1202868.4	GB	SIGNAL SENSING DEVICES AND CIRCUIT BOARDS
82951112	Granted	2212806	11/13/2008	6/27/2012	8851440.1	GB	Allocation Of Resources For Concurrent Query Execution Via Adaptive Segmentation
82991035	Granted	1725065	5/11/2006	5/23/2012	6113818.6	GB	Controlling Access To Communication Services
83009784	Granted	1249965	3/26/2001	5/30/2012	1107514	GB	Method, Computer System, And Computer Program For Monitoring Objects Of An Information Technology Environment
83050468	Granted	836306	10/10/1996	7/4/2012	96410106.7	GB	System Providing For Multiple Virtual Circuits Between Two Network Entities
83053692	Granted	2292082	4/14/2008	8/1/2012	8780524.8	GB	Fan For Computer Element In The Service Position
83057029	Granted	1428149	9/20/2002	11/7/2012	2768873.8	GB	A System And Method For A Multi-node Environment With Shared Storage
83087113	Granted	942427	2/24/1999	6/27/2012	99301353.1	GB	EOD IN MIC
83087139	Granted	1805767	10/14/2005	12/5/2012	5810496.9	GB	Nanoscale Latches And Impedance-encoded Logic For Use In Nanoscale State Machines, Nanoscale Pipelines, And In Other Nanoscale Electronic Circuits
83092458	Granted	1378093	4/9/2001	8/8/2012	1921066.5	GB	Authentication And Encryption Method And Apparatus For A Wireless Local Access Network
83092466	Published		12/16/2010		1305000	GB	A DETACHABLE LID
83115120	Granted	1825640	12/6/2004	41157	4805930.7	GB	Interconnect System For Supply Chain Management Of Virtual Private Network Services

PATENT
REEL: 038498 FRAME: 0143

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83115131	Granted	2008220	3/21/2007	9/5/2012	7759004	GB	Service Management Framework
83115420	Granted	2052338	10/2/2006	6/8/2011	6815934.2	GB	DYNAMIC BULK-TO-BRICK TRANSFORMATION OF DATA
83119184	Granted	2493660	5/20/2010	8/20/2014	1218784.5	GB	DATA CENTER COOLING
83137890	Granted	2503965	7/12/2010	8/13/2014	1222208.9	GB	FLEXIBLE DATA CENTER AND METHODS FOR DEPLOYMENT
83140718	Published		10/26/2010		1300339.7	GB	BACKUP POWER SUPPLY SYSTEMS AND METHODS
83146747	Granted	2352953	11/13/2009	41276	9775127.5	GB	Data Centre And Apparatus And Method For Data Centre Cooling
83173969	Granted	2076836	10/25/2007	12/5/2012	7868580.7	GB	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security
83185278	Granted	1078357	12/17/1998	6/7/2006	98964021.4	GB	Tape Leader Pin Asembly And Method For Making The Same
83192847	Granted	1875661	4/10/2006	2/27/2013	6743275.7	GB	IMPROVEMENTS IN OR RELATING TO COMMUNICATIONS
83194264	Granted	2074771	10/1/2007	2/27/2013	7820748.7	GB	Management Of Access To Address Data
83217123	Granted	1394679	8/30/2002	5/29/2013	2354124.6	GB	Improvements Relating To Technical Support Systems
83218689	Published		10/12/2010		1305932.4	GB	RESOURCE MANAGEMENT FOR DATA CENTERS
83228578	Granted	2271992	4/28/2008	41367	8743362.9	GB	Method And System For Generating And Delivering Inter-processor Interrupts In A Multi-core Processor And In Certain Shared-memory Multi-processor Systems
83240733	Granted	913825	10/30/1998	5/1/2013	98308912.9	GB	Data Encoding Scheme
83240744	Granted	2257880	3/25/2008	5/8/2013	8732796.1	GB	System And Method For Transforming PCIE SR-IOV Functions To Appear As Legacy Functions
83247591	Granted	950302	12/8/1997	5/8/2013	97953075.5	GB	PUBLIC KEY CRYPTOGRAPHIC APPARATUS AND METHOD
83505406	Granted	2313830	8/13/2008	10/2/2013	8795330.3	GB	Dynamic Utilization Of Power-down Modes In Multi-core Memory Modules
83538248	Granted	1592217		10/16/2013		GB	Method And Apparatus For Providing A Specialized Resource Function In A Telephone Network
83542275	Granted	2137888	39540	8/21/2013	8742575.7	GB	Available Bandwidth Estimation
83593527	Granted	913824	10/30/1998	8/14/2013	98308901.2	GB	Generating appendable points in encoded data
83683797	Granted	2427994	10/26/2009	9/25/2013	9743889.9	GB	Method And Apparatus For Creating Entanglements And Quantum Repeater Utilising The Same
83693681	Published		6/30/2011		1321670	GB	A MEMORY MODULE THAT INCLUDES A MEMORY MODULE COPY ENGINE FOR COPYING DATA FROM AN ACTIVE MEMORY DIE TO A SPARE MEMORY DIE
83806256	Granted	1622349	7/12/2005	41683	5254353.5	GB	Teleconference Audio Quality Monitoring
83809806	Granted	1676420	7/6/2004	3/5/2014	4766134.3	GB	Improvements In Or Relating To Fault Tolerant Systems
83815925	Granted	2011012	4/25/2007	3/5/2014	7756010	GB	Content-based, Compression-enhancing Routing In Distributed, Differential Electronic-data Storage Systems
83835725	Granted	2126770	1/21/2008	3/19/2014	8702121.8	GB	TRUSTED COMPUTING ENTITIES

PATENT
REEL: 038498 FRAME: 0144

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83854737	Published		10/27/2011		1405179.1	GB	SHIFTABLE MEMORY SUPPORTING IN-MEMORY DATA STRUCTURES
83873830	Published		10/25/2011		1405911.7	GB	DRIVE CARRIER SUBSTRATE
83881518	Granted	1920586	8/7/2006	41738	6800866.3	GB	Screening Of Calls In A Packet-based Network
83881942	Granted	2510286	10/28/2011	8/19/2015	1407330.8	GB	ROW SHIFTING SHIFTABLE MEMORY
83884018	Granted	1625501	5/13/2004	4/16/2014	4785554.9	GB	Read, Write, And Recovery Operations For Replicated Data
83928534	Granted	2359534	12/15/2008	5/7/2014	8879013.4	GB	Detecting An Unreliable Link In A Computer System
83933051	Published		12/23/2011		1411576	GB	MANAGING A FACILITY
83964152	Granted	2514269	6/23/2009	2/18/2015	1411189.2	GB	Power Distribution To Computer System
83985780	Granted	2368268	12/23/2008	41829	8879253.6	GB	Memristive Device And Methods Of Making And Using The Same
83996157	Published		4/20/2012		1413613.9	GB	OVERVOLTAGE PROTECTION SYSTEMS AND METHOD
83996458	Published		4/30/2012		1413419.1	GB	CONTROL SIGNAL BASED ON A COMMAND TAPPED BY A USER
83996540	Published		4/27/2012		1413418.3	GB	Similarity Score Lookup and Representation
84016660	Granted	1977572	1/23/2007	41878	7762485.6	GB	Compute Clusters Employing Photonic Interconnections For Transmitting Optical Signals Between Compute Cluster Nodes
84022114	Granted	2260611	3/31/2008	41871	8742453.7	GB	Automated Power Topology Discovery
84079680	Published		7/30/2012		1418806.4	GB	GENERATING AND PARTITIONING POLYNOMIALS
84080920	Published		7/30/2012		1418808	GB	SEARCH METHOD
84081218	Application		7/31/2012		1418807.2	GB	Concept Categorization
84088680	Application		4/30/2012		1420197.4	GB	NOTIFICATION BASED ON AN EVENT IDENTIFIED FROM VIBRATION DATA
84103209	Published		7/31/2012		1421568.5	GB	WIRELESS ACCESS POINT CELL ID INSERTION IN FRAME HEADER
84115807	Granted	2486487	10/7/2009	41976	9850311.3	GB	Notification Protocol Based Endpoint Caching Of Host Memory
84116406	Published		6/1/2012		1423391	GB	SHARING INFORMATION ABOUT RESOURCES IN A COLLABORATIVE ENVIRONMENT
84122554	Published		6/29/2012		1422943.9	GB	CAPACITY PLANNING SYSTEM
84140173	Published		10/25/2012		1500939.2	GB	EVENT CORRELATION
84140189	Published		10/26/2012		1500944.2	GB	PROCESSING STREAMING DATA WITH OPEN EXECUTORS
84172784	Granted	2350842	10/30/2008	42060	8877865.9	GB	Redundant Array Of Independent Disks (RAID) Write Cache Sub-assembly
84196128	Granted	2597899	10/13/2011	42095	11306325.9	GB	Optimizing telephony numbers for Machine 2 Machine Communications using Round Robin Assignment Technique
84210223	Published		10/18/2012		1505984.3	GB	COMMUNICATING TUPLES IN A MESSAGE

PATENT
REEL: 038498 FRAME: 0145

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84212970	Granted	2080048	5/4/2009	3/4/2015	7839603.3	GB	Photonic-interconnect Systems For Reading Data From Memory Cells And Writing Data To Memory Integrated Circuits
84290592	Granted	2622487	9/28/2011	42200	11833057	GB	HOST BASED WRITE ORDERING FOR ASYNCHRONOUS REPLICATION
90031090	Granted	2686883	3/29/2011	7/1/2015	11862142.4	GB	DUAL-PLANE MEMORY ARRAY
90063373	Application		9/30/2008		8824049.4	GB	Authentication Of Services On A Partition
90064664	Granted	2465030	8/11/2009	10/7/2015	9848324.1	GB	Enclosure Airflow Controller
82088675	Granted	2394084	6/27/2003	38637	315107.3	GB	SYSTEM AND METHOD FOR FREQUENCY AND PERFORMANCE MODULATION DEPENDENT ON THE NUMBER OF LOADED BLADES IN A BLADED SYSTEM
82891341	Granted	2483420	6/23/2009	2/18/2015	1200041	GB	Power Distribution To Computer System
83012852	Granted	GB2498027	10/25/2010	8/26/2015	1217569.1	GB	POWER CONVERTER
83273481	Published		12/22/2010		1310249.6	GB	Mosfet Switch Gate Driver, Mosfet Switch System And Method
83995692	Published		1/31/2012		1413608.9	GB	REDUCING CURRENT HARMONICS AT LIGHT LOADS
82231829	Granted	2463430	5/21/2008	40961	1000808.4	GB	A Modular High-density Computer System
82277963	Granted	1526679	10/21/2003	39260	3292628.9	GB	Methods Relating To The Monitoring Of Computer Systems
82251617	Granted	811211	2/12/1996	10/16/2002	96906429.4	GB	System and Method for Electronic Transfer of Funds Using An Automated Teller Machine to Dispense the Transferred Funds
82257110	Granted	2024950	4/27/2007	6/2/2010	7761477.4	GB	In-transit Two-way Route Communication Between A Handheld Positioning Device And A Service Provider
82190315	Granted	2423442	1/26/2006	40149	601519.2	GB	Information Technology (IT) Equipment Positioning System
83136238	Published		6/7/2010		1221240.3	GB	MODULE AND PORT
83543107	Granted	2503592	4/27/2011	7/22/2015	1315642.7	GB	Rotational Lockout
83874493	Granted	1741139	4/25/2005	7/16/2014	5740296.8	GB	Misalignment-tolerant Methods For Fabricating Multiplexing/demultiplexing Architectures
82127630	Granted	811931	6/4/1997	5/2/2003	97303797.1	GB	EXPANSION CARD INSERTION AND REMOVAL
82892354	Granted	2482842	6/19/2009	7/25/2012	1121407.9	GB	Enclosure Power Controller
82064075	Granted	2377048	6/30/2001	5/4/2005	116063.9	GB	Method Of Utilisation Of A Data Storage Array, And Array Controller Therefor
82218590	Granted	2437649	4/26/2007	3/30/2011	708132.6	GB	Compatibility Enforcement In Clustered Computing Systems
82729621	Granted	1008859	11/15/1999	5/4/2011	99309055.4	GB	Private Arbitrated Loop Self-test Management For A Fibre Channel Storage Enclosure
82786346	Granted	869426	3/30/1998	7/13/2011	98302442.3	GB	APPARATUS AND METHOD FOR STORAGE SUBSYSTEM DRIVE MOVEMENT AND VOLUME ADDITION
82098101	Granted	2405715	8/27/2004	6/14/2006	419187	GB	Circuit And System For Addressing Memory Modules
82065758	Granted	2382258	10/8/2002	9/1/2004	223255.1	GB	Traffic Manipulation By Adding Traffic

PATENT
REEL: 038498 FRAME: 0146

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82036913	Granted	967758	4/8/1999	11/30/2005	99302754.9	GB	Link Control State Machine For Controlling A Media Access Controller, A Serial Physical Layer Device And A Media Independent Interface Physical Layer Device
82274405	Granted	2411540	2/25/2004	3/29/2006	404159.6	GB	Cascade Control System for Network Units
82274594	Granted	2424144	3/11/2005	12/31/2008	505050.5	GB	Packet diversion in switching fabrics and multiple forwarding instructions for packets
82064387	Granted	2377317	7/7/2001	9/8/2004	116659.4	GB	Use Of Digital Peak Detect In Sampled Data Read Channels For Asynchronous Detection Of Tones And For Format Navigation
82064765	Granted	2380596	7/3/2002	7/27/2005	215348.4	GB	Data Backup
82094666	Granted	2390195	6/25/2003	10/26/2005	314749.3	GB	Data Recovery
82097474	Granted	2397412	12/30/2003	12/14/2005	330183.5	GB	Storage System With LUN Virtualization
82175888	Granted	2407696	11/1/2004	7/18/2007	424184	GB	Tape Cartridge
82198931	Granted	2425217	4/15/2005	6/15/2011	507592.4	GB	Temporal Mappings For Host Access / Secure Manager
82244438	Granted	2461899	7/17/2008	12/21/2011	813026.2	GB	Controlling Motion Of Storage Media
82900684	Granted	1324172	12/19/2002	2/8/2012	2258777.8	GB	System And Method For Securing Fiber Channel Drive Access In A Partitioned Data Library
82251998	Granted	1108238	7/15/1999	1/17/2007	99934061.5	GB	System and Method for Selectively Defining Access to Application Features
83120022	Granted	2361465	10/15/2008	8/29/2012	8875183.9	GB	Retrieving Configuration Records From A Configuration Management Database
81968930	Granted	2371646	9/10/2001	11/17/2004	121847.8	GB	Testing Of Policy Prior To Deployment In A Policy-Based Network Management System
82070627	Granted	1168711	6/19/2000	8/20/2008	410066.5	GB	Process For Controlling Devices Of An Intranet Network Through The Web
82171829	Granted	2406465	8/25/2004	2/22/2006	418975.9	GB	System And Method Of Network Fault Monitoring
82062515	Granted	1281270	5/8/2001	7/19/2006	1925734.4	GB	Operating A Ommunications Infrastructure On A Pre-payment Basis
82071068	Granted	1309142	10/30/2001	6/20/2007	1410140.6	GB	Communication System And Method
82174076	Granted	2427490	6/8/2006	8/25/2010	611335.1	GB	Network Usage Management System And Method
82186754	Granted	1528745	10/30/2003	12/2/2009	3292712.1	GB	Communnication Method And Apparatus
82211912	Granted	1869864	4/3/2006	8/6/2008	6749186	GB	Multimedia Transfer For Wireless Networks
82212602	Granted	1874065	6/30/2006	12/29/2010	6300735.5	GB	SIGNALLING SYSTEM AND METHOD
82392132	Granted	1617410	7/11/2005	11/24/2010	5254326.1	GB	Allocation Of Speech Recognition Tasks And Combination Of Results Thereof
83221479	Granted	1650990	10/20/2004	4/17/2013	4300698	GB	METHOD AND APPRATUS FOR ROUTING SHORT MESSAGES IN MOBILE TELEPHONE NETWORKS
83929727	Granted	1986409	3/13/2008	5/7/2014	8004715.2	GB	A Method, Apparatus And Software For Providing Communications Between A Packet Switched Network And A Public Switched Telephone Network

PATENT
REEL: 038498 FRAME: 0147

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82065824	Granted	2389481	6/4/2003	12/28/2005	312767.7	GB	Method Of Maintaining Availability Of Requested Network Resources
82089548	Granted	2391975	6/12/2003	1/4/2006	313626.4	GB	A Method For Electronic Tracking Of An Electronic Device
82098350	Granted	2404264	7/7/2004	10/25/2006	415283.1	GB	Systems And Methods For Monitoring Resource Utilization And Application Performance
82099658	Granted	2398212	1/16/2004	11/16/2005	400999.9	GB	A System For Deploying A Virtual Private Network
82116146	Granted	723231	1/15/1996	7/11/2001	96300261.3	GB	METHOD AND APPARATUS FOR PREVENTING INADVERTENT CHANGES TO SYSTEM-CRITICAL FILES IN A COMPUTING SYSTEM
82204673	Granted	2431845	10/24/2006	3/23/2011	621172.6	GB	Device Storing Vector Images With Embedded Image Style Identifier, And Methods And Utilities For Formatting A Device Image With Image Style Attributes
82208792	Granted	1708090	3/20/2006	3/3/2010	6111395.7	GB	Method And Apparatus For Direct Input And Output In A Virtual Machine Environmeent
82847508	Granted	1859346	3/4/2005	1/11/2012	5733005.2	GB	A Method And Apparatus For Facilitating Pipeline Throughput
82085051	Granted	2394121	9/23/2003	12/7/2005	322290.8	GB	Circuit Board Support Arrangement, Method, And Method For Using The Same
82103345	Granted	2402771	6/4/2004	8/30/2006	412571.2	GB	Intercoupling Apparatus For Server Computer Systems
81976424	Granted	2380837	7/29/2002	5/18/2005	217530.5	GB	System And Method For Developing Customized Integration Tests And Network Peripheral Device Evaluations
82249871	Granted	GB2466178	12/5/2008	10/10/2012	822213.5	GB	Data Centre And Apparatus And Method For Data Centre Cooling
81993524	Granted	2375412	3/8/2002	3/23/2005	205555.6	GB	Redundant Controller Data Storage System Having System And Method For Handling Controller Resets
82004390	Granted	1495270	4/16/2003	3/12/2008	3724032.2	GB	Using Pattern Recognition Techniques For Energy Management In Large Data Centers
82042223	Granted	1056086	4/18/2000	6/22/2005	303272.9	GB	Modular Data Storage System Utilizing A Wireless Cartridge Access Device
82253489	Granted	1436956	10/15/2002	12/10/2008	2793789.5	GB	Method And System For Communicating Telematics Messages
82190939	Granted	2415523	6/7/2005	10/29/2008	511574.6	GB	System And Method For Sharing Storage Resources Between Multiple Files
82065200	Granted	1237332	3/2/2001	11/5/2003	1301921.1	GB	Beacon Based Web Services II
82066010	Granted	2376765	6/19/2001	12/29/2004	114895.6	GB	Multiple Trusted Computing Environments With Verifiable Environment Identities
82171331	Granted	2400526	4/8/2003	12/21/2005	308073.6	GB	Key History Tree: Efficient Shared-key Management With Off-line Group Members
82208228	Granted	1720315	4/27/2006	7/9/2008	6113237.9	GB	Network Management And Administration

PATENT
REEL: 038498 FRAME: 0148

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82259177	Published		6/30/2009		911276.4	GB	Method And Apparatus For Creating Entanglements And Quantum Repeater Utilising The Same
82743836	Granted	1875476	4/25/2006	7/27/2011	6751576.7	GB	Three-dimensional Nanoscale Crossbars
82997369	Granted	2096672	1/26/2007	40758	9006878.4	GB	MIXED-SCALE ELECTRONIC INTERFACE
83781701	Granted	2311094	7/31/2008	1/1/2014	8794914.5	GB	MULTI-LAYER RECONFIGURABLE SWITCHES
84077567	Published		7/30/2012		1418164.8	GB	PROVIDING AGREEMENT INFORMATION TO ALLOW ACCESS BY A CLIENT DEVICE OF SELECTED EQUIPMENT FROM AMONG MULTIPLE EQUIPMENT
82207421	Granted	1938429	7/21/2006	9/30/2009	6788057.5	GB	Method And Apparatus For Electromagnetic Resonance Using Negative Index Material
82635094	Granted	2013706	4/20/2007	40730	7755826	GB	Self-authenticating Quantum Random Bit Generators
82678698	Granted	2013707	4/20/2007	7/6/2011	7755829.4	GB	Optical-based, Self-authenticating Quantum Random Number Generators
83223394	Granted	2212887	10/23/2008	4/17/2013	8842157.3	GB	Three-dimensional Memory Module Architectures
82729658	Granted	1558937	11/7/2003	8/24/2011	3783255.7	GB	Active Network Defense System and Method
83988224	Granted	2321934	10/28/2009	6/25/2014	9752028.2	GB	Distributed Packet Flow Inspection and Processing
82098665	Granted	2400942	3/31/2004	12/14/2005	407333.4	GB	Processor Type Determination
82948587	Granted	2052337	10/2/2006	7/6/2011	6815926.8	GB	RETRO-FITTING SYNTHETIC FULL COPIES OF DATA
82225397	Granted	2439572	6/29/2006	3/9/2011	612818.5	GB	REMOTE CONNECTION BETWEEN INTERMEDIARY DEVICE AND COMPUTING DEVICE VIA CENTRAL AUTHORITY SOFTWARE
83781761	Granted	1220088	12/19/2001	6/3/2009	1310644.8	GB	Circuit And Method For Supporting Misaligned Accesses In The Presence Of Speculative Load Instructions
83881904	Granted	2509661	10/27/2011	10/7/2015	1407328.2	GB	SHIFTABLE MEMORY EMPLOYING RING REGISTERS
81978848	Granted	2373090	3/1/2002	9/8/2004	204897.3	GB	Position Control For Plunge Mechanism
82061567	Granted	2367182	9/20/2000	5/26/2004	23048.2	GB	Improvements In And Relating To Data Protection
82062569	Granted	2372873	10/29/2001	12/15/2004	125891.2	GB	Improvements Relating To Data Readers
82064381	Granted	2378307	8/3/2001	6/1/2005	116068.8	GB	Format Navitation By Majority Voting Across Multiple Read Channels
82068314	Granted	1066634	4/1/1998	12/12/2001	98913957.1	GB	AFN Append Point
82084481	Granted	1508860	3/3/2004	5/23/2007	4004995.9	GB	Method And Apparatus For Managing Device Reservation (as Amended)
82088105	Granted	1492104	12/29/2003	3/4/2009	3029948.1	GB	Cartridge-handling Apparatus For A Media Storage System
82228139	Granted	2446182	1/31/2007	12/28/2011	701781.7	GB	Data Transfer Apparatus For Use With Tape Cartridges And Tape Cartridges For Use With Such Data Transfer Apparatus
82232321	Granted	GB2450340	6/20/2007	10/3/2012	711860.7	GB	Method For Changing The Configuration Of A Media Drive Apparatus, Computer Readable Medium, And Media Drive Apparatus
82240436	Granted	2457670	2/20/2008	1/4/2012	803052	GB	Data Transfer Device
82276526	Granted	2401238	4/28/2003	11/14/2007	309551	GB	Improved Multi-channel MR Head Asymmetry Calibration

PATENT
REEL: 038498 FRAME: 0149

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82859785	Granted	2489292	2/20/2008	11/7/2012	1118575.8	GB	Data Transfer Device
81986342	Granted	2375853	12/7/2001	2/16/2005	129380.2	GB	Authoring Tool For Bayesian Network Diagnostic Systems
83139209	Granted	1484682	6/2/2003	12/5/2012	3291306.3	GB	Method And Apparatus For Providing Support For An Electronic Device
82938256	Granted	2488636	12/28/2009	1/8/2014	1202586.2	GB	A SYSTEM FOR PROVIDING PHYSICALLY SEPARATED COMPUTE AND I/O RESOURCES IN THE DATACENTER TO ENABLE SPACE AND POWER SAVINGS
83995646	Published		1/31/2012		GB1412874.8	GB	MEMORY MODULE BUFFER DATA STORAGE
82103651	Granted	1560225	6/28/2004	2/4/2009	4015147.4	GB	Method And Apparatus For Reducing Soft Errors
82199855	Granted	2422461	1/20/2006	39694	601112.6	GB	Systems And Methods For Maintaining Performance
82206602	Granted	2429552	8/2/2006	9/1/2010	615369.6	GB	Start/stop Circuit For Performance Counter
82235381	Granted	2451549	7/7/2008	2/1/2012	812407.5	GB	Hardward Device Data Buffer
83213143	Granted	2260364	4/2/2008	3/20/2013	8744891.6	GB	Converting Resets In Shared I/O System
83874029	Granted	2248230	2/29/2008	4/16/2014	8731153.6	GB	Modular System And Retractable Assembly For Electronic Devices
84155345	Granted	2497023	11/2/2009	2/25/2015	9850993.8	GB	Multiprocessing Computing With Distributed Embedded Switching
81988895	Granted	2375633	3/8/2002	2/2/2005	205560.6	GB	Redundant Controller Data Storage System Having Hot Insertion System And Method
82258043	Granted	2470334	2/20/2009	2/27/2013	1015698.2	GB	Method And System For Implementing A Virtual Storage Pool In A Virtual Environment
82578772	Granted	1291780	6/12/2002	11/14/2007	2254085	GB	Node Controller for a Data Storage System
83793388	Published		10/25/2011		1404024	GB	DRIVE CARRIER LIGHT SOURCE CONTROL
83787165	Granted	2288996	4/28/2008	1/29/2014	8754129.8	GB	Virtual-interrupt-mode Interface And Method For Virtualizing An Interrupt Mode
83874318	Granted	2255291	2/18/2008	41745	8730074.5	GB	Systems And Methods Of Communicatively Coupling A Host Computing Device And A Peripheral Device
82271717	Granted	2362245	11/30/2000	2/18/2004	119018	GB	FIFO Based Network Interface Supporting Out-of-Order Processing
82266596	Granted	990206	5/28/1998	10/25/2006	98924930.5	GB	Multilayer Firewall System
82270907	Granted	2350027	5/8/1999	7/18/2001	9910582.7	GB	Monitoring of Connection Between Network Devices In A Packet-Based Communication System
82274465	Granted	2414623	5/27/2004	5/17/2006	411835.2	GB	Distributed bridging with synchronization of forwarding
82274522	Granted	2420468	11/17/2004	4/29/2009	425306.8	GB	Packet Metering in High-speed Network Units
82274147	Granted	1527626	6/30/2003	6/2/2010	3762222.2	GB	System and Method for a Universal Wireless Access Gateway
81969860	Granted	2378310	5/30/2002	11/24/2004	212534.2	GB	Data Storage Methods And Apparatus
81978725	Granted	1195942	4/5/2001	11/14/2007	1108610.5	GB	Device Detection System And Method
82005008	Granted	1383121	7/11/2003	5/12/2010	3254395.1	GB	Intrusion Monitors For Media Storage Systems

PATENT
REEL: 038498 FRAME: 0150

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82815955	Granted	1913509	8/5/2005	10/19/2011	5778416.7	GB	System, Method And Apparatus To Obtain A Key For Encryption/decryption/data Recovery From An Enterprise Cryptography Key Management System
83164613	Granted	1846867	1/20/2006	1/9/2013	6719098.3	GB	Non-invasive Method And System For Automated Administration Of Diverse Security Constrained Servers
82249304	Granted	2464284	10/8/2008	4/17/2013	818404.6	GB	Data Centre Cooling Apparatus And Method
82901634	Granted	2485490	8/31/2009	8/20/2014	1122155.3	GB	SURFACE-MOUNT TECHNOLOGY (SMT) DEVICE CONNECTOR
82200665	Granted	2419700	10/29/2004	3/31/2010	424137.8	GB	Method For Indexing Data, Systems, Softward And Apparatus Relating Thereto
83810199	Granted	1884872	7/13/2007	2/26/2014	7013794.8	GB	Method And System For Using Application Development Data To Instantiate Support Information
84058059	Granted	2460105	7/30/2009	10/1/2014	9847912.4	GB	Constructing A Bayesian Network Based On Received Events Associated With Network Entities
81986900	Granted	2371440	10/24/2001	9/22/2004	125507.4	GB	Method And System For Identifying And Processing Changes To A Network Topology
82060070	Granted	1257087	5/10/2001	9/12/2007	1111444.4	GB	Method, Computer System And Computer Program For Monitoring Objects In An IT Network
82062755	Granted	2368930	10/17/2000	4/6/2005	25452.4	GB	Establishment Of A Deferred Network Communication Session
82100468	Granted	1414194	10/22/2002	12/13/2006	2354168.3	GB	Method And Apparatus For Operating A Telecommunication Platform
82198604	Granted	1686813	1/31/2005	7/16/2008	5300075.8	GB	Signalling Point
82202228	Granted	2422218	1/14/2005	12/23/2009	500716.6	GB	A Common User Repository With Data Linked By Trust Relationships
82662207	Granted	1665824	7/23/2004	3/2/2011	4766305.9	GB	Methods And Apparatus For Controlling Signalling Gateways
82718563	Granted	1274259	7/6/2001	6/29/2011	1410085.3	GB	Multi-service Telecommunications System And Associated Methods
82837120	Granted	1632075	5/18/2004	9/14/2011	4733568.2	GB	Method And Apparatus For Load-balancing
82855474	Granted	2301277	6/12/2009	10/12/2011	9761506.6	GB	Improvements In Or Relating To Communications
83136103	Granted	2015553	7/10/2008	11/28/2012	8160071	GB	Reverse Billing Of Messages Delivered To A Mobile Device
83748542	Granted	1858266	5/18/2006	11/13/2013	6300494.9	GB	Method And Gateway For Sending Subsystem Allowed And Subsystem Prohibited SCCP Management Messages For Distributed SCCP Application Servers
83785187	Granted	1976232	3/30/2007	1/22/2014	7300912.8	GB	SIGNALING STATUS INFORMATION OF AN APPLICATION SERVICE
84251698	Granted	2143259	1/29/2008	5/27/2015	8708351.5	GB	Method And System For Facilitating Multi-point Communications
82065812	Granted	2386738	3/18/2002	9/21/2005	206404.6	GB	Lower Cost Streaming Media Playback Infrastructure

PATENT
REEL: 038498 FRAME: 0151

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81971858	Granted	2368690	6/26/2001	12/21/2005	115612.4	GB	Demand Responsive Method And Apparatus To Automatically Activate Spare Servers
82051517	Granted	1130491	12/4/2000	3/8/2006	310771.1	GB	Method And Apparatus For Providing Field Confidentiality In Digital Certificates
82098656	Granted	2408407	10/21/2004	5/24/2006	423434	GB	Smart Translation Of Generic Configurations
82199297	Granted	2425694	4/13/2006	1/13/2010	607366.2	GB	Method And An Apparatus For Securely Communicating Between A Management Server And A Managed Node Associated With A Dynamic Provisioning System
82203353	Granted	2437145	9/20/2006	11/24/2010	618517.7	GB	Method And Apparatus For Dynamically Allocating Resources Used By Software
82203854	Granted	2431846	10/24/2006	12/8/2010	621174.2	GB	Utilities, Methods And Device Providing Vector Images That May Be Updated To Reflect The Status Of A Device
82204787	Granted	2432498	10/24/2006	12/21/2011	621176.7	GB	Utility, Method And Device Providing Vector Images That May Be Formatted For Display In Different Locales
84211163	Granted	2248029	2/26/2008	4/8/2015	8726109.5	GB	Method And Apparatus For Performing A Host Enumeration Process
90037716	Granted	2176773	7/7/2008	9/2/2015	8808136.9	GB	Data Packet Processing Method For A Multi Core Processor
81992954	Granted	2380108	7/30/2002	11/17/2004	217624.6	GB	Server System With Segregated Management Lan And Payload Lan
81993893	Granted	2381611	7/30/2002	5/25/2005	217602.2	GB	Server System With Multiple Management User Interfaces
82128185	Granted	811932	6/4/1997	4/9/2003	97303798.9	GB	CONNECTING EXPANSION CARDS
83209021	Granted	2498281	11/1/2010	4/8/2015	1305158.6	GB	STORAGE ELEMENT READING USING RING OSCILLATOR
84105776	Granted	2480977	9/25/2009	11/5/2014	9849912.2	GB	MAPPING NON-PREFETCHABLE STORAGE LOCATIONS INTO MEMORY MAPPED INPUT/OUTPUT SPACE
82077368	Granted	907935	4/24/1997	8/24/2005	97922456.5	GB	A System And Method For Secure Network Electronic Payment And Credit Collection
82187120	Granted	2424734	3/29/2006	7/8/2009	606128.7	GB	PERFORMANCE MONITORING OF A PIPELINED PROCESSOR USING INSTRUCTION RECORDS
82193984	Granted	1446802	10/16/2002	10/15/2008	2770159.8	GB	Recording And/or Reproducing Device Comprising A Coated Tape Guide
82273397	Granted	2372680	2/27/2001	2/19/2003	104837	GB	Calculation and Transmission of Error Check Codes
84088604	Application		4/23/2012		1419222.3	GB	STATISTICAL ANALYSIS USING A GRAPHICS PROCESSING UNIT
82099091	Granted	2422520	1/21/2005	9/9/2009	501248.9	GB	Method And System For Contained Cryptographic Separation
82169198	Granted	2401280	4/29/2003	38756	309844.9	GB	Propagation Of Virus Through An Information Technology Network
82198541	Granted	1605626	6/6/2005	12/26/2007	5104894	GB	Cryptographic Method And Apparatus
82213901	Granted	2432433	10/29/2005	4/7/2010	522100.7	GB	A METHOD OF PROVIDING A VALIDATABLE DATA STRUCTURE

PATENT
REEL: 038498 FRAME: 0152

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82220270	Granted	2443516	10/17/2007	4/13/2011	720234.4	GB	NETWORK ADMINISTRATION
82223645	Granted	2442546	7/18/2007	3/23/2011	713877.9	GB	Authenticated Encryption Method And Apparatus
82276397	Granted	2391139	7/14/2003	10/12/2005	316390.4	GB	Method And Apparatus For Securely Transferring Data
82738932	Granted	2227862	10/14/2008	3/30/2011	8806753.3	GB	Data Processing Arrangements For Use In Data Communication Apparatus In Connection With Error Correction
82172576	Granted	1741248	4/28/2005	9/16/2009	5738071.9	GB	Assigning Wan Links To Subflows Based On Wan Link Characteristics And Application Preferences
84103280	Published		7/31/2012		1421129.6	GB	VIRTUAL MACHINE DATA PACKET ENCAPSULATION AND DECAPSULATION
82094657	Granted	1652334	7/22/2004	11/21/2007	4743493.1	GB	Improvements Relating To Quantum Cyptography
82175504	Granted	2422022	10/6/2004	39316	607194.8	GB	Photonic Interconnect System
82175510	Granted	2436242	10/6/2004	12/5/2007	710983.8	GB	Photonic Interconnect System
83694931	Granted	2013708	4/20/2007	10/16/2013	7775953.8	GB	OPTICAL-BASED, SELF-AUTHENTICATING QUANTUM RANDOM NUMBER GENERATORS
82579296	Granted	1749386	5/4/2005	4/14/2010	5746753.2	GB	Pattern Discovery In A Network Security System
82128620	Granted	825536	8/13/1997	2/5/2003	97306154.2	GB	A SERVER CONTROLLER CONFIGURED TO SNOOP AND RECEIVE A DUPLICATIVE COPY OF DISPLAY DATA PRESENTED TO A VIDEO CONTROLLER
82947668	Published		8/30/2011		1114879.8	GB	AUTOMATED PARSING OF E-MAIL MESSAGES
83229044	Granted	1792530	8/30/2005	3/6/2013	5792647.9	GB	CRAC Unit Control Based On Re-circulation Index
82184936	Granted	2418502	9/13/2005	39680	518663	GB	Responding To DC Power Degradation
82085789	Granted	2391582	6/10/2003	8/17/2005	313370.9	GB	Fan-Securing Device For Use With A Heat Transfer Device
82901717	Published		2/26/2010		1200849.6	GB	MIXED-FLOW DUCTED FAN
82068626	Granted	2344441	8/6/1999	4/30/2003	6902.1	GB	System For Improved Data Backup And Recovery
82090718	Granted	1480223	1/19/2004	39897	4001012.6	GB	Modular Storage Library With Automatic Configuration
82094339	Granted	2396739	12/20/2003	10/26/2005	329578.9	GB	Writing And Reading Data In A Data Storage Format
82094462	Granted	2409330	12/15/2004	9/26/2007	427495.7	GB	Tape Head Assembly
82199477	Granted	2431284	10/15/2005	6/4/2008	521005.9	GB	Tape Deployment Systems And Methods Of Deploying Tape In Digital Data Transfer Apparatus
82201100	Granted	2422923	2/3/2005	10/29/2008	502176.1	GB	Detailed Feedback Of Data Channel Performance Metics To Solutions Software
82202222	Granted	2425394	4/21/2005	9/19/2007	508026.2	GB	Data Transfer Apparatus Head Cleaning
82244546	Granted	2461049	6/18/2008	11/7/2012	811142.9	GB	DETECTING TAPE CONDITION IN A TAPE DATA TRANSFER APPARATUS
82644405	Granted	1460440	10/9/2003	12/8/2010	3022910.8	GB	Apparatus For Sensing The Presence Of An Inductive Load Driven By A Pulse Width Modulated Signal
83185317	Granted	1715488	12/17/1998	2/11/2009	6011296.8	GB	Tape Leader Pin Assembly And Method For Making The Same

PATENT
REEL: 038498 FRAME: 0153

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83821056	Granted	1592004	4/27/2005	3/12/2014	5103461.9	GB	METHOD AND APPARATUS FOR RECORDING DATA ONTO A RECORDING MEDIUM INCLUDING WARNING OF THE APPROACH TO AN END OF MEDIUM POSITION
83136246	Published		6/7/2010		1220986.2	GB	MODULE AND PORT
83984216	Published		1/6/2012		1411836.8	GB	CONNECTOR MODULES HAVING OPTICAL CONNECTORS MOVEABLE BETWEEN A RETRACTED POSITION AND AN EXTENDED POSITION
82084970	Granted	2393292	7/17/2003	38686	316794.7	GB	Hardware Based Utilization Metering
82128737	Granted	854611	12/30/1997	38336	97310656	GB	NETWORK SWITCH WITH MULTIPLE BUS ARCHITECTURE
82208339	Granted	2428826	7/5/2006	3/18/2009	613379.7	GB	Timestamp Generator
82233749	Granted	2463848	5/21/2008	6/27/2012	1002386.9	GB	TAMPER-EVIDENT CONNECTOR
81993632	Granted	2411058	11/1/2002	11/30/2005	509636.7	GB	BATTERY CHARGING AND DISCHARGING SYSTEM
82129487	Granted	848316	12/11/1997	5/8/2002	97310024.1	GB	SYSTEM AND METHOD FOR SECURE INFORMATION OVER A NETWORK
83853751	Published		10/25/2011		1406294.7	GB	DRIVE CARRIER TOUCH SENSING
81986522	Granted	1417783	8/13/2002	1/12/2005	2757123.1	GB	Asymmetric Wireless Communication System Using Two Different Radio Technologies
82276640	Granted	2391767	7/28/2003	38189	317578.3	GB	Notification Of Wireless Hotspots
82266341	Granted	855115	10/11/1996	7/6/2005	96936429.8	GB	METHOD AND APPARATUS FOR TRANSPARENT INTERMEDIATE SYSTEM BASED FILTERING ON A LAN OF MULTICAST PACKETS
82268339	Granted	2333931	1/22/1999	5/7/2003	9901325.2	GB	Logical Switch Set
82274333	Granted	2406742	10/3/2003	3/22/2006	323154.5	GB	Switching Fabrics and Control Protocols for them
82061684	Granted	1162537	6/9/2000	9/26/2007	304891.5	GB	Utilization Of Unused Disk Space On Networked Computers
82233314	Granted	2466580	10/25/2007	1/2/2013	1000247.5	GB	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82261652	Granted	2481807	7/6/2010	3/25/2015	1011319.9	GB	Protecting File Entities
81978905	Granted	1239479	1/28/2002	10/12/2005	2250543.2	GB	Apparatus And Method For Retrieving Data Cartridge Information External To A Media Storage System
82028288	Granted	940807	3/3/1999	5/26/2010	99301613.8	GB	Linear Speed Measurement Independent Of Lateral Position In Linear Tape Systems
82047887	Granted	2085210	7/23/1999	1/5/2000	2085210	GB	Bezel For Rack Mounted Device
83721500	Granted	2011042	4/25/2007	11/6/2013	7756008.4	GB	Distributed Differential Store With Non-distributed Objects And Compression-enhancing Data-object Routing
81956549	Granted	750253	6/11/1996	4/3/2002	96109337.4	GB	Method And Apparatus For Shared Management Information Via A Common Repository
82038023	Granted	961197	12/10/1998	8/13/2003	98123600.3	GB	User Interface Mechanism For Manipulating Context In Computer Management Applications

PATENT
REEL: 038498 FRAME: 0154

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82106516	Granted	2409602	12/16/2004	5/24/2006	427596.2	GB	Method And System For Communicating Between A Management Station And At Least Two Networks Having Duplicate Internet Protocol Addresses
82189793	Granted	1643680	8/31/2005	3/19/2008	5018947.1	GB	Method And System For Managing Network Nodes Which Communicate Via Connectivity Services Of A Service Provider
82195604	Granted	2420675	10/31/2005	6/24/2009	522161.9	GB	MPLS VPN Fault Management Using IGP Monitoring System
82062560	Granted	1197858	10/10/2000	2/6/2008	308910.9	GB	E-appliances
82062746	Granted	2368224	10/17/2000	8/25/2004	25454	GB	Content Provider Entity For Communication Session
82168943	Granted	2406244	9/3/2004	10/31/2007	419623.4	GB	Software Authentication For Mobile Communication Devices
82171193	Granted	2407734	10/19/2004	5/31/2006	423199.9	GB	Selective Message Discard
82186736	Granted	1706978	7/12/2004	9/10/2008	4766194.7	GB	Method And Apparatus For Load-balancing
82281449	Granted	1553723	1/5/2005	3/14/2007	5250014.7	GB	Method And System For Modelling A Communications Network
82862043	Granted	2018734	4/18/2007	10/19/2011	7755684.3	GB	Providing Different Network Services To A Network Agent
83004410	Granted	1202176	10/31/2000	4/25/2012	410131.7	GB	Message-based Software System
83013561	Granted	1885138	7/11/2006	6/6/2012	6300790	GB	Signalling Gateway
83277113	Granted	1929818	7/18/2006	6/5/2013	6787730.8	GB	Automated Application Server (AS) Permissions Provisioning
84191609	Application	2166703	9/21/2009		9170876.8	GB	Method And System For Managing A Hierarchical Information Base With An Application Layer Protocol
82065809	Granted	2391744	6/4/2003	10/12/2005	312764.4	GB	Method Of Satisfaying A Demand On A Network For A Network Resource
82189856	Granted	2431756	10/30/2006	40401	621590.9	GB	Method And Apparatus For Automatically Evaluating And Allocating Resources In A Cell Based System
82171565	Granted	2405563	8/13/2004	11/22/2006	418160.8	GB	A Security Intrusion Mitigation System And Method
82204529	Granted	2422225	1/13/2006	5/20/2009	600660.5	GB	Method For Controlling Resource Utilization And Computer System
81993884	Granted	2380838	7/30/2002	5/25/2005	217601.4	GB	System And Method For Graceful Shutdown Of Host Processor Cards In A Server System
82085033	Granted	2396955	11/5/2003	3/8/2006	325848	GB	Cable Systems And Related Methods
82087100	Granted	2393291	6/4/2003	9/27/2006	312858.4	GB	Method And System For Providing A Location Of A Data Interface
82088657	Granted	2394082	6/27/2003	10/5/2005	315103.2	GB	System And Method For The Frequency Management Of Computer Systems To Allow Capacity On Demand
82090403	Granted	2392269	6/27/2003	4/5/2006	315099.2	GB	Management Of Memory Subsystem
82063556	Granted	2375199	2/20/2002	2/2/2005	203939.4	GB	Method Of And Apparatus For Ascertaining The Status Of A Data Processing Environment
82097525	Granted	2398656	1/21/2004	6/14/2006	401194.6	GB	Improvements In And Relating To Computer Operating System Data Management

PATENT
REEL: 038498 FRAME: 0155

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82169192	Granted	2401281	4/29/2003	2/8/2006	309856.3	GB	Propagation Of Virus Through An Information Technology Network
82191983	Granted	2412754	3/30/2004	7/11/2007	407117.1	GB	Provision Of Resource Allocation Information
82219388	Granted	2430847	10/28/2005	5/5/2010	521935.7	GB	Device With N-time Pad And A Method Of Managing Such A Pad
82276454	Granted	2399906	2/26/2004	10/4/2006	404218	GB	Method And System For Delegating Authority And Access Control Methods Based On Delegated Authority
82277135	Granted	1355445	3/28/2003	10/17/2007	3251967	GB	Method And Apparatus For Encrypting/decrypting Data
82277204	Granted	2401763	7/4/2003	8/10/2005	417136.9	GB	Trusted Authority For Identifier-Based Cryptography
84223076	Application		6/11/2015		1510175.1	GB	MANAGEMENT OF CRYPTOGRAPHIC KEYS
83111666	Published		6/22/2010		1218061.8	GB	A SYSTEM FOR PROVIDING PHYSICALLY SEPARATED COMPUTE AND I/O RESOURCES IN THE DATACENTER
82077479	Granted	919048	6/17/1997	38224	97933142.8	GB	A System, Method And Article Of Manufacture For Multiple-Entry Point Virtual Point Of Sale Architecture
82256846	Granted	1836693	1/10/2006	39995	6717875.6	GB	RFID VEHICLE MANAGEMENT SYSTEM AND METHOD
82276889	Granted	2401209	4/30/2003	10/26/2005	309960.3	GB	A New Model For E-Business
84210670	Granted	1695468	11/19/2004	4/15/2015	4816965	GB	LASER-BASED COMMUNICATIONS WITH A REMOTE INFORMATION SOURCE
82253231	Granted	1381945	4/23/2002	6/13/2007	2726784.8	GB	Method and System for Reporting XML Data Based on Precomputed Context and a Document Object Model
82093088	Granted	2393001	7/22/2003	9/28/2005	317110.5	GB	Method And System For Supporting A Plurality Of Event Types
83037371	Granted	1358584	1/29/2002	7/27/2011	2703292.9	GB	AN ADAPTIVE DOCUMENT RANKING METHOD BASED ON USER BEHAVIOR
84022799	Granted	2374250	1/19/2009	10/29/2014	9838521.4	GB	Load Balancing
82093655	Granted	2397447	12/30/2003	12/28/2005	330184.3	GB	Hot Swap Power Delivery Circuit
82859770	Granted	2481752	4/27/2009	12/4/2013	1117696.3	GB	Electric Power Conversion System Having An Adaptable Transformer Turns Ratio For Improved Efficiency
82938233	Granted	2492432	4/22/2010	5/20/2015	1202601.9	GB	System And Method For Balancing Input Current With Parallel Power Supplies
83166376	Published		9/13/2010		1301057.4	GB	POWER RAIL REGULATOR SYSTEM
82175123	Granted	2413439	3/29/2005	10/31/2007	506331.8	GB	Liquid Loop With Multiple Heat Exchangers For Efficient Space Utilization
82182491	Granted	2421603	11/22/2005	39750	523752.4	GB	Apparatus And System For Monitoring Environmental Factors In A Computer System
82091282	Granted	2381630	6/7/2002	3/30/2005	304527.5	GB	Secure Machine Platform That Interfaces To Operating Systems And Customized Control Programs
82097831	Granted	1466234	11/21/2003	5/24/2006	3812445.9	GB	Cooling System With Evaporators Distributed In Series
83808776	Granted	2245516	12/21/2007	2/12/2014	7869793.5	GB	Moisture Content Control System
83862785	Published		11/11/2011		1406360.6	GB	MANAGING AIRFLOW PROVISIONING

PATENT
REEL: 038498 FRAME: 0156

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82392463	Granted	1428125	9/18/2002	11/3/2010	2775864.8	GB	Monitoring In Component-based Systems At Runtime (as Amended)
82071356	Granted	1329809	1/18/2002	39666	2354007.3	GB	Distributed Computing System And Method
82187294	Granted	2419262	7/29/2005	12/27/2007	515630.2	GB	Authentication System And Method
82242728	Granted	2458157	3/7/2008	4/25/2012	804259	GB	Virtual Machine Liveness Check
82085213	Granted	1460630	10/9/2003	12/13/2006	3022914	GB	High-density Media Storage System
82173494	Granted	1528469	10/18/2004	12/10/2008	4105131.9	GB	Tape Drive Permanent Emulation Of Cd--drive For Disaster Recovery
82185167	Granted	2413689	5/3/2005	1/31/2007	508968.5	GB	Magnetic Tape Data Transfer Apparatus For Use With Different Width Magnetic Tapes
82190411	Granted	1587106	3/17/2005	6/18/2008	5102120.2	GB	Use Of Write Pass Value To Enable Detection Of Tampering With WORM Data
83261203	Granted	913823	10/30/1998	5/22/2013	98308892.3	GB	Data encoding method and apparatus
81991754	Granted	2374042	1/31/2002	8/17/2005	202321.6	GB	Harvest Data From A Networked Appliance
82055123	Granted	2358264	8/31/2000	5/12/2004	21417.1	GB	Authoring Tool For Bayesian-Network Troubleshooters
82071047	Granted	1265144	6/8/2001	3/29/2006	1410070.5	GB	A Method Of Providing Access To Computer Configuration Information To An Interested Party, An Arrangement Apparatus For Providing Remote Support To A Computer User, And Apparatus For Obtaining Remote Support For A Computer User
82192784	Granted	2425377	4/10/2006	40408	607149.2	GB	External State Cache For Computer Processor
83159858	Published		9/15/2010		1302670.3	GB	COMPUTER SYSTEM WITH FABRIC MODULES
83618374	Published		5/25/2011		1315512.2	GB	BLADE COMPUTER SYSTEM
83787628	Granted	2460074	7/31/2009	12/31/2014	9847921.5	GB	PROVIDING FAULT-TOLERANT SPREAD SPECTRUM CLOCK SIGNALS IN A SYSTEM
82102322	Granted	1413893	10/17/2003	38623	3256580.6	GB	System And Method Of Measuring Low Impedances
83092490	Published		6/18/2010		1221862.4	GB	Systems And Methods For Determining Electrical Connectivity
81993626	Granted	2386268	11/1/2002	9/28/2005	225511.5	GB	Battery Charging And Discharging System Optimized For High Temperature Environments
82025405	Granted	907123	3/26/1998	5/26/2004	98105536.1	GB	System And Method For Reporting Available Capacity In A Data Storage System With Variable Consumption Characteristics
82126979	Granted	851362	12/31/1997	4/23/2003	97310692.5	GB	BUFFER RESERVATION METHOD FOR A BUS BRIDGE SYSTEM
82232807	Granted	2464074	5/27/2008	12/28/2011	1002400.8	GB	Systems And Methods For Improving Performance Of A Routable Fabric
82857872	Granted	GB2480986	4/28/2009	4/8/2015	1117526.2	GB	Network Interface
83538878	Granted	2255263	2/20/2008	7/31/2013	8730240.2	GB	Redriver With Two Reference Clocks And Method Of Operation Thereof

PATENT
REEL: 038498 FRAME: 0157

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82066862	Granted	815677	1/17/1997	3/16/2005	97900685.5	GB	Multicarrier Communication System And Method For Peak Power Control
82277066	Granted	2393531	9/24/2002	5/10/2006	222232.1	GB	Multimodal Interaction Across Multiple Devices
82037954	Granted	1014622	12/20/1999	8/3/2005	99310273	GB	Network Appliance Combining Asynchronous Notification With Interactive Network Transfer Protocol Server
82269518	Granted	1159815	3/15/2000	11/23/2005	914989.9	GB	METHOD AND SYSTEM FOR DISTRIBUTED NETWORK ADDRESS TRANSLATION WITH NETWORK SECURITY FEATURES
83242872	Granted	EP2077029	9/18/2007	41395	7842678	GB	IDENTIFYING A SUBNET ADDRESS RANGE FROM DNS INFORMATION
84084095	Published		4/26/2012		1419017.7	GB	MULTICAST ROUTER TOPOLOGY DISCOVERY
82251218	Granted	2472072	7/24/2009	10/16/2013	912846.3	GB	Deduplication Of Encoded Data
81956231	Granted	2048314	6/21/1995	8/23/1995	2048314	GB	Media Autochanger Such As An Optical Disk Autochanger
82006862	Granted	1439745	7/23/2003	5/9/2007	3016822.3	GB	Backplane System And Method For Its Use
82012853	Granted	757351	6/10/1996	8/16/2001	96109263.2	GB	Computer Frame Structure With Modular Housing
82028276	Granted	940805	3/2/1999	6/18/2008	99301567.6	GB	Servo Band Identification In Linear Tape Systems Having Timing-based Servo Formats
82049630	Granted	2350535	3/2/2000	11/5/2003	5100.3	GB	Firm Addressing For Devices On A Fibre Channel Arbitrated Loop
82063862	Granted	2375651	4/11/2002	10/12/2005	208326.9	GB	Data Authentication
82068485	Granted	945800	3/2/1998	7/16/2003	98301498.6	GB	Enhancing Reliability
84067467	Granted	2324440	8/7/2008	10/8/2014	8797322.8	GB	Providing Data Structures For Determining Whether Keys Of An Index Are Present In A Storage System
83873536	Granted	2249542	4/8/2010	4/2/2014	10159409.1	GB	Communicating Confidential Information Between An Application And A Database
84119243	Granted	1748621	7/5/2006	12/31/2014	6253519	GB	Computer System Polling
81957104	Granted	750254	6/11/1996	5/8/2002	96109347.3	GB	Method And Apparatus For Providing Topology Based Enterprise Management Services
81985139	Granted	2377121	4/9/2002	10/19/2005	208166.9	GB	Method And System For Identifying Event Source In Duplicate IP Networks
82098764	Granted	2397913	1/12/2004	9/14/2005	400589.8	GB	Collection Of Session-Related Information Using An Extendable Sampling Period
82177112	Granted	2410648	1/14/2005	9/13/2006	500808.1	GB	Managing A Network
82277315	Granted	2400771	3/24/2004	6/28/2006	406523.1	GB	Use Of Nodes To Monitor Or Manage Peer To Peer Networks
82089959	Granted	2400697	3/29/2004	12/7/2005	407050.4	GB	Method Of Creating A Unit Test Framework To Test A Resource Description Framework Based Object
82062737	Granted	2368227	10/17/2000	12/10/2003	25461.5	GB	Contact Center
82062866	Granted	1215656	11/30/2001	6/15/2005	1310044.1	GB	Idiom Handling In Voice Service Systems

PATENT
REEL: 038498 FRAME: 0158

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82133603	Granted	1188339	6/23/2000	11/24/2004	943160.2	GB	METHOD AND SYSTEM FOR PROVIDING TELECOMMUNICATION SERVICES ACROSS NETWORKS THAT USE DIFFERENT PROTOCOLS
82171685	Granted	2410395	1/12/2005	7/26/2006	500576.4	GB	Signal Gateway Aggregation
82197659	Granted	1643777	10/4/2004	6/17/2009	4300652.7	GB	Methods And Apparatus For Controlling Signalling Gateways
82215134	Granted	1892907	7/31/2006	4/22/2009	6300840.3	GB	Signalling Gateway
82654154	Granted	1941701	7/20/2006	6/22/2011	6787972.6	GB	Telephony And Web Services Coordination
84109797	Granted	1784962	7/26/2005	4/8/2015	5775235.4	GB	System, Method, And Computer Program Product For Content Delivery In A Push-to-talk Communication System
84118596	Granted	2277311	5/20/2009	2/25/2015	9751488.9	GB	Apparatus And Method For Recording Video Data
81971777	Granted	2373673	12/20/2001	7/28/2004	130569.7	GB	Apparatus And Method For Identifying A Requested Level Of Service For A Transaction
82204088	Granted	2431848	10/24/2006	6/8/2011	621178.3	GB	System, Device, Method And Utility To Convert Images Retrieved From A Device To A Format Supported By A Device Management Tool
82204520	Granted	2425864	4/11/2006	8/5/2009	607241.7	GB	System And Methods For Organizing And Storing Data
82093079	Granted	2398407	1/16/2004	11/16/2005	401001.3	GB	Radio Frequency Linked Computer Architecture
82100264	Granted	2406677	10/1/2004	6/6/2007	421879.8	GB	A Rack Equipment Management System And Method
82256276	Granted	1745661	4/21/2005	9/1/2010	5737577.6	GB	INTERNET MICRO CELL
83800549	Granted	2031822	12/12/2002	2/12/2014	8017098.8	GB	System And Method For Managing Wireless Vehicular Communications
82254284	Granted	1504376	5/7/2003	1/13/2010	3726681.4	GB	Data Archive Recovery
83189530	Granted	1457007	12/17/2002	2/13/2013	2790678.3	GB	System For Supply Chain Management Of Virtual Private Network Services
81978773	Granted	1244104	3/22/2002	5/16/2007	2252102.5	GB	Inventory Control Apparatus And Method For A Data Storage System
82743457	Granted	1236206	7/10/2000	9/13/2006	947182.2	GB	Electrically Addressable Volatile Non-volatile Molecular-based Switching Devices
83253503	Granted	2361438	10/29/2008	5/15/2013	8877855	GB	Electrically Actuated Device And Method Of Controlling The Formation Of Dopants Therein
84103242	Published		7/31/2012		1420560.3	GB	BANDWIDTH GUARANTEE AND WORK CONSERVATION
83087123	Granted	2047319	7/11/2007	11/7/2012	7796825.3	GB	Compact Systems For Generating Polarization-entangled Photons
84038207	Granted	2386150	1/9/2009	41899	9837743.5	GB	CONFIGURABLE POINT-TO-POINT OPTICAL COMMUNICATIONS SYSTEM BETWEEN SERVERS
82672116	Granted	1540502	8/11/2003	3/2/2011	3785167.2	GB	Multi-level packet screening with dynamically selected filtering criteria
82802870	Granted	1411703	10/11/2003	8/3/2011	3256431.2	GB	Propagation Of Viruses Through An Information Technology Network

PATENT
REEL: 038498 FRAME: 0159

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82233113	Granted	2464221	5/21/2008	9/28/2011	922042.7	GB	Dynamic Converter Control For Efficient Operation
82062992	Granted	2382699	10/18/2002	2/1/2006	224252.7	GB	Dynamic Generation Of A Networked Information Resource
83087146	Granted	2215539	11/27/2007	1/2/2013	7871581	GB	SYSTEM SYNTHESIS TO MEET AN EXERGY LOSS TARGET VALUE
84210538	Granted	EP1909178	6/6/2007	4/8/2015	7252277.4	GB	Transactional Shared Memory System And Method Of Control
82088648	Granted	2393540	7/25/2003	10/26/2005	317525.4	GB	System, Method And Apparatus For The Frequency Management Of Blades In A Bladed Architecture Based On Performance Requirements
82103699	Granted	2403610	6/30/2004	6/28/2006	414700.5	GB	Apparatus And Method For Real-tme Power Distribution Management
82191974	Granted	2422727	1/18/2006	8/19/2009	601024.3	GB	Reversible Fan Of Electronic Module
82194662	Granted	2431777	9/25/2006	4/6/2011	618893.2	GB	Impingement Cooling Of Components In An Electronic System
82938281	Granted	2485096	3/22/2010	3/12/2014	1202063.2	GB	MODULAR DATA CENTER
83629031	Granted	2506764	6/27/2011	9/23/2015	1318783.6	GB	COOLING A SECONDARY COMPONENT BY DIVERTING AIRFLOW USING AN AIR CHANNEL ASSOCIATED WITH A THERMAL DISSIPATION DEVICE THAT COOLS A PRIMARY COMPONENT
82066850	Granted	1001643	1/17/1996	2/9/2001	98100615.8	HK	OFDM FEC
82207307	Granted	1129471	8/1/2007	6/8/2012	9109040.2	HK	Cooling Fan Module
82579389	Granted	1129758	9/28/2009	4/5/2013	9108915.6	HK	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security
82948588	Published		10/2/2006		9104467.7	HK	RETRO-FITTING SYNTHETIC FULL COPIES OF DATA
82579545	Application		12/28/2007		101011708	HK	Storing Log Data Efficiently While Supporting Querying To Assist in Computer Network Security
82579353	Published		1/20/2009		9100576.3	HK	Merging Multi-Line Log Entries
82579370	Published		9/25/2009		9108891.4	HK	Tracking Changing State Data To Assist In Computer Network Security
82948595	Published		10/2/2006		9104468.6	HK	DYNAMIC BULK-TO-BRICK TRANSFORMATION OF DATA
82579301	Granted	1096794	5/4/2005	40389	7104042.3	HK	Pattern Discovery In A Network Security System
82077326	Granted	901672	4/24/1997	37937	97922458.1	IE	System, Method And Article Of Manufacture For Network Electronic Authorization Utilizing An Authorization Instrument
82579297	Granted	1749386	5/4/2005	4/14/2010	5746753.2	IE	Pattern Discovery In A Network Security System
82077371	Granted	907935	4/24/1997	8/24/2005	97922456.5	IE	A System And Method For Secure Network Electronic Payment And Credit Collection

PATENT
REEL: 038498 FRAME: 0160

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0161

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82077482	Granted	919048	6/17/1997	8/25/2004	97933142.8	IE	A System, Method And Article Of Manufacture For Multiple-Entry Point Virtual Point Of Sale Architecture
83185308	Granted	1715488	12/17/1998	2/11/2009	6011296.8	IE	Tape Leader Pin Assembly And Method For Making The Same
82251947	Granted	140906	7/15/1999	4/16/2006	140906	IL	System and Method for Selectively Defining Access to Application Features
82579354	Granted	194190	4/3/2007	7/31/2012	194190	IL	Merging Multi-Line Log Entries
82948281	Granted	125188	12/31/1996	10/1/2002	125188	IL	EVALUATION OF CONTENT OF A DATA SET USING MULTIPLE AND/OR COMPLEX QUERIES
82579302	Granted	178861	5/4/2005	12/28/2011	178861	IL	Pattern Discovery In A Network Security System
82267781	Granted	127055	11/16/1998	12/30/2004	127055	IL	A Method And Device For Generating A Frame Check Sequence
82116887	Granted	130239	12/8/1997	2/24/2004	130239	IL	PUBLIC KEY CRYPTOGRAPHIC APPARATUS AND METHOD
82095314	Granted	252619	10/15/2004	5/24/2012	1215/CHENP/2006	IN	TELECOMMUNICATION SERVICE PLATFORM AND METHOD THEREOF
82097066	Granted	263181	6/13/2005	10/13/2014	4556/CHENP/2006	IN	Method And System For Establishing Communications
82098419	Application		8/28/2007		637/CHENP/2009	IN	Computer System Indicator Panel With Exposed Indicator Edge
82174151	Granted	255977	4/28/2005	4/11/2013	4026/CHENP/2006	IN	QUANTUM OPTICAL STATE CONVERTER
82178216	Application		4/1/2005		265/KOL/2005	IN	Key-configured Topology With Connection Management
82185476	Application		1/28/2005		45/KOL/05	IN	Providing A Flexible Protection Model In A Computer System By Decoupling Protection From Computer Privilege Level
82186199	Granted	258179	5/13/2005	41621	4080/CHENP/2006	IN	METHOD AND APPARATUS FOR COMMUNICATING INFORMATION BETWEEN AN INTERMEDIATE ELEMENT AND A SOURCE ELEMENT IN A MESSAGE-BASED COMMUNICATIONS SYSTEM
82188083	Granted	265281	7/4/2005	42052	858/CHE/2005	IN	Time Of Day Response
82188650	Granted	258709	4/28/2005	1/31/2014	4028/CHENP/2006	IN	Non-demolition Photon Detector That Preserves Input State Characteristics
82189262	Granted	262409	7/4/2005	8/20/2014	857/CHE/2005	IN	METHOD FOR LATENT ERROR DETECTION
82189817	Application		1/18/2006		84/CHE/2006	IN	Method And Apparatus For Direct Reception Of Inbound Data
82189835	Application		9/28/2005		1379/CHE/2005	IN	Systems And Methods For Presenting Managed Data
82192376	Application		3/24/2005		223/KOL/05	IN	Method And System Of Determining Whether A User Program Has Made A System Level Call
82196324	Application		11/29/2005		3204/DEL/2005	IN	Diagnostic Memory Dumping
82197398	Application		11/10/2005		3003/DEL/2005	IN	Distributed Lock
82199768	Application		7/3/2006		1151/CHE/2006	IN	Heterogeneous Parallel Processing Based On Processor Performance

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82203428	Application		4/25/2006		775/CHE/2006	IN	Speedy Boot For Computer Systems
82205189	Application		1/30/2006		3638/CHENP/2008	IN	Forms Management System
82205573	Application		3/17/2006		4242/CHENP/2007	IN	Message Exchange Between Software Components
82206005	Application		2/13/2006		231/CHE/2006	IN	Distributed-state-information-based Distributed Computing Systems And Methods And Protocols For Managing Distributed State Information
82206314	Application		3/9/2006		3901/CHENP/2007	IN	Embedded Web-based Management Method
82206566	Application		4/20/2006		721/CHE/2006	IN	File Access Management System
82207136	Application		5/24/2006		908/CHE/2006	IN	File Cache Management System
82212302	Application		10/20/2005		1515/CHE/2005	IN	A Method And System For Establishing An Extranet And A Method For Selectively Controlling Traffic Flow Relative To A Firewall
82228421	Published		10/30/2007		2470/CHE/2007	IN	A Method And System For Clustering
82228730	Application		1/23/2008		3882/CHENP/2009	IN	METHODS FOR PROVIDING SECURE Ecommerce TRANSACTIONS
82230782	Application		4/17/2007		814/CHE/2007	IN	Managing Of Items Distributed In A Global Supply Chain
82233152	Application		2/20/2008		5058/CHENP/2010	IN	Redriver With Two Reference Clocks And Method Of Operation Thereof
82235219	Application		6/27/2007		1380/CHE/2007	IN	Access Control System And Method
82235768	Application		2/4/2008		298/CHE/2008	IN	RFID System With A Mobile RFID Reader
82238168	Application		4/28/2008		6450/CHENP/2010	IN	Adjustable Server-transmission Rates Over Fixed-speed Backplane Connections Within A Multi-server Enclosure
82238276	Application		2/25/2008		466/CHE/2008	IN	Data Processing System And Method
82239098	Published		4/2/2008		5825/CHENP/2010	IN	Disk Drive Data Encryption
82241084	Application		3/6/2008		570/CHE/2008	IN	Port Enablement
82241465	Application		4/2/2008		5943/CHENP/2010	IN	Converting Resets In Shared I/O System
82241600	Application		4/28/2008		6822/CHENP/2010	IN	Virtual-interrupt-mode Interface And Method For Virtualizing An Interrupt Mode
82242575	Published		3/11/2008		6412/DELNP/2010	IN	Optoelectronic Switches Using On-chip Optical Waveguides
82244591	Application		5/5/2008		1107/CHE/2008	IN	Pre-pay Communication Services
82250078	Application		6/30/2009		1540/CHE/2009	IN	Managing I/O Request In Storage System
82250651	Published		7/13/2009		1654/CHE/2009	IN	Method And System For Verifying Data Accuracy
82254149	Granted	241567	6/12/2003	40372	2536/CHENP/2004	IN	Multi-tiered Enterprise Management System And Method Including A Presentation Services Unit External To The Enterprise
82254248	Granted	239566	9/9/2004	40261	410/MUMNP/2006	IN	Extensible Agent System And Method
82254275	Granted	246786	5/7/2003	3/16/2011	2190/CHENP/2004	IN	System and Method for Data Archive Recovery
82256198	Granted	266818	6/15/2005	6/3/2015	00238/MUMNP/2007	IN	Virtual User Interface For Multiple User Devices

PATENT
REEL: 038498 FRAME: 0162

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82256267	Granted	256932	4/21/2005	8/14/2013	1393/MUMNP/2006	IN	SYSTEM AND METHOD FOR FACILITATING COMMUNICATIONS BETWEEN DEVICES IN A COMMUNICATIONS NETWORK
82256321	Application		9/6/2006		00100/MUMNP/2008	IN	SYSTEMS AND METHODS FOR THE PROVISION OF DATA PROCESSING SERVICES TO MULTIPLE ENTITIES
82256885	Application		5/11/2006		2165/MUMNP/2007	IN	AUTOMATED REPORTING OF COMPUTER SYSTEM METRICS
82257755	Application		7/21/2009		6084/CHENP/2010	IN	System And Method For Electronic Data Security
82260689	Published		3/3/2010		555/CHE/2010	IN	Method For Determining Network Topology
82262432	Published		4/30/2010		1210/CHE/2010	IN	MANAGING EXCLUSIVE ACCESS TO SYSTEM RESOURCES
82262441	Published		6/23/2010		1773/CHE/2010	IN	Testing Compatibility Of A Computer Application
82274807	Application		12/18/2006		2701/DEL/2006	IN	Bi-planar Network Architecture
82274855	Application		11/28/2007		2477/DEL/2007	IN	Network Traffic Redirection in Bi-Planar Networks
82400884	Application		6/19/2008		8318/CHENP/2010	IN	Multi-blade Interconnector
82405524	Application		5/28/2008		7840/CHENP/2010	IN	Impedance Correction
82554399	Application		6/20/2008		7590/CHENP/2010	IN	LOW LEVEL INITIALIZER
82554428	Application		6/20/2008		7591/CHENP/2010	IN	DOMAIN MANAGEMENT PROCESSOR
82559518	Application		6/1/2008		8093/CHENP/2010	IN	Queue Sharing And Reconfiguration In PCI Express Links
82576592	Application		7/1/2008		7997/CHENP/2010	IN	Remote Computing Services
82578994	Application		6/13/2008		8059/CHENP/2010	IN	Hierarchical Policy Management
82580857	Published		12/30/2008		10776/DELNP/2008	IN	STANDARD OPERATING PROCEDURE AUTOMATION IN DATABASE ADMINISTRATION
82585365	Application		8/4/2009		81/CHENP/2011	IN	APPARATUS, AND ASSOCIATED METHOD, FOR TRACKING AIRCRAFT STATUS
82651134	Application		9/23/2009		1050/CHENP/2011	IN	MEMORY MODULE INCLUDING VOLTAGE SENSE MONITORING INTERFACE
82656088	Application		10/28/2008		2596/CHENP/2011	IN	WORKFORCE PLANNING
82656100	Application		10/30/2008		2628/CHENP/2011	IN	Supply And Demand Consolidation In Employee Resource Planning
82665389	Application		3/8/2011		1694/DELNP/2011	IN	Telecommunication Systems
82716521	Application		10/30/2008		2645/CHENP/2011	IN	Redundant Array Of Independent Disks (RAID) Write Cache Sub-assembly
82743442	Application		5/17/2011		1676/CHE/2011	IN	DETERMINING POWER SOURCING EQUIPMENT WITH EXCESS POWER CAPACITY
82744690	Application		1/12/2009		4375/CHENP/2011	IN	Reducing Propagation Of Message Floods In Computer Networks
82766418	Application		1/19/2009		4292/CHENP/2011	IN	Load Balancing
82780880	Application		6/29/2011		2206/CHE/2011	IN	PROVIDE SERVICES USING UNIFIED COMMUNICATION CONTENT
82805179	Application		1/26/2010		5378/CHENP/2011	IN	Communications System And Method

PATENT
REEL: 038498 FRAME: 0163

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82813909	Application		1/29/2009		5728/CHENP/2011	IN	CONNECTING PORTS OF ONE OR MORE ELECTRONIC DEVICES TO DIFFERENT SUBSETS OF NETWORKS BASED ON DIFFERENT OPERATING MODES
82817465	Application		3/13/2009		5806/CHENP/2011	IN	A PLURALITY OF SENSORS COUPLED TO A SERIES OF SWITCHING DEVICES
82817499	Application		2/24/2009		5808/CHENP/2011	IN	Method And System To Lower Power Consumption
82840836	Application		3/13/2009		7158/DELNP/2011	IN	Determining Status Assignments That Optimize Entity Utilization And Resiurce Power Consumption
82879821	Application		10/26/2009		9070/CHENP/2011	IN	METHOD AND APPARATUS FOR INCREASING THE SPEED OF SUCCESSFUL ENTANGLEMENT CREATION AND QUANTUM REPEATER USING THE SAME
82882084	Application		10/28/2011		3708/CHE/2011	IN	SYSTEMS AND METHODS FOR CALL FORWARDING TO A DEVICE BASED ON A PRIORITY LEVEL AND GEOGRAPHIC PROXIMITY
82948576	Published		8/7/2006		1703/DELNP/2008	IN	ENTERPRISE SERVER VERSION MIGRATION THROUGH IDENTITY PRESERVATION
82948594	Published		10/2/2006		948/DELNP/2009	IN	DYNAMIC BULK-TO-BRICK TRANSFORMATION OF DATA
82987735	Application		4/2/2012		1313/CHE/2012	IN	MANAGING VIRTUAL MACHINES IN A CLOUD COMPUTING SYSTEM
82992893	Application		4/12/2012		1485/CHE/2012	IN	Automatic Detection Of An End Node Behind A Phone On A Computer Network
83068499	Application		7/30/2012		3116/CHE/2012	IN	Source Discovery For Non-Flooding Multicast Using Openflow
83080896	Application		7/31/2012		3142/CHE/2012	IN	SYSTEM AND METHOD FOR REAL-TIME DETECTION, IDENTIFICATION AND REPORTING OF MAC-SYNC FAILURES IN DISTRIBUTED TRUNKING
83098374	Application		12/11/2012		5166/CHE/2012	IN	Identifying A Label-Switched Path (LSP) Associated With A Multi Protocol Label Switching (MPLS) Service And Diagnosing A LSP Related Fault
83099287	Application		1/16/2013		221/CHE/2013	IN	Securing Confidential Information In A Document
83116812	Application		9/27/2012		4026/CHE/2012	IN	Dynamic Management Of A Cloud Computing Infrastructure
83116829	Application		9/28/2012		4038/CHE/2012	IN	QR CODE UTILIZATION IN SELF-REGISTRATION IN A NETWORK
83139039	Application		3/28/2013		1394/CHE/2013	IN	Network Switch Configuration
83165232	Application		7/22/2010		326/CHENP/2013	IN	Context-based Item Bookmarking
83209025	Application		3/15/2013		770/DEL/2013	IN	DATA LOOP DETECTION
83209040	Application		3/15/2013		772/DEL/2013	IN	CERTIFICATE GRANT LIST AT NETWORK DEVICE
83417895	Application		1/24/2011		6186/DELNP/2013	IN	A SYSTEM AND METHOD FOR ACCESSING A SERVICE
83777448	Application		12/21/2013		5971/CHE/2013	IN	NETWORK PROGRAMMING

PATENT
REEL: 038498 FRAME: 0164

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0165

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83862623	Application		3/20/2014		1499/CHE/2014	IN	NETWORK OPERATION RULE
83942838	Application		4/29/2014		2175/CHE/2014	IN	SECURING DATA IN A FILE SYSTEM
83942889	Application		4/29/2014		2173/CHE/2014	IN	MAINTAINING FILES IN A RETAINED FILE SYSTEM
83955951	Application		5/22/2014		2541/CHE/2014	IN	Eliminating File Duplication In A File System
83955956	Application		9/1/2014		4259/CHE/2014	IN	DYNAMICALLY APPLYING A PATCH TO A SHARED LIBRARY
83956059	Application		6/18/2014		2973/CHE/2014	IN	PREVENTING FLOW TABLE MISSES IN A SOFTWARE DEFINED NETWORK
83957616	Application		7/30/2014		3722/CHE/2014	IN	FILE DIRECTORY STORAGE ON A STORAGE DEVICE
83958175	Application		9/26/2014		4752/CHE/2014	IN	DETERMINING TEST APPLICATION EFFECTIVENESS
83958358	Application		6/2/2014		2704/CHE/2014	IN	Journal Events In A File System And A Database
83958773	Application		7/30/2014		3723/CHE/2014	IN	DISTRIBUTED SEGMENTED FILE SYSTEMS
83958831	Application		7/31/2014		3765/CHE/2014	IN	FILE CREATION
83961764	Application		6/10/2014		2835/CHE/2014	IN	SERVICE LEVEL BASED CATEGORIZATION OF VIRTUAL MACHINES
83975681	Application		6/26/2014		3126/CHE/2014	IN	BACKUP AND NON-STAGED RECOVERY OF VIRTUAL ENVIRONMENTS
83975708	Application		6/26/2014		3125/CHE/2014	IN	VIRTUAL MACHINE DATA PROTECTION
83991660	Application		4/30/2012		5391/CHENP/2014	IN	AUTOMATED EVENT MANAGEMENT
84033185	Application		12/12/2014		6287/CHE/2014	IN	CLOUD SERVICE TUNING
84033423	Application		11/1/2014		5484/CHE/2014	IN	MANAGING A STORAGE POOL
84034616	Application		10/29/2014		5401/CHE/2014	IN	DATA RESTORATION USING ALLOCATION MAPS
84034620	Application		11/4/2014		5529/CHE/2014	IN	Storing excess data in a RAID 60 array
84034628	Application		1/20/2015		294/CHE/2015	IN	Database Management
84034637	Application		11/26/2014		5932/CHE/2014	IN	Secure File Deletion
84034659	Application		11/26/2014		5934/CHE/2014	IN	BACKUP OPERATIONS
84054897	Application		11/1/2014		5486/CHE/2014	IN	EXTENDED ATTRIBUTE STORAGE
84054954	Application		11/1/2014		5483/CHE/2014	IN	DYNAMICALLY UPDATING METADATA
84054960	Application		11/4/2014		5519/CHE/2014	IN	GENERATING A UNIQUE IDENTIFIER FOR AN OBJECT IN A DISTRIBUTED FILE SYSTEM
84055249	Application		11/1/2014		5482/CHE/2014	IN	FILE SYSTEM CONFIGURATION DATA STORAGE
84055289	Application		11/3/2014		5500/CHE/2014	IN	DETECTING INCONSISTENCIES IN HIERARCHICAL ORGANIZATION DIRECTORIES
84077708	Application		6/8/2012		7500/CHENP/2014	IN	CHECKPOINTING USING FPGA
84104747	Application		8/17/2012		8248/CHENP/2014	IN	CONNECTION INCLUDING FLANGE IN COOPERATION WITH RESILIENT MEMBER TO ENGAGE AND DISENGAGE REMOVABLE PRINTED CIRCUIT ASSEMBLY
84111577	Application		1/30/2015		460/CHE/2015	IN	JOB SCHEDULING IN AN INFINIBAND NETWORK BASED HPC CLUSTER
84112816	Application		1/30/2015		465/CHE/2015	IN	BYTE ADDRESSABLE NON-VOLATILE RANDOM ACCESS MEMORY FOR STORING LOG RECORD

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84113775	Application		4/10/2015		1897/CHE/2015	IN	INTEROPERABILITY-AS-A-SERVICE IN A CLOUD ENVIRONMENT
84113993	Application		1/30/2015		477/CHE/2015	IN	FAILURE ATOMIC UPDATE OF APPLICATION DATA FILES
84114132	Application		2/13/2015		719/CHE/2015	IN	CONSISTENCY CHECK ON NAMESPACE OF AN ONLINE FILE SYSTEM
84114147	Application		2/26/2015		930/CHE/2015	IN	File Level Snapshots In A File System
84114159	Application		1/29/2015		423/CHE/2015	IN	CHARGING A USER'S STORAGE QUOTA FOR EXTENDED ATTRIBUTES
84114533	Application		3/9/2015		1150/CHE/2015	IN	A-GPS WLAN
84114828	Application		1/29/2015		430/CHE/2015	IN	FILE SERVICE OPERATION ON EXTERNAL HOST
84116042	Application		3/30/2015		1662/CHE/2015	IN	Scalabale Cloud Storage Solution
84118211	Application		1/28/2015		401/CHE/2015	IN	BLOCK CIPHER
84137069	Application		1/30/2015		482/CHE/2015	IN	MULTI-CHASSIS LINK AGGREGATION (LAG) SWITCHES
84138231	Application		3/13/2015		1254/CHE/2015	IN	Restoring a flow path in response to a link failure in a software defined network (SDN)
84141251	Application		7/31/2012		306/CHENP/2015	IN	NETWORK TRAFFIC PROCESSING SYSTEM
84148405	Application		1/29/2015		427/CHE/2015	IN	TAP TECHNOLOGY SELECTION
84148410	Application		1/29/2015		428/CHE/2015	IN	PACKET HEADERS WITH DEVICE-EXTRINSIC INFORMATION
84151047	Application		1/31/2015		491/CHE/2015	IN	DEACTIVATING A NETWORK LINK AT A HOME LOCATION REGISTER (HLR) BASED ON A RESOURCE
84156691	Application		1/30/2015		487/CHE/2015	IN	VIRTUAL MACHINE DATA PROTECTION
84170183	Application		4/29/2015		2200/CHE/2015	IN	MERGING INCOMING DATA IN A DATABASE
84170289	Application		5/8/2015		2358/CHE/2015	IN	HETEROGENEOUS HOT SPARE SERVER POOL
84170417	Application		7/29/2015		3899/CHE/2015	IN	FILE SYSTEM METADATA REPRESENTATIONS
84171347	Application		4/29/2015		2201/CHE/2015	IN	Failure of Network Devices in Cloud Managed Networks
84171405	Application		4/29/2015		2189/CHE/2015	IN	NETWORK BASED SERVICE DISCOVERY VIA UNICAST MESSAGES
84171548	Application		4/30/2015		2242/CHE/2015	IN	Reducing flooding of route updates of a dynamic routing protocol
84172553	Application		5/29/2015		2706/CHE/2015	IN	Generating Test Data Based on Histogram Statistics
84172736	Application		4/23/2015		2094/CHE/2015	IN	Storage Reclamation in a Thin Provisioned Storage Device
84173603	Application		6/9/2015		2885/CHE/2015	IN	DATA REPLICATION MANAGEMENT
84182208	Application		9/28/2012		1353/CHENP/2015	IN	Application Security Testing
84195031	Application		3/13/2015		1250/CHE/2015	IN	FILE MANAGEMENT
84202617	Application		3/26/2015		1571/CHE/2015	IN	DELAY OF ROUTE UPDATE COMMUNICATION
84203046	Application		4/15/2015		1947/CHE/2015	IN	DATABASE QUERY CLASSIFICATION
84217877	Application		4/8/2015		1853/CHE/2015	IN	BIG DATA TRANSFER
84229486	Application		5/2/2015		2256/CHE/2015	IN	Storage Memory Direct Access
84260046	Application		7/6/2015		3446/CHE/2015	IN	DATA MANAGEMENT USING INDEX CHANGE EVENTS
84262579	To Be Filed					IN	DATA BLOCK SNAPSHOTS

PATENT
REEL: 038498 FRAME: 0166

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84262599	Application		6/12/2015		2966/CHE/2015	IN	Data Replication
84262631	Application		41304		3888/CHENP/2015	IN	CONTROLLING ERROR PROPAGATION DUE TO FAULT IN COMPUTING NODE OF A DISTRIBUTED COMPUTING SYSTEM
84262651	Application		8/21/2015		4403/CHE/2015	IN	REBUILDING STORAGE VOLUMES
84262694	To Be Filed					IN	Method to recover Filesystem Archive Journal Audit Records
84262880	Application		6/24/2015		3171/CHE/2015	IN	CONTROLLING APPLICATION DEPLOYMENT BASED ON LIFECYCLE STAGE
84262954	Application		42237		4382/CHE/2015	IN	ADDRESS RESOLUTION FOR ROUTING
84263074	Application		7/15/2015		3633/CHE/2015	IN	BACKUP DATA STORAGE
84263078	Application		7/13/2015		3570/CHE/2015	IN	BACKUP-CLIENT INTERFACE DEVICE
84263590	Acknowledged					IN	Rapid Resilience Pro - Sense and respond to supply chain events in real-time
84264031	Application		8/5/2015		4063/CHE/2015	IN	SWITCHING FREQUENCY BAND OF RADIO OF ACCESS POINT
84264074	Application		42214		3898/CHE/2015	IN	Facilitating and Simplifying System Call Concurrency and Cache Coherency Tests in Distributed Systems.
84264091	Application		9/11/2015		4843/CHE/2015	IN	Reducing Adjacency Losses In A Network
84264119	Application		6/30/2015		3342/CHE/2015	IN	OPEN SHORTEST PATH FIRST ROUTING FOR HETEROGENEOUS NETWORKS
84265141	Application		5/29/2015		2714/CHE/2015	IN	APPLICATION DEPLOYMENT TO VIRTUAL MACHINES
84273858	Application		7/3/2015		3423/CHE/2015	IN	PROCESSING IO REQUESTS IN MULTI-CONTROLLER STORAGE SYSTEMS
84291301	Application		1/15/2013		3889/CHENP/2015	IN	Dynamic Firmware Updating
84292921	Application		1/31/2013		3914/CHENP/2015	IN	LIQUID COOLING
84304342	Application		7/8/2015		3486/CHE/2015	IN	LOCATION OF OBJECT WITHIN NETWORK OF OBJECTS
84312961	Application		1/18/2013		6275/DELNP/2015	IN	TASK ASSIGNMENT IN CROWDSOURCING
90017216	Application		7/24/2015		3819/CHE/2015	IN	TOPICAL VIDEO NAVIGATION
90035150	Acknowledged					IN	Framework to Automate Shrink Wrapping of a Cloud Instance
90035261	Acknowledged					IN	Dynamic Event Correlation For NFV
90035968	To Be Filed					IN	Method for SSD Cache management
90037302	To Be Filed					IN	An apparatus for out of order asynchronous replication across distributed file systems using Unique File System Object Identifiers
90037835	To Be Filed					IN	Method and system to intelligently retrieve data on endpoint devices
90037903	To Be Filed					IN	Enhanced unidirectional link detection with hardware assistance and capability discovery

PATENT
REEL: 038498 FRAME: 0167

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90037917	To Be Filed					IN	Method for making established TLS connections on network devices seamless in High Availability Public Key Infrastructure environments using certificate revocation lists
90038000	To Be Filed					IN	Non stop Power Over Ethernet during software upgrades
90038009	To Be Filed					IN	Method for creating Application based thin Snapshots for orchestrating Big Data management
90039581	Application		42265		5013/CHE/2015	IN	FORWARD MODIFIED VERSION OF DUPLICATE ADDRESS SOLICITATION PACKET
90039630	To Be Filed					IN	Network Intrusion Prevention of Rogue APs by corrupting Forwarding Tables
90040546	Acknowledged					IN	A solution to prevent the security vulnerability on release automation tool component or application deployment designs using application security solution tool before the designs are used to deploy application on hybrid cloud environment
90048589	Application		42257		4820/CHE/2015	IN	GUEST ACCESS PROVISIONING
90054380	Application		9/24/2015		5110/CHE/2015	IN	HIERARCHICAL INDEX INVOLVING PRIORITIZATION OF DATA CONTENT OF INTEREST
90056374	Application		41367		5695/CHENP/2015	IN	MICROCONTROLLER AT A CARTRIDGE OF A CHASSIS
90066010	Acknowledged					IN	A Homegrown Virtual Machine IO Accelerator for Near-Bare Metal Performance in Unified File Service
90037015	To Be Filed					IN	WRITE I/O profiling during data Migration
83957719	Application		7/18/2014		3536/CHE/2014	IN	CONFLICT DETECTION IN A HYBRID NETWORK DEVICE
84211149	Application		4/3/2015		1781/CHE/2015	IN	ADDRESS CACHE FOR TUNNEL ENDPOINT ASSOCIATED WITH AN OVERLAY NETWORK
82207295	Application		8/1/2007		522/CHENP/2009	IN	Cooling Fan Module
82240628	Application		39576		7942/CHENP/2010	IN	A Method For Interfacing A Fibre Channel Network With An Ethernet Based Network
82212974	Application		38789		445/CHE/2006	IN	Migrating Data In A Storage System
82227524	Application		8/27/2007		1917/CHE/2007	IN	Prioritising Data Processing Operations
82244501	Application		10/23/2008		2595/CHE/2008	IN	Input/output Workload Analysis Method And System For A Storage Area Network
82249181	Application		12/22/2008		3239/CHE/2008	IN	Data Storage Network Management Method, Computer Program And Server
84173622	Application		5/25/2015		2612/CHE/2015	IN	STORAGE MANAGEMENT
84273911	Application		7/24/2015		3822/CHE/2015	IN	CACHING MECHANISM
82241444	Application		2/18/2008		4957/CHENP/2010	IN	Systems And Methods Of Communicatively Coupling A Host Computing Device And A Peripheral Device
82716611	Application		10/30/2008		2503/CHENP/2011	IN	BIT Inversion For Communication Interface

PATENT
REEL: 038498 FRAME: 0168

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82274783	Application		12/7/2005		3295/DEL/2005	IN	Self-Configurable Telephony Architecture
82607457	Application		6/17/2011		2053/CHE/2011	IN	DRAWING POWER OVER NETWORK CABLE
83942797	Application		4/30/2014		2196/CHE/2014	IN	DATA PLANE TO FORWARD TRAFFIC BASED ON COMMUNICATIONS FROM A SOFTWARE DEFINED NETWORKING (SDN) CONTROLLER DURING CONTROL PLANE FAILURE
84261634	Application		8/8/2015		4141/CHE/2015	IN	Data Restoration
90001592	Application		7/31/2015		3949/CHE/2015	IN	SNAPSHOT STORAGE MANAGEMENT
82253555	Application		12/6/2002		01804/DELNP/2004	IN	Network User Authentication System And Method
82850379	Application		4/28/2010		6864/CHENP/2011	IN	IMPROVEMENTS IN OR RELATING TO DATA CENTERS
90031456	Application		8/21/2015		4385/CHE/2015	IN	VIRTUAL MACHINE STORAGE MANAGEMENT
82116767	Granted	198971	12/11/1997	38820	2354/CAL/1997	IN	A SYSTEM AND METHOD FOR OPTIMIZING DATABASE QUERIES WITH IMPROVED PERFORMANCE ENHANCEMENTS
82251059	Application		4/29/2009		986/CHE/2009	IN	Method And System For Determining Network Topology Of A Virtual Private Network In Multi Protocol Label Switching (MPLS) Based Virtual Private Networks (vpns)
82915394	Application		1/12/2012		139/CHE/2012	IN	Managing Data Paths Between Computer Applications And Data Storage Devices
90039700	Application		9/11/2015		4839/CHE/2015	IN	DATA CENTER CAPACITY MANAGEMENT
90040238	To Be Filed					IN	Optimized Data Modeling Technique for Dimension Change Management in a Data Warehouse
82997200	Application		4/25/2012		1622/CHE/2012	IN	SYMBOL-BASED MERGING OF COMPUTER PROGRAMS
83012334	Application		9/27/2012		4015/CHE/2012	IN	Managing Compliance Across Information Technology Components
90041340	Acknowledged					IN	Deployment of application by automatically identifying and integrating the platform dependencies at runtime using simple definitions
82217717	Application		4/18/2007		5830/CHENP/2008	IN	Providing Different Network Services To A Network Agent
82235828	Application		39766		2798/CHE/2008	IN	Communication Methods And Systems
83700267	Application		7/25/2011		284/DELNP/2014	IN	Transferring a Conference Session Between Conference Servers Due to Failure
83991301	Application		4/20/2012		6037/DELNP/2014	IN	Unified User Profiles
84263114	Application		42171		3016/CHE/2015	IN	Virtualized Network Function Monitoring
82228145	Application		7/26/2007		1616/CHE/2007	IN	An Efficient Stacked File System And Method
82237949	Application		9/11/2008		2199/CHE/2008	IN	Dynamic Allocation Of Virtual Machine Devices
83205120	Application		5/30/2013		2381/CHE/2013	IN	Preserving Object Code Translations Of A Library For Future Reuse By An Emulator
84114312	Application		12/30/2014		6750/CHE/2014	IN	CLUSTER ARBITRATION
84172563	Application		5/28/2015		2690/CHE/2015	IN	Improving Performance of Virtual Machines

PATENT
REEL: 038498 FRAME: 0169

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83957610	Application		7/22/2014		3589/CHE/2014	IN	ENSURING DATA INTEGRITY OF A RETAINED FILE UPON REPLICATION
83958815	Application		7/31/2014		3764/CHE/2014	IN	POLICY-BASED DATA PROTECTION
90037310	To Be Filed					IN	PIP-OBJ: Relevance Optimized Approximate Storage System with Data Thumbnails and Representative Objects
82675343	Application		11/13/2009		2293/CHENP/2011	IN	Data Centre And Apparatus And Method For Data Centre Cooling
82676471	Application		10/21/2009		1755/CHENP/2011	IN	DATA CENTER AND DATA CENTER DESIGN
84030591	Application		12/3/2014		6093/CHE/2014	IN	UPDATING A VIRTUAL NETWORK TOPOLOGY BASED MONITORED APPLICATION DATA
82191374	Granted	267338	11/8/2005	42200	1618/CHE/2005	IN	Persistent Memory Manipulation Using EFI
82256861	Application		38743		01271/MUMNP/2007	IN	System, Method, And Computer Program Product For Byte-based Utility Computing Pricing
82223402	Application		7/11/2007		207/CHENP/2009	IN	Defect-and-failure-tolerant Demultiplexer Using Series Replication And Error-control Encoding
83134887	Application		6/16/2010		9748/CHENP/2012	IN	Computer Racks
83957644	Application		11/10/2014		5654/CHE/2014	IN	Online File System Check
83964345	Application		7/29/2014		3695/CHE/2014	IN	VIRTUAL FILE SERVER
84034624	Application		12/23/2014		6514/CHE/2014	IN	Data Deduplication
84034644	Application		1/19/2015		287/CHE/2015	IN	Access control to a portion of a file system object
84055285	Application		11/3/2014		5491/CHE/2014	IN	POLICY AND CONFIGURATION DATA FOR A USER DIRECTORY
90037298	To Be Filed					IN	SHIFT-SCAN: A Methodology to Improve the Free Space Scan and Allocation Performance on File Systems Employing Storage Bitmaps
82240253	Application		5/7/2008		1120/CHE/2008	IN	System And Method For Concurrency Control Of Logically Grouped Shared Objects In A Multi-user Environment
82653588	Application		9/22/2009		1140/CHENP/2011	IN	DIFFERENTIAL ON-LINE TERMINATION
84106251	Application		5/24/2012		8257/CHENP/2014	IN	Fiber Connector Assembly
84106354	Application		6/27/2012		8265/CHENP/2014	IN	BATTERY TO PROVIDE VOLTAGE TO POWER MODULES
90051553	Application		41362		5502/CHENP/2015	IN	SHARING FIRMWARE AMONG AGENTS IN A COMPUTING NODE
82559528	Application		6/10/2008		8114/CHENP/2010	IN	Presenting Multi-function Devices Behind A Switch Hierarchy As A Single Function Device
82207724	Application		3/21/2006		504/CHE/2006	IN	Virtually Unlimited Storage
82408611	Application		5/28/2008		7659/CHENP/2010	IN	Providing Object-level Input/output Requests Between Virtual Machines To Access A Storage Subsystem

PATENT
REEL: 038498 FRAME: 0170

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84261104	Application		7/18/2015		3697/CHE/2015	IN	DATA VOLUME MIGRATION IN DISTRIBUTED STORAGE SYSTEMS
84262667	Application		6/23/2015		3150/CHE/2015	IN	Task Execution In A Storage Area Network (SAN)
90037344	To Be Filed					IN	Efficient back up mechanism by eliminating IO requests to unwritten pages
90065997	Acknowledged					IN	Hyperconverged solutions such as Nutanix rely on data locality to improve its performance characteristics. HP StoreVirtual inhibits data locality due to the inherent node-based striping. A solution to this is presented here.
82241558	Application		3/25/2008		5482/CHENP/2010	IN	System And Method For Transforming PCIE SR-IOV Functions To Appear As Legacy Functions
83177122	Application		1/31/2013		277/DEL/2013	IN	NETWORK MANAGEMENT ACCESS BASED PREVIOUS REGISTRATION OF USER DEVICE
83208778	Application		3/15/2013		771/DEL/2013	IN	LOOP-FREE HYBRID NETWORK
83277534	Application		41439		2592/CHE/2013	IN	Measuring Flow Activity On An Openflow Enabled Network Device
84264078	Application		42252		4708/CHE/2015	IN	Maintaining Bidirectional Forwarding Detection (BFD) Sessions On A Network Device Upon Reboot
83992775	Application		4/25/2012		5882/DELNP/2014	IN	FILE TRANSFER USING XML
84266580	Application		7/31/2015		3993/CHE/2015	IN	Password Based Access Control
82987728	Application		4/2/2012		1317/CHE/2012	IN	INFORMATION MANAGEMENT POLICY BASED ON RELATIVE IMPORTANCE OF A FILE
90024105	Application		7/31/2015		3987/CHE/2015	IN	BACKUP CHANGE IN TRANSACTION LOG FILE
84169125	Application		4/13/2015		1910/CHE/2015	IN	SUBSCRIBER IDENTITY PATTERN
82205228	Application		8/14/2007		1810/CHE/2007	IN	Spam Control Systems And Methods
83955961	Application		9/10/2014		4440/CHE/2014	IN	DETERMINING OPTIMUM RESOURCES FOR AN ASYMMETRIC DISASTER RECOVERY SITE OF A COMPUTER CLUSTER
83985639	Application		2/21/2012		5721/DELNP/2014	IN	MAINTAINING SYSTEM FIRMWARE IMAGES REMOTELY USING A DISTRIBUTE FILE SYSTEM PROTOCOL
90035154	Acknowledged					IN	Efficient way of handling the Application-recovery in a Site Aware Disaster Tolerant Architecture
82256234	Granted	256212	4/21/2005	41410	1380/MUMNP/2006	IN	METHOD AND SYSTEM FOR STORING SELF-DESCRIPTIVE TABULAR DATA WITH ALPHANUMERIC AND BINARY VALUES
82691759	Published		9/4/2009		2387/DELNP/2011	IN	Storing Log Data Efficiently While Supporting Querying
84169145	Application		8/18/2015		4322/CHE/2015	IN	File Repository
82654467	Application		8/27/2008		1329/CHENP/2011	IN	Performing Zone Based Workload Scheduling According To Environmental Conditions

PATENT
REEL: 038498 FRAME: 0171

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83956064	Application		41815		3087/CHE/2014	IN	SELECTING AN OPTIMAL NETWORK DEVICE FOR REPORTING FLOW TABLE MISSES UPON EXPIRY OF A FLOW IN A SOFTWARE DEFINED NETWORK
84076347	Application		6/25/2012		7468/CHENP/2014	IN	TRANSLATED SESSION INFORMATION TO PROVISION A NETWORK PATH
84113493	Application		1/30/2015		468/CHE/2015	IN	FORWARDING TABLE OF HYBRID SOFTWARE DEFINED NETWORKING SWITCH
84121943	Application		1/28/2015		399/CHE/2015	IN	DATA LOOP DETERMINATION WITH A SOFTWARE-DEFINED NETWORK CONTROLLER
82819012	Application		3/31/2009		5960/CHENP/2011	IN	Determining power Topology Of Plurality Of Computer Systems
83958368	Application		5/23/2014		2575/CHE/2014	IN	USING LOCATION ADDRESSED STORAGE AS CONTENT ADDRESSED STORAGE
83958780	Application		7/17/2014		3522/CHE/2014	IN	PARTIAL SNAPSHOT CREATION
84033842	Application		10/17/2014		5217/CHE/2014	IN	FILE SYSTEM JOURNALING
84173710	Application		5/23/2015		2585/CHE/2015	IN	TRANSLATE DATA OPERATIONS BASED ON DATA STRIPE SIZE
84261616	Application		7/9/2015		3518/CHE/2015	IN	Managing A Database Index File
82250102	Application		6/22/2009		1464/CHE/2009	IN	Method And System For Visualizing A Storage Area Network
84273876	Application		7/22/2015		3784/CHE/2015	IN	Improving the data availability during Site Failover in Async Remote Replication Setup
90037352	To Be Filed					IN	Efficient prefetch mechanism in distributed storage systems
90065988	Acknowledged					IN	FCoE Aggregation between an Edge Device and an FCoE Switch
83177096	Application		1/30/2013		266/DEL/2013	IN	NETWORK ACCESS MANAGEMENT BASED ON SESSION INFORMATION
82274951	Application		6/12/2009		1206/DEL/2009	IN	Method for Implementing Distributed Voice Functions Into Software Applications
82391284	Application		10/28/2010		3216/CHE/2010	IN	Providing Cloud-Based Computing Services
83874375	Application		41737		1858/CHE/2014	IN	PIPELINE TABLE IDENTIFICATION
83933499	Application		41754		2113/CHE/2014	IN	FLOW SAMPLE
84171383	Application		4/29/2015		2202/CHE/2015	IN	CLIENT COMMUNICATIONS IN MULTI-TENANT DATA CENTER NETWORKS
90037913	To Be Filed					IN	OpenFlow assisted multi-hop Bi-directional Forwarding Detection (BFD)
83957592	Application		7/4/2014		3319/CHE/2014	IN	DATA DEDUPLICATION
84034612	Application		10/28/2014		5370/CHE/2014	IN	SNAPSHOT CREATION

PATENT
REEL: 038498 FRAME: 0172

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90037315	To Be Filed					IN	Zero detecting restore process for recovery manager central
82256534	Application		8/9/2006		00129/MUMNP/2008	IN	Enterprise Application Server System And Method
90037086	To Be Filed					IN	System and method of application-aware backups without installing backup agent inside VM
84116046	Application		4/8/2015		1841/CHE/2015	IN	Managing Cost Related to Usage of Cloud Resources
90040541	Acknowledged					IN	Security Vulnerability machine transformation & Analyzer as a Service to enable assess vulnerabilties
82219763	Application		39085		3717/CHENP/2008	IN	Call Screening For VOIP Calls At Gateway
82724419	Published		4/20/2011		1168/DEL/2011	IN	SYSTEMS AND METHODS FOR PROVIDING PROMOTIONAL CONTENT DURING A CALL ATTEMPT
84263574	Application		42174		3075/CHE/2015	IN	FILE PROCESSING WORKFLOW MANAGEMENT
82188050	Application		9/21/2005		1337/CHE/2005	IN	Transparent Migration Of Files Among Various Types Of Storage Volumes Based On File Access Properties
82229750	Application		39377		2383/CHE/2007	IN	A Method And System For Transferring Files
82238807	Application		1/14/2008		133/CHE/2008	IN	System And Method For Flexible Device Driver Resource Allocation
82240490	Application		4/22/2008		995/CHE/2008	IN	Method Of Computer Clustering
82262531	Application		10/31/2011		3106/DEL/2011	IN	File Lock Preservation
83874309	Application		4/10/2014		1898/CHE/2014	IN	Relocating A Virtual Address In A Persistent Memory
83932769	Application		4/28/2014		2134/CHE/2014	IN	Improving Startup Time Of Managed Code
82948569	Published		8/7/2006		1704/DELNP/2008	IN	ENTERPRISE SERVICE AVAILABILITY THROUGH IDENTITY PRESERVATION
82255289	Granted	211086	1/23/2004	39372	0693/MUMNP/2005	IN	SYSTEM AND METHOD FOR COMPOSING, CONFIGURING, DEPLOYING, AND MANAGING SERVICES USING A GRAPHICAL USER INTERFACE
84140108	Application		10/30/2012		302/CHENP/2015	IN	ANALYZING DATA WITH COMPUTER VISION
82254041	Granted	240432	5/6/2003	40309	2490/CHENP/2004	IN	Payment System And Method
82195856	Granted	261309	4/26/2006	41809	4481/CHENP/2007	IN	Nanoscale Interconnection Interface
83957738	Application		6/18/2014		2974/CHE/2014	IN	AUTOMATIC RE-ROUTING OF NETWORK TRAFFIC IN A SOFTWARE-DEFINED NETWORK
84121957	Application		1/30/2015		478/CHE/2015	IN	ADJUSTED SPANNING TREE PROTOCOL PATH COST VALUES IN A SOFTWARE DEFINED NETWORK
84148266	Application		1/29/2015		426/CHE/2015	IN	INTERMEDIARY NETWORK ELEMENT FOR TAP TRAFFIC
84150616	Application		2/28/2015		980/CHE/2015	IN	Refresh Flow Entry
90039539	Acknowledged					IN	Smartly prepare a newly added ESXi host in vCenter which is tightly coupled with special kind of service VM for tenant VM's network traffic or any other service VM serving any kind of services..

PATENT
REEL: 038498 FRAME: 0173

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83995826	Application		4/20/2012		5415/CHENP/2014	IN	VOLTAGE REGULATOR CONTROL SYSTEM
82240370	Application		4/14/2008		5985/CHENP/2010	IN	Fan For Computer Element In The Service Position
82580953	Application		7/31/2008		500/CHENP/2011	IN	Heatsink With A Plurality Of Fans
82948563	Published		1/23/2006		6130/DELNP/2007	IN	MULTI-DIMENSIONAL SURROGATES FOR DATA MANAGEMENT
84264441	Application		41242		3089/CHENP/2015	IN	IMAGE ANALYSIS
82238669	Application		12/20/2007		3957/CHENP/2010	IN	AUTOMATED MODEL GENERATION FOR COMPUTER BASED BUSINESS PROCESS
84260594	Application		7/31/2015		3997/CHE/2015	IN	MANAGEMENT OF CONTENT STORAGE AND RETRIEVAL
84034632	Application		11/27/2014		5956/CHE/2014	IN	PROVIDING A LOAN OF STORAGE SPACE IN A DATA STORAGE SYSTEM
84054964	Application		11/1/2014		5485/CHE/2014	IN	DATA MANAGEMENT FOR TENANTS
84114809	Application		1/29/2015		424/CHE/2015	IN	FILE SYSTEM REPLICATION
84261630	Application		7/17/2015		3683/CHE/2015	IN	Managing Appendable State of an Immutable File
90037306	To Be Filed					IN	A Method for Accurate Enforcement of Quota Limits in a Distributed File System
84099724	Application		41947		5530/CHE/2014	IN	DEMAND FORECASTING AND SIMULATION
83984204	Application		1/6/2012		4948/CHENP/2014	IN	CONNECTOR MODULES HAVING OPTICAL CONNECTORS MOVEABLE BETWEEN A RETRACTED POSITION AND AN EXTENDED POSITION
82672076	Application		10/8/2008		1872/CHENP/2011	IN	Firmware Storage Medium With Customized Image
82203650	Application		8/29/2005		1203/CHE/2005	IN	A Method Or Apparatus For Providing Storage In A Network
82274630	Application		9/21/2006		2080/DEL/2006	IN	Method and System for Using a Packet-Network Telephone to Schedule a Conference Call
82210016	Application		8/7/2006		888/CHENP/2008	IN	Screening Of Calls In A Packet-based Network
83080900	Application		8/1/2012		3165/CHE/2012	IN	SYSTEM AND METHOD FOR DATA COMMUNICATION USING A CLASSIFIED FLOW TABLE IN OPENFLOW NETWORKS
83932093	Application		6/12/2014		2875/CHE/2014	IN	MULTICAST CONTROL
84264066	Application		9/29/2015			IN	MANAGING MULTIPLE ACTIVE SEGMENTS IN A STACKING SYSTEM
82584167	Published		40029		8532/CHENP/2010	IN	APPARATUS, AND ASSOCIATED METHOD, FOR DETECTING FRAUDULENT TEXT MESSAGE
82858559	Application		4/28/2010		7248/CHENP/2011	IN	IMPROVEMENTS IN OR RELATING TO COOLING
82263020	Application		7/1/2010		1863/CHE/2010	IN	METHOD AND SYSTEM OF CONTENT DEVELOPMENT FOR A DATA WAREHOUSE
82258967	Published		9/15/2009		2231/CHE/2009	IN	Automatic Selection Of Agent-based Or Agentless Monitoring
84162675	Application		8/29/2012		978/CHENP/2015	IN	SECURITY SCAN BASED ON DYNAMIC TAINT
84033109	Application		12/5/2014		6128/CHE/2014	IN	CLOUD SERVICE RATING

PATENT
REEL: 038498 FRAME: 0174

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82202903	Application		7/18/2006		614/CHENP/2008	IN	Automated Application Server (AS) Permissions Provisioning
82220315	Application		7/10/2007		474/CHENP/2009	IN	Interface Module
82201772	Application		10/17/2005		1487/CHE/2005	IN	Stacked File Systems And Methods
82239356	Application		4/11/2008		920/CHE/2008	IN	Multi-stream Communication Processing
82241423	Application		2/26/2008		5161/CHENP/2010	IN	Method And Apparatus For Performing A Host Enumeration Process
83964685	Application		7/24/2014		3628/CHE/2014	IN	DEVICE AUTHENTICATION AGENT
84094520	Application		10/30/2014		5423/CHE/2014	IN	LOCATION AWARE FAILOVER SOLUTION
82253216	Application		4/23/2002		1727/DELNP/2003	IN	Method And System For Reporting XML Data Based On Precomputed Context And A Document Object Model
82257656	Application		7/21/2009		6007/CHENP/2010	IN	BYTE-BASED METHOD, PROCESS AND ALGORITHM FOR SERVICE-ORIENTED AND UTILITY INFRASTRUCTURE USAGE MEASUREMENT, METERING, AND PRICING
84265145	Application		7/31/2015		3994/CHE/2015	IN	WORKLOAD DEPLOYMENT IN COMPUTING NETWORKS
84141092	Application		9/10/2012		355/CHENP/2015	IN	USE OF PRIMARY AND SECONDARY CONNECTION TABLES
82215824	Granted	267451	4/20/2007	42205	5735/CHENP/2008	IN	Dynamic Data Navigation
82263956	Application		9/18/2010		2736/CHE/2010	IN	SEARCHING DOCUMENT IMAGES
82750799	Published		5/27/2011		1805/CHE/2011	IN	GUIDING AN IMAGE-BASED TASK EXECUTION
82948589	Published		10/2/2006		947/DELNP/2009	IN	RETRO-FITTING SYNTHETIC FULL COPIES OF DATA
82242545	Application		3/10/2008		6260/DELNP/2010	IN	Two-phase Optical Communication Methods And Optical Bus Systems For Implementing The Same
90036994	To Be Filed					IN	Method for Setup Automation during Online Volume Migration
84138204	Application		3/2/2015		996/CHE/2015	IN	Controlling an unknown flow inflow to an SDN controller in a software defined network (SDN)
84263674	Application		6/30/2015		3343/CHE/2015	IN	MAXIMUM TRANSMISSION UNIT INSTALLATION FOR SWITCHES IN A SOFTWARE-DEFINED NETWORK
84264046	Application		7/31/2015		3952/CHE/2015	IN	Network Port Profile for Virtual Machines using Network Controller
82062518	Granted	1281270	5/8/2001	38917	1925734.4	IT	Operating A Ommunications Infrastructure On A Pre-payment Basis
82062539	Granted	1281269	37019	38476	1925726	IT	Charging For VAS Resource Usage In A Communications Infrastructure
82116149	Granted	723231	1/15/1996	37083	96300261.3	IT	METHOD AND APPARATUS FOR PREVENTING INADVERTENT CHANGES TO SYSTEM-CRITICAL FILES IN A COMPUTING SYSTEM
82128263	Granted	811937	6/4/1997	38371	97303808.6	IT	AUTOMATICALLY PREFETCHING DATA IN A COMP-
82165241	Granted	782301	12/23/1996	37706	96120819.6	IT	METHOD AND APPARATUS FOR RATE-BASED SCHEDULING USING A RELATIVE ERROR APPROACH

PATENT
REEL: 038498 FRAME: 0175

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82579299	Granted	1749386	5/4/2005	4/14/2010	5746753.2	IT	Pattern Discovery In A Network Security System
83185311	Granted	1715488	12/17/1998	2/11/2009	6011296.8	IT	Tape Leader Pin Assembly And Method For Making The Same
82133606	Granted	1188339	6/23/2000	11/24/2004	943160.2	IT	METHOD AND SYSTEM FOR PROVIDING TELECOMMUNICATION SERVICES ACROSS NETWORKS THAT USE DIFFERENT PROTOCOLS
82102325	Granted	1413893	10/17/2003	9/28/2005	3256580.6	IT	System And Method Of Measuring Low Impedances
82180922	Granted	1359207	1/12/2005	4/21/2009	RM2005A000012	IT	Detection Of Errors
82180550	Granted	1359206	1/12/2005	4/21/2009	RM2005A000011	IT	Link Failures
81958334	Granted	3734888	7/19/1996	10/28/2005	H08-190162	JP	A Microprocessor With Power Management Features
81966335	Granted	3840382	2/19/2001	8/11/2006	2001-041819	JP	METHOD FOR REDUCING CONTAMINATION OF BRANCH PREDICTION TABLE
81966962	Granted	4065674	10/26/2001	1/11/2008	2001-329766	JP	Data Storage System And Method
81978515	Granted	4059682	2/4/2002	12/28/2007	2002-026922	JP	Method And Structure For Characterization Of Bayesian Belief Networks
81978746	Granted	3973476	4/10/2002	6/22/2007	2002-107879	JP	Status Transfer Using Frequency
81978944	Granted	4549593	11/20/2001	7/16/2010	2001-353969	JP	Dual Bar Code Reading System For A Data Storage System
81983807	Granted	4008224	10/15/2001	9/7/2007	2001-316210	JP	Cache Coherence Protocol For A Multiple Bus Multiprocessor System
81994157	Granted	3786418	2/20/2004	3/31/2006	2004-043852	JP	Directory-Based Coherency Scheme For Reducing Memory Bandwidth Loss
82006232	Granted	4361310	4/17/2003	8/21/2009	2003-112891	JP	Wrap-around Cooling Arrangement For Printed Circuit Board
82012841	Granted	4528372	7/24/1996	6/11/2010	H08-194520	JP	Frame Structure
82020950	Granted	3974238	10/21/1997	6/22/2007	H09-288143	JP	Method And Apparatus For Automatic Device Segmentation And Port-to-segment Distribution
82025000	Granted	4041218	7/9/1998	11/16/2007	H10-210447	JP	Automatic Internet Protocol (IP) Address Allocation And Assignment
82028267	Granted	4266423	1/6/1999	2/27/2009	H11-000861	JP	Servo Band Identification In Linear Tape Systems Having Timing-based Servo Formats
82030832	Granted	4248661	2/19/1999	1/23/2009	H11-041607	JP	Efficient Routing Of Transactions With Ordering Constraints
82034318	Granted	3187022	3/2/1999	5/11/2001	H11-054785	JP	Tape Cartridge Reel Lock
82036235	Granted	3287815	7/21/1999	3/15/2002	H11-206012	JP	Resiliently Biased Parking Seat For Receiving The Leader Pin Of A Single Reel Tape Cartridge
82037939	Granted	4562226	12/20/1999	8/6/2010	H11-361036	JP	Network Appliance Combining Asynchronous Notification With Interactive Network Transfer Protocol Server
82038137	Granted	3142528	3/8/1999	12/22/2000	H11-059798	JP	Two Axis Reading Of Memory Chip In Cartridge
82042436	Granted	3174775	9/7/1999	3/30/2001	H11-253265	JP	Tape Leader Pin Clamp And Method For Securing Same To Leader Pin Assembly

PATENT
REEL: 038498 FRAME: 0176

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82043117	Granted	3894698	3/9/2000	12/22/2006	2000-064480	JP	Hybrid Just-in-time Compiler That Consumes Minimal Resource
82044440	Granted	4497605	11/11/1999	4/23/2010	H11-320977	JP	Private Arbitrated Loop Self-test Management For A Fibre Channel Storage Enclosure
82044548	Granted	4009049	2/24/2000	9/7/2007	2000-046870	JP	Data Cartridge Exchange Apparatus
82049624	Granted	3587758	4/7/2000	8/20/2004	2000-106140	JP	Firm Addressing For Devices On A Fibre Channel Arbitrated Loop
82056479	Granted	4723102	2/26/2001	4/15/2011	2001-050405	JP	Protocol For Insuring Exactly Once Semantics Of Transactions Across An Unordered, Unreliable Network
82062719	Granted	4818542	8/9/2001	9/9/2011	P2001-241933	JP	Performance Of A Service On A Computing Platform
82064084	Granted	3895677	12/9/2002	12/22/2006	2002-356939	JP	System And Method For Managing A Moveable Media Library With Library Partitions
82065602	Granted	4667707	12/24/2002	1/21/2011	2002-371841	JP	System And Method For Intermediating Communication With A Moveable Media Library Utilizing A Plurality Of Partitions
82066844	Granted	3886536	1/17/1997	12/1/2006	H09-525814	JP	OFDM FEC
82069391	Granted	4519261	4/27/2000	5/28/2010	2000-126830	JP	Loop Prevention In Networks
82079957	Granted	4309215	9/9/2003	5/15/2009	2003-317256	JP	Circuit Cooling Apparatus
82080878	Granted	4222917	9/30/2003	11/28/2008	2003-340093	JP	Virtual Storage Systems And Virtual Storage System Operational Methods
82081007	Granted	4511824	12/25/2003	5/14/2010	2003-430798	JP	System And Method For Migrating Data Between Memories
82082210	Granted	4440648	1/22/2003	1/15/2010	2003-563183	JP	A Method Of Hand-off Of A Data Session
82082699	Granted	4386410	5/16/2003	10/9/2009	2003-138804	JP	Method And System For Dynamically Allocating Computer System Resources
82082897	Granted	4522056	6/9/2003	6/4/2010	2003-163514	JP	Four-drop Bus With Matched Response
82084808	Granted	4318459	1/7/2003	6/5/2009	2003-000942	JP	Hardware Pay-per-use
82087190	Granted	4059859	3/11/2004	12/28/2007	2004-068807	JP	Apparatus For Sensing The Presence Of An Inductive Load Driven By A Pulse Width Modulated Signal
82087199	Granted	4421333	3/2/2004	12/11/2009	2004-057270	JP	Enhanced Antenna Using Flexible Circuitry
82090580	Granted	4112420	4/30/2003	4/18/2008	2003-125028	JP	Method And System For Allocating System Resources Among Applications Using Weights
82092680	Granted	4098288	8/25/2004	3/21/2008	2004-245339	JP	High Performance Cooling Device With Vapor Chamber
82093514	Granted	4084765	3/17/2004	2/22/2008	2004-076715	JP	An Assembly And Method For Balancing Processors In A Partitioned Server
82094132	Granted	3968095	8/20/2004	6/8/2007	2004-240636	JP	A Multi-dimensional Deglitch Filter For High Speed Digital Signals
82095932	Granted	4304055	12/1/2003	5/1/2009	2003-400950	JP	Method And Architecture To Provide Client Session Failover
82097234	Granted	4047315	9/10/2004	11/30/2007	2004-263172	JP	System And Method For Determining The Value Of A Memory Element
82097822	Granted	4927335	11/21/2003	2/17/2012	P2004-557274	JP	Cooling System With Evaporators Distributed In Series

PATENT
REEL: 038498 FRAME: 0177

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82098422	Granted	5011490	8/28/2007	6/15/2012	P2009-528231	JP	Indicating Device for Computer System having Electronic Components
82100315	Granted	3903052	10/13/2004	1/12/2007	2004-298490	JP	Method For Correcting Errors In A Digital System
82103252	Granted	3962026	2/27/2004	5/25/2007	2004-052876	JP	System And Method For Application Programming Interface For Extended Intelligent Platform Management
82103789	Granted	4459755	8/25/2004	2/19/2010	2004-244753	JP	Automatic Provisioning Of Network Address Translation Data
82104923	Granted	5041805	3/25/2004	7/20/2012	2006-509277	JP	Quality Of Service Controller And Method For A Data Storage System
82106543	Granted	4695143	8/30/2005	3/4/2011	2007-531222	JP	Scalable, Component-accessible, And Highly Interconnected Three-dimensional Component Arrangement Within A System
82129844	Granted	4354023	4/2/1998	8/7/2009	H10-089812	JP	APPARATUS AND METHOD FOR STORAGE SUBSYSTEM DRIVE MOVEMENT AND VOLUME ADDITION
82133321	Granted	4596623	10/2/2000	10/1/2010	2000-302020	JP	DISK STORAGE WITH TRANSPARENT OVERFLOW TO NETWORK STORAGE
82133591	Granted	3779207	6/23/2000	3/10/2006	2001-504714	JP	METHOD AND SYSTEM FOR PROVIDING TELECOMMUNICATION SERVICES ACROSS NETWORKS THAT USE DIFFERENT PROTOCOLS
82136264	Granted	4294778	11/26/1998	4/17/2009	H10-375360	JP	METHOD FOR ESTIMATING STATISTICS OF PROPERTIES OF INTERACTIONS PROCESSED BY A PROCESSOR PIPELINE
82163999	Granted	3532358	8/29/1996	3/12/2004	H08-228128	JP	DISTRIBUTED INTERACTIVE MULTIMEDIA SERVICE SYSTEM
82165226	Granted	2963064	12/26/1996	8/6/1999	H08-359878	JP	METHOD AND APPARATUS FOR RATE-BASED SCHEDULING USING A RELATIVE ERROR APPROACH
82171151	Granted	4809236	10/21/2004	8/26/2011	P2006-538145	JP	Methods And Systems For Dynamically Configuring A Network Component
82171166	Granted	5437634	7/21/2006	12/20/2013	P2008-535519	JP	Quantum Information Conversion Between Matter And Light Representations
82174775	Granted	4302659	4/5/2005	5/1/2009	2005-108332	JP	Liquid Loop With Multiple Pump Assembly
82178171	Granted	4669728	4/5/2005	1/21/2011	2005-108214	JP	Formatting A Data Storage Medium To A Desired Block Format
82178525	Granted	4038510	1/20/2005	11/9/2007	2005-012195	JP	Cluster Node Status Detection And Communication
82179032	Granted	4611322	2/17/2005	10/22/2010	2006-554206	JP	Airflow Detection System Having An Airflow Indicating Device
82181783	Granted	4404861	1/24/2006	11/13/2009	2006-015058	JP	Thermally Conductive Cover Directly Attached To Heat Producing Component
82182350	Granted	4744290	12/22/2005	5/20/2011	2005-369369	JP	Spring Adapted To Hold Electronic Device In A Frame
82183763	Granted	5043360	4/11/2006	7/20/2012	P2006-108504	JP	Memory Module With A Predetermined Arrangement Of Pins
82186220	Granted	4695986	1/16/2006	3/4/2011	2006-007661	JP	Non Unique Fragment Number Identifiers

PATENT
REEL: 038498 FRAME: 0178

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82187765	Granted	4463305	8/31/2005	2/26/2010	2007-528877	JP	COMMUNICATIONS INFRASTRUCTURE FOR CONTENT DELIVERY USING EDGE SERVERS
82188641	Granted	4638486	4/28/2005	12/3/2010	2007-510972	JP	Non-demolition Photon Detector That Preserves Input State Characteristics
82189391	Granted	5001557	1/26/2006	5/25/2012	P2006-017621	JP	Thermal And Power Management Apparatus
82190318	Granted	4286838	1/27/2006	4/3/2009	2006-018652	JP	Information Technology (IT) Equipment Positioning System
82190942	Granted	4238233	6/14/2005	12/26/2008	2005-173488	JP	System And Method For Sharing Storage Resources Between Multiple Files
82190951	Granted	4307461	3/28/2006	5/15/2009	2006-087346	JP	Memory Module With On-board Power-consumption Monitoring
82191761	Granted	4615012	5/10/2005	10/29/2010	2007-513322	JP	ARCHITECTURE AND METHODS FOR COMPUTING WITH NANOMETER SCALE RECONFIGURABLE RESISTOR CROSSBAR SWITCHES
82191953	Granted	5022417	9/11/2009	6/22/2012	P2009-210497	JP	Remote Measurement Of Motion Employing RFID
82192010	Granted	4912731	4/19/2006	1/27/2012	P2006-115312	JP	Reduntant I/O Interface Management
82192019	Granted	4195042	4/27/2006	10/3/2008	2006-123083	JP	Remote Detection Employing RFID
82196441	Granted	4474378	4/19/2006	3/12/2010	2006-115314	JP	Computing With Both Lock-step And Free Step Processor Modes
82196633	Granted	4224477	7/25/2005	11/28/2008	2005-213848	JP	Communication Among Partitioned Devices
82197068	Granted	4594985	9/13/2005	9/24/2010	2007-531476	JP	Tests Of Quantum Information
82197443	Granted	4916162	11/21/2005	2/3/2012	P2005-335398	JP	Systems And Methods For A Unified Computer System Fabric
82198007	Granted	4185103	2/16/2006	9/12/2008	2006-039467	JP	System And Method For Scheduling Executables
82200077	Granted	4510895	10/14/2005	5/14/2010	2007-538992	JP	Nanoscale Latches And Impedance-encoded Logic For Use In Nanoscale State Machines, Nanoscale Pipelines, And In Other Nanoscale Electronic Circuits
82200686	Granted	4679584	10/31/2005	2/10/2011	2007-545470	JP	Routing A Service Query In An Overlay Network
82201244	Granted	5124140	9/17/2004	11/2/2012	P2006-527086	JP	Configuration system and method
82201871	Granted	5068256	6/9/2006	8/24/2012	P2008-515985	JP	Fiber-coupled Single Photon Source
82204505	Granted	4261543	12/15/2005	2/20/2009	2005-361764	JP	System And Method For Replacing An Inoperable Master Workload Management Process
82204514	Granted	4558661	2/20/2006	7/30/2010	2006-042081	JP	Computer System And Method For Transferring Executables Between Partitions
82205867	Granted	4588768	10/31/2005	9/17/2010	2007-545468	JP	Determining Highest Workloads For Nodes In An Overlay Network
82205882	Granted	4681615	12/6/2005	2/10/2011	2007-545560	JP	Splitting A Workload Of A Node
82206251	Granted	4505763	1/25/2008	5/14/2010	2008-014976	JP	Managing A Node Cluster
82206311	Granted	4625864	3/9/2006	11/12/2010	2008-503017	JP	Embedded Web-based Management Method
82206446	Granted	4129959	2/1/2005	5/30/2008	2005-025015	JP	*
82208684	Granted	4199278	3/1/2005	10/10/2008	2006-517882	JP	Packet Relay System And Packet Relay Device

PATENT
REEL: 038498 FRAME: 0179

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82209053	Granted	4041518	3/10/2005	11/16/2007	2006-517883	JP	Server System, Server Device And Method Therefor
82209362	Granted	4658657	3/28/2005	1/7/2011	2005-091955	JP	Storage System, Method For Storing Information In A Storage Device, Method Related Thereto, And Computer Program Product
82212494	Granted	4489789	4/12/2007	4/9/2010	2007-105034	JP	Power Management System And Method
82212683	Granted	4925610	6/16/2005	2/17/2012	P2005-175922	JP	Communication System And Its Method
82214237	Granted	4827261	9/6/2005	9/22/2011	P2007-534208	JP	Message Processing Device And Method Tereof
82214609	Granted	4871994	5/22/2007	11/25/2011	P2009-513177	JP	Nanoparticle Coupled To Waveguide
82214738	Granted	5096376	1/30/2007	9/28/2012	P2008-552500	JP	Tunneling-resistor-junction-based Microscale/nanscale Demultiplexer Arrays
82215476	Granted	4694578	1/16/2008	3/4/2011	2008-006416	JP	Method And System For Protecting A Computer Network Against Packet Floods
82215818	Granted	4945633	4/20/2007	3/9/2012	P2009-507743	JP	Dynamic Data Navigation
82216112	Granted	4580020	1/30/2007	9/3/2010	2008-553337	JP	Methods And Systems For Avoiding Transmission-channel Disruptions
82216730	Granted	4167260	12/27/2005	8/8/2008	2005-375223	JP	Apparatus For Information Acquisition And Method Therefor
82217813	Granted	4541373	3/6/2007	7/2/2010	2007-055047	JP	Methods And Systems For Hierarchical Management Of Distributed Data
82218056	Granted	4773835	2/3/2006	7/1/2011	2006-026839	JP	Apparatus For Processing Control And Method Therefor
82218242	Granted	4516087	3/6/2007	5/21/2010	2007-055048	JP	Consistency Methods And Systems
82218440	Granted	4343983	11/24/2005	7/17/2009	2007-546323	JP	Network Administrating Device And Method Of Administrating Network
82219112	Granted	4842378	7/11/2007	10/14/2011	P2009-521754	JP	Compact Systems For Generating Polarization-entangled Photons
82219235	Granted	4864143	7/11/2007	11/18/2011	P2009-529170	JP	Compact, Single-chip-based, Entangled Polarization-state Photon Sources And Methods For Generating Photons In Entangled Polarization States
82223852	Granted	1304272	8/9/2006	5/25/2007	2006-021132	JP	Movable Gate For Reading RF IC Tags
82223930	Granted	5059130	2/28/2008	8/10/2012	2009-551736	JP	Hetero-crystalline Semiconductor Device And Method Of Making Same
82224347	Granted	4987744	1/30/2008	5/11/2012	P2008-018511	JP	SOFTWARE LICENSE AGREEMENT MANAGEMENT BASED ON TEMPORARY USAGE
82225667	Granted	5026508	4/20/2007	6/29/2012	P2009-506626	JP	OPTICAL-BASED, SELF-AUTHENTICATING QUANTUM RANDOM NUMBER GENERATORS
82226048	Granted	5357752	3/28/2008	9/6/2013	P2009-509213	JP	Data Transmission System And Method
82226603	Granted	5258877	4/25/2008	5/2/2013	2010-506282	JP	Active Control Of Time-varying Spatial Temperature Distribution
82229351	Granted	4926120	4/24/2008	2/17/2012	P2008-113735	JP	Data Processing System And Method
82229666	Granted	4792065	7/7/2008	7/29/2011	2008-176597	JP	Storing Data

PATENT
REEL: 038498 FRAME: 0180

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82229798	Granted	5255348	7/7/2008	4/26/2013	P2008-176598	JP	Memory Allocation For Crash Dump
82230536	Granted	5079086	6/4/2008	9/7/2012	P2010-512153	JP	OPTICAL INTERCONNECT
82230671	Granted	4740979	5/16/2008	5/13/2011	2008-129128	JP	A Method And A System To Determine Device Criticality During SAN Reconfigurations
82233155	Granted	5138050	2/20/2008	11/22/2012	P2010-547602	JP	Redriver With Two Reference Clocks And Method Of Operation Thereof
82234544	Granted	5133414	7/16/2008	11/16/2012	P2010-518196	JP	Free Space WDM Signal Detector
82234610	Granted	4920787	10/15/2008	2/10/2012	2010-529949	JP	METHOD AND SYSTEM OF TRACKING OPTICAL BEAM SHIFT
82234673	Granted	5373782	6/25/2008	9/27/2013	2010-514803	JP	Nanowire Photodiodes And Methods Of Making Nanowire Photodiodes
82235168	Granted	5222950	10/15/2008	3/15/2013	2010-529941	JP	PLASMONIC HIGH-SPEED DEVICES FOR ENHANCING THE PERFORMANCE OF MICROELECTRONIC DEVICES
82235225	Granted	4907603	6/20/2008	1/20/2012	P2008-161206	JP	Access Control System And Method
82236704	Granted	5055252	12/2/2008	8/3/2012	P2008-307361	JP	Data Processing Method And System
82237952	Granted	5376496	10/24/2008	10/4/2013	P2008-274368	JP	Dynamic Allocation Of Virtual Machine Devices
82238021	Granted	4249622	9/20/2002	1/23/2009	2003-531367	JP	A SYSTEM AND METHOD FOR EFFICIENT LOCK RECOVERY
82238333	Granted	5159897	1/31/2008	12/21/2012	P2010-544948	JP	OPTICAL TAPS FOR CIRCUIT BOARD-MOUNTED OPTICAL WAVEGUIDES
82239101	Granted	5230797	4/2/2008	3/29/2013	2011-502919	JP	Disk Drive Data Encryption
82241468	Granted	5182771	4/2/2008	1/25/2013	2011-502918	JP	Converting Resets In Shared I/O System
82241603	Granted	5108975	4/28/2008	10/12/2012	P2011-506240	JP	Virtual-interrupt-mode Interface And Method For Virtualizing An Interrupt Mode
82241891	Granted	5366982	3/4/2008	9/20/2013	P2010-549622	JP	ANGLE SENSOR, SYSTEM AND METHOD EMPLOYING GUIDED-MODE RESONANCE
82242218	Granted	5178910	3/28/2008	1/18/2013	P2011-501770	JP	FLEXIBLE OPTICAL INTERCONNECT
82242578	Granted	5357903	3/11/2008	9/6/2013	P2010-550643	JP	Optoelectronic Switches Using On-chip Optical Waveguides
82242656	Granted	5199455	4/4/2008	2/15/2013	P2011-502907	JP	BEAMSPLITTERS WITH OFFSET COMPENSATION
82242713	Published		5/1/2008		P2011-507392	JP	Storing Checkpoint Data In Non-volatile Memory
82245008	Granted	5179654	5/6/2008	1/18/2013	2011-508460	JP	SYSTEM AND METHOD FOR MICRO RING LASER
82245326	Granted	5155444	5/7/2008	12/14/2012	2011-508463	JP	ARRAYS, SYSTEM AND METHOD FOR BI-DIRECTIONAL DATA TRANSMISSION
82247456	Granted	5154666	9/29/2008	12/14/2012	2010-550652	JP	Neuromorphic Circuit
82251950	Granted	4571746	7/15/1999	8/20/2010	2000-560497	JP	System And Method For Selectively Defining Access To Application Features
82252091	Granted	5043255	4/19/2000	41110	P2000-614176	JP	Method and System for Presenting Non-Transaction Message on an ATM Terminal
82253132	Granted	4495895	3/7/2001	4/16/2010	2001-565042	JP	System And Method For Reporting XML Data From A Legacy Computer System
82405415	Granted	5186592	5/8/2008	1/25/2013	2011-508455	JP	Optical Polymorphic Computer Systems
82405423	Granted	5309212	5/9/2008	7/5/2013	2011-508471	JP	Optical Splitter Device

PATENT
REEL: 038498 FRAME: 0181

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82405547	Granted	5118771	5/9/2008	10/26/2012	2011-508457	JP	Proximity Free Space Optical Interconnect
82554385	Granted	5118772	5/23/2008	10/26/2012	2011-510478	JP	Optical Interconnect
82579303	Granted	5038888	5/4/2005	7/13/2012	JP20070511653	JP	Pattern Discovery In A Network Security System
82579372	Granted	5191492	10/25/2007	2/8/2013	2009534869	JP	Tracking Changing State Data To Assist In Computer Network Security
82579391	Granted	5417179	10/25/2007	11/22/2013	2009534870	JP	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security
82581169	Granted	4789933	5/12/2005	7/29/2011	2007-515157	JP	APPARATUS AND METHOD FOR DEVELOPING, TESTING AND MONITORING SECURE SOFTWARE
82595705	Granted	5474065	7/31/2008	2/14/2014	2011-521082	JP	Nano-wire Optical Block Devices For Amplifying, Modulating, And Detecting Optical Signals
82621137	Granted	5231642	8/8/2008	3/29/2013	2011-522033	JP	Independently Controlled Virtual Memory Devices In Memory Modules
82631631	Granted	5475776	7/31/2008	2/14/2014	2011-521068	JP	Multi-layer Reconfigurable Switches
82634148	Granted	5325299	8/26/2008	7/26/2013	2011-523785	JP	Tunable Nanowire Resonant Cavity For Optical Modulation
82651102	Granted	5425912	9/30/2008	12/6/2013	2011-529000	JP	Authentication Of Services On A Partition
82651136	Granted	5567580	9/23/2009	6/27/2014	2011-534565	JP	MEMORY MODULE INCLUDING VOLTAGE SENSE MONITORING INTERFACE
82653590	Granted	5235036	9/22/2009	4/5/2013	2011-534564	JP	DIFFERENTIAL ON-LINE TERMINATION
82653941	Granted	5352683	1/30/2009	8/30/2013	2011-547900	JP	SYSTEM AND METHOD FOR INTEGRATING CAPACITY PLANNING AND WORKLOAD MANAGEMENT
82654456	Granted	5376544	9/4/2008	10/4/2013	P2011-526021	JP	Dielectric Waveguide Intersection With Reduced Losses
82672078	Granted	5255703	10/8/2008	4/26/2013	P2011-531005	JP	Firmware Storage Medium With Customized Image
82678335	Granted	5645837	10/29/2008	11/14/2014	2011-534468	JP	Electrically Actuated Device And Method Of Controlling The Formation Of Dopants Therein
82692035	Granted	5324660	10/31/2008	7/26/2013	2011-534463	JP	Prioritized Optical Arbritration Systems And Methods
82716523	Granted	5426684	10/30/2008	12/6/2013	P2011-534471	JP	Redundant Array Of Independent Disks (RAID) Write Cache Sub-assembly
82716635	Granted	5199479	10/31/2008	2/15/2013	2011-534461	JP	Variably Configurable Computer Buses
82716701	Granted	5373919	10/31/2008	9/27/2013	2011-534477	JP	Optical Connector Interconnection System And Method
82774439	Granted	5639598	1/7/2009	10/31/2014	2011-545334	JP	PHOTONIC WAVEGUIDE
82779966	Granted	5579667	6/9/2006	7/18/2014	2011-148449	JP	OPTICALLY COUPLED INTEGRATED CIRCUIT LAYERS
82790077	Granted	5710499	1/9/2009	3/13/2015	2011-545338	JP	OPTICAL ENGINE FOR POINT-TO-POINT COMMUNICATIONS
82805245	Granted	5683493	1/30/2009	1/23/2015	2011-547901	JP	PLASMONIC LIGHT EMITTING DIODE
82811451	Granted	5539397	1/29/2009	5/9/2014	2011-547896	JP	CONNECTING PORTS OF ONE OR MORE ELECTRONIC DEVICES TO DIFFERENT SUBSETS OF NETWORKS BASED ON DIFFERENT OPERATING MODES
82853028	Granted	5178960	3/25/2009	1/18/2013	P2012-501974	JP	POWER DISTRIBUTION UNIT-DEVICE CORRELATION

PATENT
REEL: 038498 FRAME: 0182

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82879823	Granted	5414006	10/26/2009	11/22/2013	2012-508912	JP	Method And Apparatus For Creating Entanglements And Quantum Repeater Utilising The Same
82891943	Granted	5414007	10/26/2009	11/22/2013	2012-518764	JP	Quantum Repeater And System And Method For Creating Extended Entanglements
82904517	Application		7/31/2009		2012-522789	JP	PROVIDING FAULT-TOLERANT SPREAD SPECTRUM CLOCK SIGNALS IN A SYSTEM
82929796	Granted	5607175	3/7/2011	9/5/2014	2012-542249	JP	DATA STORAGE APPARATUS AND METHODS
82931419	Published		1/29/2010		2012-551137	JP	MULTIMODE VERTICAL-CAVITY SURFACE-EMITTING LASER ARRAYS
83167832	Granted	2013533829	10/16/2010	10/31/2014	2013-533829	JP	DEVICE HARDWARE AGENT
83185321	Granted	5269400	12/17/1998	5/17/2013	2007-308749	JP	Tape Leader Pin Assembly And Method For Making The Same
83209017	Granted	5529352	11/1/2010	4/25/2014	2013-534887	JP	STORAGE ELEMENT READING USING RING OSCILLATOR
83215488	Published		9/27/2010		2013-530125	JP	DEVICE STRUCTURE FOR LONG ENDURANCE MEMRISTORS
83242135	Published		10/29/2010		2013-536579	JP	OPTICAL INTERCONNECT FABRICS IMPLEMENTED WITH STAR COUPLERS
83255611	Published		1/27/2011		2013-551947	JP	ELECTRONIC BOOK WITH CHANGEABLE PATHS
83266109	Published		12/20/2010		2013-543149	JP	VERTICAL-CAVITY SURFACE-EMITTING LASER SYSTEM AND METHOD FOR FABRICATING THE SAME
83566663	Application		8/25/2011		2014-527133	JP	Model-based stereoscopic and multiview cross-talk reduction
83680960	Application		4/6/2011		P2014-503636	JP	IDENTIFYING SIMILARITY
83721327	Published		5/31/2011		2014-513483	JP	AUTOMATED SECURITY TESTING
83776065	Granted	5710075	7/29/2011	42076	2014-522804	JP	CREDENTIAL VALIDATION
83933610	Published		10/31/2011		2014-539911	JP	EMAIL TAGS
83991629	Published		2/27/2012		2014-552176	JP	METHOD AND SYSTEM FOR VEHICLE PERSONALIZATION
84050569	Published		3/30/2012		2015-503173	JP	DEFINING A PERIMETER TO MONITOR A WIRELESS DEVICE FOR A VIOLATION OF THE PERIMETER
84076351	Published		6/25/2012		2015-506949	JP	TRANSLATED SESSION INFORMATION TO PROVISION A NETWORK PATH
84078890	Published		6/8/2012		2015-510243	JP	PATIENT INFORMATION INTERFACE
84106255	Published		5/24/2012		2015-513986	JP	Fiber Connector Assembly
84106358	Published		6/27/2012		2015-513987	JP	BATTERY TO PROVIDE VOLTAGE TO POWER MODULES
84136975	Application		7/31/2012		2015-524236	JP	NETWORK TRAFFIC PROCESSING SYSTEM
84192578	Application		9/28/2012		2015-534447	JP	COOLING ASSEMBLY
84208491	Application		9/30/2012		2015-534449	JP	ELECTRONIC HEALTH RECORD SYSTEM WITH CUSTOMIZABLE COMPLIANCE POLICIES

PATENT
REEL: 038498 FRAME: 0183

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84237777	Application		10/31/2012		2015-540645	JP	Patient oriented hospital care approach and system
84241560	Application		12/7/2012			JP	NETWORK RESOURCE MANAGEMENT
84292925	Application		1/31/2013			JP	LIQUID COOLING
84292950	Application		1/31/2013			JP	RAM REFRESH RATE
90022721	Application		3/27/2013			JP	Non-Volatile Memory Based Synchronous Logic
90025973	Application		3/28/2013			JP	Shared Memory System
90045005	Acknowledged					JP	MULTIMODE VERTICAL-CAVITY SURFACE-EMITTING LASER ARRAYS
90046364	Application		3/14/2013			JP	SUPPORT MEMBER
82236764	Granted	5000456	10/31/2007	41054	P2007-282914	JP	System For Resource Management And Method Therefor
82220714	Granted	4848182	12/21/2005	40837	P2005-367863	JP	Power Supply System
83984208	Published		1/6/2012		2014-551226	JP	CONNECTOR MODULES HAVING OPTICAL CONNECTORS MOVEABLE BETWEEN A RETRACTED POSITION AND AN EXTENDED POSITION
90016082	Application		1/30/2013			JP	UNIFIED CONTROL OF AN ELECTRONIC CONTROL SYSTEM AND A FACILITY CONTROL SYSTEM
82100594	Granted	4033856	11/8/2004	39388	2004-323479	JP	System And Method For Dynamically Varying A Clock Signal
82119890	Granted	4771615	6/1/2001	40725	2001-166124	JP	ARCHITECTURE FOR PARALLEL DISTRIBUTED TABLE DRIVEN I/O MAPPING
82176704	Granted	4634812	38378	40508	2005-018280	JP	Storage System With Capability To Allocate Virtual Storage Segment Among Multiple Controllers
82194992	Granted	4435831	5/13/2005	40186	2007-513362	JP	Providing An Alternative Caching Scheme At The Storage Area Network Level
82212977	Granted	4768497	4/10/2006	40718	2006-107628	JP	Migrating Data In A Storage System
82218593	Granted	4726852	4/25/2007	40655	2007-115272	JP	Compatibility Enforcement In Clustered Computing Systems
82241447	Granted	4959004	2/18/2008	3/30/2012	2010-546744	JP	Systems And Methods Of Communicatively Coupling A Host Computing Device And A Peripheral Device
82266353	Granted	3737517	10/11/1996	11/4/2005	H09-515258	JP	METHOD AND APPARATUS FOR TRANSPARENT INTERMEDIATE SYSTEM BASED FILTERING ON A LAN OF MULTICAST PACKETS
82065569	Granted	4579492	12/24/2002	9/3/2010	2002-371864	JP	System And Method For Securing Drive Access To Data Storage Media Based On Medium Identifiers
82175891	Granted	4336639	11/1/2004	7/3/2009	2004-317695	JP	Tape Cartridge
84253410	Application		6/25/2015			JP	MAGNETIC TAPE PROCESSING
82241759	Granted	5069357	11/13/2008	8/24/2012	2010-535007	JP	AUTOMATED RE-ORDERING OF COLUMNS FOR ALIGNMENT TRAP REDUCTION
82581180	Granted	4997242	8/25/2006	5/18/2012	JP2008528245	JP	Apparatus and method for analyzing and supplementing a program to provide security
83714213	Granted	5801953	5/31/2011	9/4/2015	2014-511332	JP	APPLICATION SECURITY TESTING
84162679	Application		8/29/2012		2015-529767	JP	SECURITY SCAN BASED ON DYNAMIC TAINT

PATENT
REEL: 038498 FRAME: 0184

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82070942	Granted	4498670	10/30/2002	4/23/2010	2002-315361	JP	Date Processing System And Method
82183508	Granted	4137877	12/7/2004	39612	2004-353755	JP	Avoiding Name Collision For The ACPI Control Methods
82093355	Granted	4387174	12/11/2003	10/9/2009	2003-413411	JP	Systems And Methods For Facilitating Fair And Efficient Scheduling Of Processes Among Multiple Resources In A Computer System
82098353	Granted	3978199	6/28/2004	6/29/2007	2004-189310	JP	Systems And Methods For Monitoring Resource Utilization And Application Performance
82201112	Granted	4386449	1/25/2006	10/9/2009	2006-016023	JP	METHOD AND SYSTEM OF ALIGNING EXECUTION POINT OF DUPLICATE COPY OF USER PROGRAM BY EXCHANGING INFORMATION ABOUT INSTRUCTION EXECUTED
81993530	Granted	4097436	2/22/2002	39528	2002-045800	JP	Redundant Controller Data Storage System Having An On-line Controller Removal System And Method
82135118	Granted	4275771	6/26/1998	3/13/2009	H10-180201	JP	MIRRORED WRITE-BACK CACHE MODULE WARMSWAP
82068635	Granted	4518672	8/6/1999	5/28/2010	2000-564129	JP	System For Improved Data Backup And Recovery
84164259	Published		9/19/2012		2015-527437	JP	METADATA TREE OF A PATIENT WITH LOCKBOXES
82069628	Granted	4865177	9/19/2000	11/18/2011	P2001-530670	JP	Operation Of Trusted State In Computing Program
82086047	Granted	5068251	4/25/2006	8/24/2012	P2008-509102	JP	Three-dimensional Nanoscale Crossbars
82186004	Granted	5047184	11/1/2006	7/27/2012	P2008-539049	JP	Crossbar-Array Designs and Wire Addressing Methods That Tolerate Misalignment Of Electrical Components at Wire Overlap Points
82223528	Granted	5118746	4/18/2008	10/26/2012	2010-504111	JP	Computational Nodes And Computational-node Networks That Include Dynamical-nanodevice Connections
82743455	Granted	4707295	7/10/2000	3/25/2011	2001-543738	JP	Electrically Addressable Volatile Non-volatile Molecular-based Switching Devices
83140423	Granted	5575866	10/3/2007	7/11/2014	2012-270961	JP	Electrically Actuated Switch
82080056	Granted	4002890	1/15/2003	8/24/2007	2003-560796	JP	A Method For Searching Nodes For Information
82096292	Granted	4870549	2/11/2004	40872	P2006-503439	JP	Quantum Information Processing Using Electromagnetically Induced Transparency
82174142	Granted	5068162	4/28/2005	8/24/2012	P2007-510997	JP	Quantum Optical State Converter
82208354	Granted	5026416	6/21/2006	6/29/2012	P2008-518456	JP	Integrated Circuit Device Having Optically Coupled Layers
82233449	Granted	5086440	10/15/2008	9/14/2012	2010-529947	JP	OPTICAL INTERCONNECT SYSTEM PROVIDING COMMUNICATION BETWEEN COMPUTER SYSTEM COMPONENTS
82235012	Granted	5154652	10/23/2008	12/14/2012	2010-531046	JP	Three-dimensional Die Stacks With Inter-device And Intra-device Optical Interconnect
82247624	Granted	5231632	4/29/2009	3/29/2013	2011-508554	JP	OPTICAL WAVEGUIDES AND METHODS OF MAKING THE SAME
82595684	Granted	5438107	7/25/2008	12/20/2013	2011-520011	JP	Light-emitting Devices
82716717	Granted	5231651	10/31/2008	3/29/2013	2011-534460	JP	Optical Broadcast With Buses With Shared Optical Interfaces

PATENT
REEL: 038498 FRAME: 0185

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82790056	Granted	5269206	1/9/2009	5/17/2013	2011-545339	JP	CONFIGURABLE POINT-TO-POINT OPTICAL COMMUNICATIONS SYSTEM BETWEEN SERVERS
83235817	Granted	5777722	10/29/2010	7/17/2015	2013-536577	JP	SMALL-MODE-VOLUME, VERTICAL-CAVITY, SURFACE-EMITTING LASER
84141096	Application		9/10/2012		2015-525410	JP	USE OF PRIMARY AND SECONDARY CONNECTION TABLES
83784117	Published		10/20/2011		2014-529695	JP	SYSTEMS AND METHODS FOR EVALUATION OF EVENTS BASED ON A REFERENCE BASELINE ACCORDING TO TEMPORAL POSITION IN A SEQUENCE OF EVENTS
84022147	Published		2/22/2012		2014-558716	JP	HIDING LOGICAL PROCESSORS FROM AN OPERATING SYSTEM ON A COMPUTER
84290791	Application		1/30/2013			JP	NON-VOLATILE MEMORY WRITE MECHANISM
90022823	Application		7/31/2015			JP	DETERMINING TRANSFERABILITY OF A COMPUTING RESOURCE TO A CLOUD COMPUTING ENVIRONMENT
90065900	Application		3/28/2013			JP	SHIELD FOR AN ELECTRONIC DEVICE
82238198	Granted	5376538	12/21/2007	10/4/2013	2010-539407	JP	Moisture Content Control System
82728101	Granted	5654480	12/19/2008	11/28/2014	2011-542097	JP	Redundant Data Storage For Uniform Read Latency
82067753	Granted	4397456	5/12/1999	40116	H11-131184	JP	Read After Write
82180505	Granted	4576399	4/19/2007	40417	2007-110164	JP	System And Method For Clearing Information In A Stalled Output Queue Of A Crossbar
82183499	Granted	4312754	12/12/2005	39955	2005-357348	JP	Component For Impedance Matching
82222643	Granted	4971943	10/22/2007	41012	P2007-273286	JP	Non-volatile Storage
90056379	Acknowledged		4/3/2013			JP	MICROCONTROLLER AT A CARTRIDGE OF A CHASSIS
82052582	Granted	4922496	3/16/2001	40949	P2001-075172	JP	Improving Host I/O Performance And Availability Of A Storage Array During Rebuild By Prioritizing I/O Requests
82099403	Granted	4342452	1/26/2005	7/17/2009	2005-017681	JP	Transaction-based Storage Operations
82217651	Granted	4668970	10/29/2007	1/21/2011	2007-279763	JP	Detection And Correction Of Block-level Data Corruption In Fault-tolerant Data-storage Systems
81994955	Granted	4925559	11/17/2003	2/17/2012	P2003-386822	JP	Transmission Node, Reception Node and Network System
82209842	Granted	4167238	3/11/2005	8/8/2008	2005-068670	JP	*
82253546	Granted	4864289	12/6/2002	11/18/2011	P2003-551963	JP	Network User Authentication System And Method
84182212	Application		9/28/2012		2015-534445	JP	Application Security Testing
82580856	Granted	5148607	6/29/2007	41250	JP2009518568	JP	STANDARD OPERATING PROCEDURE AUTOMATION IN DATABASE ADMINISTRATION
81971855	Granted	5137281	6/25/2001	11/22/2012	P2001-190601	JP	Demand Responsive Method And Apparatus To Automatically Activate Spare Servers
82191926	Granted	4177833	4/11/2005	8/29/2008	2005-113248	JP	Method And Apparatus For Multi-process Access To A Linked-list
82195364	Granted	4971673	4/26/2006	4/13/2012	P2006-121629	JP	Memory Mapped Page Priorities
82200854	Granted	4749431	3/4/2005	5/27/2011	2007-557672	JP	A Method And Apparatus For Facilitating Pipeline Throughput

PATENT
REEL: 038498 FRAME: 0186

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82223015	Granted	4641546	1/23/2008	12/10/2010	2008-012640	JP	Method And System For Handling Input/output (I/O) Errors
82224080	Granted	4726915	1/23/2008	4/22/2011	2008-012641	JP	Method And System For Determining Device Criticality In A Computer Configuration
82228448	Granted	4907605	6/24/2008	40928	P2008-163998	JP	A Method And A Computer Program For Inode Allocation And De-allocation
84074289	Published		5/30/2012		2015-508929	JP	SERVER PROFILE TEMPLATES
81968168	Granted	3947381	10/19/2001	4/20/2007	2001-321305	JP	Method And Apparatus For Processing Unit Synchronization For Scalable Parallel Processing
82007006	Granted	4771654	11/10/2003	7/1/2011	2003-379250	JP	Mapping Addresses To Memory Banks Based On At Least One Mathematical Relationship
84301957	Application		3/28/2013			JP	APPARATUS AND METHOD FOR STORAGE DEVICE READING
82209224	Granted	4023748	3/11/2005	10/12/2007	2005-068669	JP	Apparatus For Data Creation And Method Therefor
82253174	Granted	4570325	10/11/2001	8/20/2010	2002-538341	JP	Method And System For Organizing Vendor Information
83728685	Published		6/16/2011		2014-514445	JP	System and Method for Policy Generation
82201541	Granted	4769860	4/19/2006	6/24/2011	2008-507874	JP	Multiplexer Interface To A Nanoscale-crossbar
82214711	Granted	5086359	10/16/2007	41166	P2009-533343	JP	CROSSBAR-MEMORY SYSTEMS AND METHODS FOR WRITING TO AND READING FROM CROSSBAR MEMORY JUNCTIONS OF CROSSBAR-MEMORY SYSTEMS
83215473	Granted	5721839	9/16/2010	4/3/2015	2013-529114	JP	NANOSCALE SWITCHING DEVICE
83255745	Granted	5619296	1/31/2011	9/26/2014	2013-539821	JP	Method and Circuit for Switching a Memristive Device
82175507	Granted	4447606	10/6/2004	40207	2006-534342	JP	Photonic Interconnect System
82181498	Granted	4684294	6/28/2005	2/18/2011	2007-523571	JP	Nonlinear Electromagnetic Quantum Information Processing
82198418	Granted	4699477	11/18/2005	3/11/2011	2007-543280	JP	Composite Material With Controllable Resonant Cells
82207409	Granted	4829971	7/21/2006	40808	P2008-532217	JP	Method And Apparatus For Electromagnetic Resonance Using Negative Index Material
82226639	Granted	5501768	1/31/2008	3/20/2014	2009-548299	JP	Electronic And Optical Circuit Integration Through Wafer Bonding
82230323	Granted	5096573	6/25/2008	9/28/2012	P2010-514804	JP	Micro-electro-mechanical Systems And Photonic Interconnects Employing The Same
82230572	Granted	5286359	7/16/2008	6/7/2013	P2010-517013	JP	Optical Device Including Waveguide Grating Structure
82230632	Granted	4981126	4/20/2007	4/27/2012	P2009-506613	JP	Self-authenticating Quantum Random Bit Generators
82238315	Granted	5302339	1/31/2008	6/28/2013	P2010-544950	JP	MEMS-BASED PELLICLE BEAMSPLITTER
82239500	Granted	5205473	1/31/2008	2/22/2013	P2010-544932	JP	FREE SPACE OPTICAL INTERCONNECT
82240127	Granted	5280455	10/23/2008	5/31/2013	2010-531048	JP	Three-dimensional Memory Module Architectures
82243367	Granted	5133424	10/23/2008	11/16/2012	2010-531044	JP	Photonic Interconnects For Computer System Devices
82405608	Granted	5309211	5/8/2008	7/5/2013	2011-508468	JP	Hierarchical Passive Networks
82716668	Granted	5502880	10/31/2008	3/20/2014	2011-534476	JP	Device For Opticaly Coupling Photonic Elements
82901674	Granted	5364776	4/3/2007	9/13/2013	2011-258371	JP	Merging Multiple Log Entries In Accordance With Merge Properties And Mapping Properties

PATENT
REEL: 038498 FRAME: 0187

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84191744	Application		9/25/2012		2015-533032	JP	NOTIFICATION OF ADDRESS RANGE INCLUDING NON-CORRECTABLE ERROR
84292966	Application		1/31/2013			JP	UPDATING A COMMIT LIST TO INDICATE DATA TO BE WRITTEN TO A FIRMWARE INTERFACE VARIABLE REPOSITORY
90051530	Application		3/28/2013			JP	IDENTIFYING MEMORY OF A BLADE DEVICE FOR USE BY AN OPERATING SYSTEM OF A PARTITION INCLUDING THE BLADE DEVICE
82095035	Granted	4128986	9/2/2004	5/23/2008	2004-255317	JP	Self-contained Spray Cooling Module
82170578	Granted	4639192	5/28/2004	12/3/2010	2006-533516	JP	Air Re-circulation Index
82191365	Granted	4979584	10/5/2005	4/27/2012	P2007-535841	JP	Method Of Providing Storage To Virtual Computer Cluster Within Shared Computing Environment
82223393	Granted	5006930	7/11/2007	6/1/2012	P2009-519522	JP	Defect-and-failure-tolerant Demultiplexer Using Series Replication And Error-control Encoding
82240373	Granted	5467100	4/14/2008	1/31/2014	2011-503958	JP	Fan For Computer Element In The Service Position
82042208	Granted	3612003	5/26/2000	38289	2000-156251	JP	MODULE TYPE DATA STORAGE SYSTEM
82068305	Granted	4398589	4/1/1998	40116	2000-541687	JP	AFN Append Point
84104751	Published		8/17/2012		2015-512614	JP	CONNECTION INCLUDING FLANGE IN COOPERATION WITH RESILIENT MEMBER TO ENGAGE AND DISENGAGE REMOVABLE PRINTED CIRCUIT ASSEMBLY
84262635	Application		1/30/2013			JP	CONTROLLING ERROR PROPAGATION DUE TO FAULT IN COMPUTING NODE OF A DISTRIBUTED COMPUTING SYSTEM
82000379	Granted	4130751	7/23/2002	5/30/2008	2002-213486	JP	Dual Switching Reference Voltages
82103642	Granted	4388127	12/17/2004	10/9/2009	2008-185774	JP	Method And Apparatus For Reducing Soft Errors
82221263	Granted	4836915	10/11/2007	10/7/2011	P2007-265310	JP	Address Handling
82233752	Granted	5002055	5/21/2008	5/25/2012	2010-518168	JP	TAMPER-EVIDENT CONNECTOR
82102145	Granted	4378308	3/24/2005	9/18/2009	2005-085401	JP	Bus Configuration Multiplexer
84184516	Application		9/27/2012		2015-533033	JP	TRANSMIT SPECIFIC TRAFFIC ALONG BLOCKED LINK
82028282	Granted	4410869	3/8/1999	40137	H11-059665	JP	Linear Speed Measurement Independent Of Lateral Position In Linear Tape Systems
82065560	Granted	4716478	12/19/2002	40641	2002-367583	JP	System And Method For Securing Drive Access To Media Based On Medium Identification Numbers
82068116	Granted	4290881	1/16/1998	4/10/2009	2000-540540	JP	Methods And Apparatus For Data Storage On Magnetic Media Including Error Correction Codes
82257476	Granted	5183752	6/27/2008	1/25/2013	P2010-544957	JP	APPARATUS, AND AN ASSOCIATED METHODOLOGY, FOR FACILITATING AUTHENTICATION USING A DIGITAL MUSIC AUTHENTICATION TOKEN

PATENT
REEL: 038498 FRAME: 0188

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82032905	Granted	3655486	3/18/1999	3/11/2005	H11-073367	JP	System For Logging And Enabling Ordered Retrieval Of Management Events
82195601	Granted	4332149	11/25/2005	6/26/2009	2005-340545	JP	MPLS VPN Fault Management Using IGP Monitoring System
84274039	Application		12/4/2012			JP	Displaying Information Technology Conditions with Heat Maps
82244426	Granted	5313336	5/29/2008	41467	2011-507399	JP	Method And System Of Testing Software Using Real Time Replication
90041019	Application		5/31/2011		2015-166360	JP	APPLICATION SECURITY TESTING
81966917	Granted	4422359	4/6/2001	12/11/2009	2001-108265	JP	Method And System For Using A Universal Serial Bus (USB) As A Peer-to-peer Network
82196348	Granted	4668698	6/28/2005	1/21/2011	2005-187526	JP	Enablement Of Software-controlled Services Required By Installed Applications
82201097	Granted	4463212	1/25/2006	2/26/2010	2006-016022	JP	Method And System Of Aligning Execution Point Of Duplicate Copies Of A User Program By Copying Memory Stores
82204532	Granted	4121525	1/6/2006	5/9/2008	2006-001432	JP	Method For Controlling Resource Utilization And Computer System
82207343	Granted	4792047	3/3/2005	7/29/2011	2007-557671	JP	A Method Of Predicting Availability Of A System
82241426	Granted	5042372	2/26/2008	41110	P2010-547598	JP	Method And Apparatus For Performing A Host Enumeration Process
82128173	Granted	3895005	6/5/1997	12/22/2006	H09-162024	JP	CONNECTING METHOD FOR EXTENSION CARD AND COMPUTER SYSTEM TO WHICH EXTENSION CARD CAN BE CONNECTED
82177997	Granted	4994596	3/15/2005	41047	P2005-072279	JP	SYSTEM AND METHOD FOR VOLTAGE CONTROL OF SUB CIRCUIT
82253477	Granted	4443924	10/15/2002	1/22/2010	2003-537269	JP	Method And System For Communicating Telematics Messages
82675557	Granted	5149997	3/12/2009	12/7/2012	2011-533190	JP	NANOWIRE BOLOMETER PHOTODETECTOR
83165234	Granted	5696213	7/22/2010	2/13/2015	2013-520695	JP	Context-based Item Bookmarking
84162976	Published		8/30/2012		2015-527433	JP	ENCRYPTED DATA STORE FOR RECORDS
82891509	Granted	5296924	10/26/2009	6/21/2013	2012-518765	JP	Quantum Repeater And System And Method For Creating Extended Entanglements
82184180	Granted	4397398	1/28/2005	10/30/2009	2006-551584	JP	Split-stream Multi-access Point Data Transmission (as Amended)
82006997	Granted	4348093	2/21/2003	7/24/2009	2003-043586	JP	System And Method For Memory Interleaving Using Cell Map With Entry Grouping For Higher-way Interleaving
84119249	Published		10/13/2010		2014-255698	JP	DASHBOARD DISPLAY METHOD AND APPARATUS
82254038	Granted	5027386	5/6/2003	6/29/2012	P2004-504164	JP	Payment System And Method

PATENT
REEL: 038498 FRAME: 0189

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0190

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84185037	Application		9/14/2012		2015-531896	JP	DETERMINING A LOAD DISTRIBUTION FOR DATA UNITS AT A PACKET INSPECTION DEVICE
82128611	Granted	3641354	8/18/1997	1/28/2005	H09-221332	JP	A SERVER CONTROLLER CONFIGURED TO SNOOP AND RECEIVE A DUPLICATIVE COPY OF DISPLAY DATA PRESENTED TO A VIDEO CONTROLLER
82219892	Granted	4870047	8/7/2007	40872	P2007-205051	JP	Methods And Systems For Arbitrating Error Handling And Firmware Updates
82277636	Granted	4033727	7/8/2002	11/2/2007	2002-198988	JP	System For Controlling Provision Of Information And Mothod For Controlling Provision Of Information
84160128	Application		8/16/2013		2015-529849	JP	NETWORK SYSTEM FOR IMPLEMENTING A CLOUD PLATFORM
82218830	Granted	4995837	1/26/2007	5/18/2012	P2008-552399	JP	Mixed-scale Electronic Interface
82066370	Granted	4515763	8/28/2002	40319	2003-525793	JP	Quantum Information Processing Method And Apparatus
82094648	Granted	4829788	7/22/2004	9/22/2011	P2006-520891	JP	IMPROVEMENTS RELATING TO QUANTUM CYPTOGRAPHY
82217393	Granted	5082039	8/11/2006	41166	P2008-526233	JP	Quantum Repeater
82219136	Granted	5096457	4/20/2007	9/28/2012	P2009-506614	JP	Optical-based, Self-authenticating Quantum Random Number Generators
82230380	Granted	5079088	6/16/2008	9/7/2012	2010-513232	JP	OPTICAL INTERCONNECT
82242677	Granted	5265757	4/2/2008	5/10/2013	P2011-502904	JP	PRISM BEAMSPLITTERS
82405579	Granted	5186593	5/9/2008	41299	2011-508456	JP	Optically Enabled Broadcast Bus
82595666	Granted	5490116	7/14/2008	3/7/2014	2011-518690	JP	Hybrid Guided-mode Resonance Filter And Method Employing Distributed Bragg Reflection
83235825	Granted	5690411	10/27/2010	2/6/2015	2013-536572	JP	RECEIVERS AND TRANSCEIVERS FOR OPTICAL MULTIBUS SYSTEMS
82194665	Granted	4809184	10/25/2006	8/26/2011	P2006-289666	JP	Impingement Cooling Of Components In An Electronic System
82091276	Granted	4498735	6/7/2002	4/23/2010	2003-504201	JP	Secure Machine Platform That Interfaces To Operating Systems And Customized Control Programs
82184303	Granted	4897685	8/18/2005	1/6/2012	P2007-529993	JP	Mapping Power System Componets
82190423	Granted	4616888	10/31/2005	10/29/2010	2007-544354	JP	Spray Cooling With Spray Deflection
82223510	Granted	5121921	3/21/2008	11/2/2012	2010-500948	JP	Three-dimensional Crossbar Array Systems And Methods For Writing Information To And Reading Information Stored In Three-dimensional Crossbar Array Junctions
82242548	Granted	5160654	3/10/2008	12/21/2012	P2010-550641	JP	Two-phase Optical Communication Methods And Optical Bus Systems For Implementing The Same
82629486	Granted	5289569	8/8/2008	6/14/2013	2011-522032	JP	Independently Controllable And Reconfigurable Virtual Memory Devices In Memory Modules That Are Pin-compatible With Standard Memory Modules
82629546	Granted	5400886	8/13/2008	11/1/2013	2011-522943	JP	Dynamic Utilization Of Power-down Modes In Multi-core Memory Modules

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83134889	Granted	5686424	6/16/2010	1/30/2015	P2013-515308	JP	Computer Racks
84163282	Published		9/12/2012		2015-527435	JP	VALIDATING A METADATA TREE USING A METADATA INTEGRITY VALIDATOR
84164192	Published		9/12/2012		2015-527436	JP	METADATA TREE WITH KEY ROTATION INFORMATION
82176869	Granted	4635009	5/21/2004	11/26/2010	2006-530523	JP	Use Of Certified Secrets In Communication
82242419	Granted	5100844	10/14/2008	10/5/2012	2010-530558	JP	QUANTUM KEY DISTRIBUTION SYSTEM USING LDPC CODES WITH A GRAPH HAVING A TOROID STRUCTURE
82236236	Granted	5031106	1/30/2008	7/6/2012	P2010-544938	JP	Servo Write Head Gap Width Correction
82169123	Granted	4673353	10/23/2007	1/28/2011	2007-275122	JP	Cache And Method For Cache Bypass Functionality
82192787	Granted	4465329	4/19/2006	2/26/2010	2006-115313	JP	External State Cache For Computer Processor
90051558	Application		3/29/2013			JP	SHARING FIRMWARE AMONG AGENTS IN A COMPUTING NODE
82128728	Granted	4002337	1/5/1998	8/24/2007	H10-000291	JP	NETWORK SWITCH WITH MULTIPLE BUS ARCHITECTURE
82164131	Granted	3230960	10/9/1995	9/14/2001	07-261671	JP	VARIABLE FREQUENCY CLOCK CONTROL FOR MICROPROCESSOR-BASED COMPUTER SYSTEMS
82238171	Granted	5400135	4/28/2008	11/1/2013	2011-506241	JP	Adjustable Server-transmission Rates Over Fixed-speed Backplane Connections Within A Multi-server Enclosure
82716613	Granted	5341198	10/30/2008	8/16/2013	P2011-534472	JP	BIT Inversion For Communication Interface
82029092	Granted	3659820	11/5/1998	38436	H10-314616	JP	Tape Cartridge Reel Lock
82047134	Granted	3585169	5/23/2001	8/13/2004	2001-153896	JP	Positioning System For Removable Data Storage Cartridges
82067738	Granted	4124887	10/29/1998	5/16/2008	H10-308160	JP	Flush Points
82104941	Granted	4381012	3/14/2003	10/2/2009	2003-069522	JP	An Interactive Service Searching Method Using Meta-date Uds(guid)system
82185479	Granted	4481180	1/26/2005	3/26/2010	2005-018281	JP	Providing A Flexible Protection Model In A Computer System By Decoupling Protection From Computer Privilege Level
82226249	Granted	5118438	10/26/2007	10/26/2012	P2007-278297	JP	Improving Computer Networks
81993131	Granted	4025569	4/2/2002	10/12/2007	2002-099588	JP	Method And System For Controlling A Policy-based Network
82189412	Granted	4621087	7/25/2005	11/5/2010	2005-214194	JP	System And Method For Operating Load Balancers For Multiple Instance Applications
82189415	Granted	4374391	7/25/2005	9/11/2009	2008-068757	JP	System And Method For Operating Load Balancers For Multiple Instance Applications
82099388	Granted	4234613	1/20/2004	12/19/2008	2004-011776	JP	Methods And Apparatus For Rapidly Activating Inactive Components In A Computer System
82214450	Granted	4949157	7/24/2007	3/16/2012	P2007-192067	JP	SYSTEM AND METHOD FOR RECOMPILING CODE BASED ON LOCALITY DOMAIN AND THREAD AFFINITY IN NUMA COMPUTER SYSTEMS

PATENT
REEL: 038498 FRAME: 0191

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82227998	Granted	4848392	5/15/2008	10/21/2011	P2008-128046	JP	Method And System To Determine Device Criticality For Hot-plugging In Computer Configurations
84301896	Application		3/28/2013			JP	Implementing Coherency with Reflective Memory
82251530	Granted	4480189	2/12/1996	3/26/2010	H08-525735	JP	System And Method For Electronic Transfer Of Funds Using An Automated Teller Machine To Dispense The Transferred Funds
83640289	Granted	5766346	4/7/2011	6/26/2015	2014-503640	JP	METHOD AND APPARATUS FOR MOVING A SOFTWARE OBJECT
82004366	Granted	4616558	4/16/2003	10/29/2010	2003-586537	JP	Using Pattern Recognition Techniques For Energy Management In Large Data Centers
82195847	Granted	4685159	4/26/2006	2/18/2011	2008-509095	JP	Nanoscale Interconnection Interface
82209458	Granted	4864098	1/23/2007	40865	P2008-552379	JP	Compute Clusters Employing Photonic Interconnections For Transmitting Optical Signals Between Compute Cluster Nodes
82209578	Granted	5133347	10/12/2007	11/16/2012	P2009-532429	JP	Composite Material With Chirped Resonant Cells
82226996	Granted	5289330	1/10/2008	6/14/2013	2009-545602	JP	Capacitively Coupling Layers Of A Multilayer Device
83242122	Granted	5683712	10/29/2010	1/23/2015	2013-536581	JP	OPTICAL CONNECTOR
82579547	Granted	5357777	12/28/2007	41523	2009544284	JP	Storing Log Data Efficiently While Supporting Querying To Assist in Computer Network Security
84291305	Application		1/15/2013			JP	Dynamic Firmware Updating
82172558	Granted	4317876	5/13/2004	5/29/2009	2006-533127	JP	Redundant Data Assigment In A Data Storage System
82232180	Granted	4929400	7/30/2008	2/17/2012	P2010-519919	JP	Electronic System Having Free Space Optical Elements
82235051	Granted	5070342	10/23/2008	8/24/2012	2010-531049	JP	All Optical Fast Distributed Arbitration In A Computer System Device
82239545	Granted	5563986	11/27/2007	6/20/2014	2010-534928	JP	SYSTEM SYNTHESIS TO MEET AN EXERGY LOSS TARGET VALUE
83681016	Granted	5666722	3/14/2011	12/19/2014	P2013-557998	JP	MEMORY INTERFACE
82191977	Granted	4208884	1/24/2006	10/31/2008	2006-015205	JP	Reversible Fan Of Electronic Module
82165229	Granted	10-0290191-0000	12/27/1996	2/28/2001	10-1996-0072712	KR	METHOD AND APPARATUS FOR RATE-BASED SCHEDULING USING A RELATIVE ERROR APPROACH
82180970	Granted	1188252	1/6/2006	9/27/2012	2006-0001748	KR	Systems And Methods For Mitigating Latency Associated With Error Detection And Correction
82186013	Granted	10-0965965-0000	11/1/2006	40345	10-2008-7013211	KR	Crossbar-array Designs And Wire Addressing Methods That Tolerate Misalignment Of Electrical Components With Wires At Wire Overlap Points
82200083	Granted	10-0929305-0000	10/14/2005	11/23/2009	10-2007-7009540	KR	Nanoscale Latches And Impedance-encoded Logic For Use In Nanoscale State Machines, Nanoscale Pipelines, And In Other Nanoscale Electronic Circuits
82207298	Granted	10-1407181	8/1/2007	6/5/2014	2009-7002204	KR	Cooling Fan Module

PATENT
REEL: 038498 FRAME: 0192

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82208303	Granted	1014231550000	1/29/2008	7/18/2014	10-2009-7015918	KR	Metamaterial Structures For Light Processing And Methods Of Processing Light
82208360	Granted	10-0959426-0000	6/21/2006	5/14/2010	10-2007-7029725	KR	Integrated Circuit Device Having Optically Coupled Layers
82214624	Granted	10-1408471	10/16/2007	6/10/2014	2009-7009995	KR	Photonic-based Interconnects For Interconnecting Multiple Integrated Circuits
82224167	Granted	10-1455706	4/25/2008	10/22/2014	2009-7022246	KR	Nanowire-based Opto-electronic Devices
82225673	Granted	10-1062790-0000	4/20/2007	8/31/2011	10-2008-7025624	KR	OPTICAL-BASED, SELF-AUTHENTICATING QUANTUM RANDOM NUMBER GENERATORS
82225727	Granted	10-1343705	10/16/2007	12/13/2013	2009-7009993	KR	Photonic-interconnect Systems For Reading Data From Memory Cells And Writing Data To Memory Integrated Circuits
82226057	Granted	10-1513315	3/28/2008	4/13/2015	2009-7020595	KR	Data Transmission System And Method
82227041	Granted	10-1448575	1/3/2008	10/1/2014	2009-7015026	KR	Photonic Systems And Methods For Encoding Data In Carrier Electromagnetic Waves
82230539	Published		6/4/2008		2009-7025885	KR	OPTICAL INTERCONNECT
82233158	Granted	10-1419292	2/20/2008	7/8/2014	2010-7018505	KR	Redriver With Two Reference Clocks And Method Of Operation Thereof
82234526	Granted	10-1516332	6/16/2008	4/23/2015	2009-7026392	KR	Misalignment Tolerant Free Space Optical Transceiver
82234547	Published		7/16/2008		2010-7001800	KR	Free Space WDM Signal Detector
82234985	Granted	10-1516690	7/30/2008	4/24/2015	2010-7004424	KR	Microresonator Systems And Methods Of Fabricating The Same
82235150	Granted	10-1434239	1/31/2008	8/20/2014	2010-7019398	KR	MODULAR DATA PROCESSING COMPONENTS AND SYSTEMS
82235171	Granted	10-1517423	10/15/2008	4/28/2015	2010-7008114	KR	PLASMONIC HIGH-SPEED DEVICES FOR ENHANCING THE PERFORMANCE OF MICROELECTRONIC DEVICES
82238141	Granted	10-1409308	1/30/2008	6/12/2014	10-2010-7019266	KR	OPTICAL INTERCONNECTS
82238336	Granted	10-1395167	1/31/2008	5/8/2014	10-2010-7019445	KR	OPTICAL TAPS FOR CIRCUIT BOARD-MOUNTED OPTICAL WAVEGUIDES
82239104	Granted	10-1379172	4/2/2008	41719	2010-7024453	KR	Disk Drive Data Encryption
82239464	Granted	10-1404529	1/30/2008	5/30/2014	10-2010-7019217	KR	PLASMON ENHANCED LIGHT-EMITTING DIODES
82241450	Granted	101400597	2/18/2008	5/21/2014	20107018373	KR	Systems And Methods Of Communicatively Coupling A Host Computing Device And A Peripheral Device
82241471	Granted	10-1445436	4/2/2008	41904	2010-7024661	KR	Converting Resets In Shared I/O System
82241894	Granted	10-1468520	3/4/2008	11/27/2014	2010-7019672	KR	ANGLE SENSOR, SYSTEM AND METHOD EMPLOYING GUIDED-MODE RESONANCE
82242221	Granted	10-1434237	3/28/2008	8/20/2014	2010-7021578	KR	FLEXIBLE OPTICAL INTERCONNECT
82242581	Granted	10-1465293	3/11/2008	11/19/2014	2010-7022707	KR	Optoelectronic Switches Using On-chip Optical Waveguides
82242641	Granted	10-1474811	4/2/2008	12/15/2014	2010-7022135	KR	IMAGE-ROTATION PRISMS AND OPTICAL INTERCONNECTS EMPLOYING THE SAME
82242659	Granted	10-1434236	4/4/2008	8/20/2014	2010-7022113	KR	BEAMSPLITTERS WITH OFFSET COMPENSATION

PATENT
REEL: 038498 FRAME: 0193

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82242716	Granted	10-1470994	5/1/2008	12/3/2014	10-2010-7024409	KR	Storing Checkpoint Data In Non-volatile Memory
82245329	Granted	10-1453946	5/7/2008	10/16/2014	2010-7027530	KR	ARRAYS, SYSTEM AND METHOD FOR BI-DIRECTIONAL DATA TRANSMISSION
82247459	Granted	10-1489416	9/29/2008	1/28/2015	2010-7020549	KR	Neuromorphic Circuit
82274732	Granted	10-1045362-0000	11/7/2003	6/23/2011	10-2005-7008205	KR	Active Network Defense System and Method
82405417	Granted	10-1464026	5/8/2008	11/14/2014	2010-7027638	KR	Optical Polymorphic Computer Systems
82405549	Granted	10-1394844	5/9/2008	5/7/2014	2010-7027654	KR	Proximity Free Space Optical Interconnect
82405581	Granted	10-1421777	5/9/2008	7/15/2014	2010-7027755	KR	Optically Enabled Broadcast Bus
82405610	Granted	10-1389587	5/8/2008	4/21/2014	2010-7027627	KR	Hierarchical Passive Networks
82573901	Granted	10-1548779	6/17/2008	8/25/2015	2011-7001225	KR	Optical Broadcast Systems And Methods
82576824	Granted	10-1433425	6/9/2008	8/18/2014	2010-7029556	KR	Cylindrical Resonators For Optical Signal Routing
82579392	Granted	10-1497610	10/25/2007	2/24/2015	2009-7004992	KR	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security
82581170	Granted	10-1150653	5/12/2005	5/21/2012	2006-7025455	KR	APPARATUS AND METHOD FOR DEVELOPING, TESTING AND MONITORING SECURE SOFTWARE
82595668	Granted	10-1443728	7/14/2008	9/17/2014	2011-7003251	KR	Hybrid Guided-mode Resonance Filter And Method Employing Distributed Bragg Reflection
82595707	Granted	10-1510356	7/31/2008	4/1/2015	2011-7002500	KR	Nano-wire Optical Block Devices For Amplifying, Modulating, And Detecting Optical Signals
82629488	Granted	10-1477849	8/8/2008	12/23/2014	2011-7005365	KR	Independently Controllable And Reconfigurable Virtual Memory Devices In Memory Modules That Are Pin-compatible With Standard Memory Modules
82629548	Granted	10-1474597	8/13/2008	12/12/2014	2011-7005846	KR	Dynamic Utilization Of Power-down Modes In Multi-core Memory Modules
82634150	Granted	10-1508618	8/26/2008	3/30/2015	2011-7006857	KR	Tunable Nanowire Resonant Cavity For Optical Modulation
82634173	Granted	10-1479149	8/27/2008	12/29/2014	2011-7004477	KR	Dynamic Impedance Receiver Circuit For Ultrafast Low-power Photodetector
82653592	Published		9/22/2009		2011-7009994	KR	DIFFERENTIAL ON-LINE TERMINATION
82654479	Published		9/24/2008		2011-7006725	KR	Polarization Maintaining Large Core Hollow Waveguides
82678346	Granted	10-1468521	12/23/2008	11/27/2014	2011-7014537	KR	Memristive Device And Methods Of Making And Using The Same
82716615	Granted	10-1520141	10/30/2008	5/7/2015	2011-7009958	KR	BIT Inversion For Communication Interface
82716637	Granted	10-1489033	10/31/2008	1/27/2015	2011-7012118	KR	Variably Configurable Computer Buses
82716703	Published		10/31/2008		2011-7012393	KR	Optical Connector Interconnection System And Method
82716730	Granted	10-1464816	10/31/2008	11/18/2014	2011-7012106	KR	Optical Beam Couplers And Splitters
82731795	Granted	1011114330000	11/22/2010	1/26/2012	10-2010-7026179	KR	Active Network Defense System and Method
82790079	Granted	10-1520143	1/9/2009	5/7/2015	2011-7018485	KR	OPTICAL ENGINE FOR POINT-TO-POINT COMMUNICATIONS
82837230	Published		3/27/2009		2011-7022663	KR	SWITCHABLE JUNCTION WITH INTRINSIC DIODE

PATENT
REEL: 038498 FRAME: 0194

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82837341	Published		6/25/2009		2011-7030803	KR	SWITCHABLE JUNCTION WITH INTRINSIC DIODES WITH DIFFERENT SWITCHING THRESHOLDS
82859849	Granted	10-1531981	4/29/2009	6/22/2015	2011-7026266	KR	OPTICAL MEMORY EXPANSION
82924257	Application		9/4/2009		2012-7008623	KR	MEMRISTORS BASED ON MIXED-METAL-VALENCE COMPOUNDS
82925133	Published		3/12/2010		2012-7007192	KR	DEVICE HAVING MEMRISTIVE MEMORY
82925849	Published		9/4/2009		2012-7008691	KR	SWITCHABLE JUNCTION WITH AN INTRINSIC DIODE FORMED WITH A VOLTAGE DEPENDENT RESISTOR
83165236	Published		7/22/2010		2013-7004358	KR	Context-based Item Bookmarking
83168702	Granted	10-1448412	8/30/2010	9/30/2014	2013-7005370	KR	Multilayer Memory Array
83209019	Published		11/1/2010		2013-7011186	KR	STORAGE ELEMENT READING USING RING OSCILLATOR
83215475	Granted	10-1510258	9/16/2010	42096	2013-7009037	KR	NANOSCALE SWITCHING DEVICE
83219399	Granted	10-1479154	10/11/2010	42002	2013-7010688	KR	MICROFLUIDIC CHIP ASSEMBLY
83255663	Published		2/28/2011		2013-7015619	KR	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83423125	Granted	10-1510358	1/31/2011	42095	2013-7020396	KR	BROADBAND OPTICAL BEAM SPLITTERS
83515794	Granted	10-1460122	2/1/2011	41947	2013-7023031	KR	NEGATIVE DIFFERENTIAL RESISTANCE DEVICE
83546345	Published		2/10/2011		2013-7023373	KR	GRATING-BASED POLARIZERS AND OPTICAL ISOLATORS
83566668	Published		8/25/2011		10-2014-7004419	KR	Model-based stereoscopic and multiview cross-talk reduction
83680966	Published		4/6/2011		10-2013-7026306	KR	IDENTIFYING SIMILARITY
83681018	Granted	10-1527308	3/14/2011	42157	2013-7027086	KR	MEMORY INTERFACE
83721332	Published		5/31/2011		2013-7031852	KR	AUTOMATED SECURITY TESTING
83735427	Published		6/28/2011		10-2013-7034643	KR	SHIFTABLE MEMORY
83769079	Published		7/27/2011		10-2014-7002360	KR	Method and System for Reducing Write-Buffer Capacities within Memristor-Based Data-Storage Devices
83776071	Published		7/29/2011		10-2014-7005376	KR	CREDENTIAL VALIDATION
83784001	Published		7/12/2011		10-2014-7003567	KR	AUDIO SAMPLE
83786528	Published		7/22/2011		2014-7003655	KR	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83789133	Published		9/14/2011		10-2014-7006553	KR	IMPARTING DURABILITY TO A TRANSACTIONAL MEMORY SYSTEM
83807343	Granted	10-1528572	8/3/2011	42163	2014-7004603	KR	NITRIDE-BASED MEMRISTORS
83815239	Published		8/26/2011		2014-7006935	KR	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83835759	Published		9/6/2011		2014-7008220	KR	MECHANICALLY ALIGNED OPTICAL ENGINE
83835851	Published		9/15/2011		2014-7009080	KR	VERTICAL-CAVITY SURFACE-EMITTING LASERS
83855590	Granted	10-1487291	3/14/2014	42026	2014-7006885	KR	Photonic Systems And Methods For Encoding Data In Carrier Electromagnetic Waves

PATENT
REEL: 038498 FRAME: 0195

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83857918	Published		10/12/2011		2014-7009994	KR	SELECT DEVICE FOR CROSS POINT MEMORY STRUCTURES
83858312	Published		10/21/2011		2014-7010291	KR	GRATING COUPLERS WITH DEEP-GROOVE NON-UNIFORM GRATINGS
83862114	Published		10/28/2011		2014-7013986	KR	METAL-INSULATOR PHASE TRANSITION FLIP-FLOP
83875496	Published		10/27/2011		10-2014-7011218	KR	SHIFTABLE MEMORY SUPPORTING ATOMIC OPERATION
83881936	Published		10/28/2011		10-2014-7011192	KR	ROW SHIFTING SHIFTABLE MEMORY
83883379	Published		10/28/2011		2014-7014302	KR	DEVICES INCLUDING A DIAMOND LAYER
83948715	Published		1/9/2012		10-2014-7015602	KR	Optical Connections
83948789	Published		1/10/2012		2014-7015546	KR	OPTICAL CONNECTORS
83948835	Published		1/12/2012		10-2014-7015966	KR	INTEGRATED SUB-WAVELENGTH GRATING SYSTEM
83951537	Published		1/27/2012		2014-7017677	KR	Glass-Silicon Wafer-Stacked Opto-Electronic Platforms
83959952	Published		1/31/2012		2014-7017837	KR	APPARATUS FOR USE IN OPTOELECTRONICS
83981742	Published		3/27/2012		2014-7021356	KR	NONVOLATILE MEMORY BANK GROUPS
83984212	Published		1/6/2012		2014-7021940	KR	CONNECTOR MODULES HAVING OPTICAL CONNECTORS MOVEABLE BETWEEN A RETRACTED POSITION AND AN EXTENDED POSITION
83992370	Published		4/18/2012		2014-7020753	KR	FLEXIBLE CIRCUIT CABLE WITH FLOATING CONTACT
83995719	Published		2/9/2012		2014-7021264	KR	Flexible Cooling of Server Tray Through Dry Disconnect Thermal Connector.
83995736	Published		3/12/2012		20147021265	KR	LIQUID TEMPERATURE CONTROL COOLING
83995831	Published		4/20/2012		20147020915	KR	VOLTAGE REGULATOR CONTROL SYSTEM
83998911	Allowed		1/30/2012		2014-7021344	KR	DYNAMIC/STATIC RANDOM ACCESS MEMORY (D/SRAM)
84020493	Published		4/25/2012		2014-7026686	KR	NONLINEAR MEMRISTORS
84022151	Published		2/22/2012		2014-7026285	KR	HIDING LOGICAL PROCESSORS FROM AN OPERATING SYSTEM ON A COMPUTER
84068288	Published		4/16/2012		2014-7028937	KR	INTEGRATED OPTICAL SUB-ASSEMBLY
84072043	Published		6/28/2012		2014-7030513	KR	MEMORY MODULE WITH A DUAL-PORT BUFFER
84076056	Published		6/28/2012		2014-7030453	KR	Optical Shuffling
84076176	Published		7/26/2012		2015-7001721	KR	OPTICAL ENGINE
84078607	Published		7/31/2012		2014-7030671	KR	NON-VOLATILE RESISTIVE MEMORY CELLS
84104755	Published		8/17/2012		2014-7032040	KR	CONNECTION INCLUDING FLANGE IN COOPERATION WITH RESILIENT MEMBER TO ENGAGE AND DISENGAGE REMOVABLE PRINTED CIRCUIT ASSEMBLY
84112893	Published		7/30/2012		2015-7001809	KR	OPTICAL COUPLING SYSTEM AND METHOD FOR FABRICATING THE SAME
84113025	Published		7/30/2012		2015-7001697	KR	COMPACT PHOTONIC PLATFORMS
84140153	Published		10/30/2012		2015-7002546	KR	SMART MEMORY BUFFERS
84141100	Published		9/10/2012		2015-7002427	KR	USE OF PRIMARY AND SECONDARY CONNECTION TABLES
84158904	Published		9/13/2012		2015-7005987	KR	CONTROLLING TEMPERATURES IN OPTICAL CIRCUITS

PATENT
REEL: 038498 FRAME: 0196

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84160132	Published		8/16/2013		2015-7004207	KR	NETWORK SYSTEM FOR IMPLEMENTING A CLOUD PLATFORM
84162683	Published		8/29/2012		2015-7006785	KR	SECURITY SCAN BASED ON DYNAMIC TAINT
84182216	Published		9/28/2012		2015-7009868	KR	Application Security Testing
84184520	Published		9/27/2012		2015-7007046	KR	TRANSMIT SPECIFIC TRAFFIC ALONG BLOCKED LINK
84193717	Application		1/14/2013		2015-7017338	KR	NONVOLATILE MEMORY ARRAY LOGIC
84195012	Application		1/28/2013		2015-7018797	KR	RADIUSED ALIGNMENT POST FOR SUBSTRATE MATERIAL
84210930	Application		1/30/2013		2015-7020716	KR	RUNTIME BACKUP OF DATA IN A MEMORY MODULE
84241564	Published		12/7/2012		2015-7016151	KR	NETWORK RESOURCE MANAGEMENT
84290795	Application		1/30/2013		2015-7020722	KR	NON-VOLATILE MEMORY WRITE MECHANISM
84301128	Application		1/31/2013		2015-7020664	KR	ADAPTIVE -RANULARITY ROW BUFFER CACHE
84304474	Application		1/31/2013		2015-7020833	KR	SELECTING CIRCUITS OF A MULTI-LEVEL INTEGRATED CIRCUIT
84304491	Application		3/15/2013		2015-7020802	KR	MEMORY MODULE CONTROLLER SUPPORTING EXTENDED WRITES
84306269	Application		3/20/2013		2015-7020796	KR	CACHING DATA IN A MEMORY SYSTEM HAVING MEMORY NODES AT DIFFERENT HIERARCHICAL LEVELS
90022764	Application		1/31/2013		2015-7020916	KR	RADIX ENHANCEMENT FOR PHOTONIC PACKET SWITCH
90024613	Application		3/25/2013		2015-7026567	KR	MEMORY DEVICE HAVING ERROR CORRECTION LOGIC
90051591	Application		3/29/2013		2015-7026438	KR	SHARING FIRMWARE AMONG AGENTS IN A COMPUTING NODE
83995801	Published		3/12/2012		2014-7021350	KR	RACK COOLING SYSTEM WITH A COOLING SECTION
82651138	Published		9/23/2009		2011-7009759	KR	MEMORY MODULE INCLUDING VOLTAGE SENSE MONITORING INTERFACE
84301900	Application		3/28/2013		2015-7020797	KR	Implementing Coherency with Reflective Memory
83991633	Published		2/27/2012		10-2014-7021347	KR	METHOD AND SYSTEM FOR VEHICLE PERSONALIZATION
82716525	Granted	10-1475113	10/30/2008	41988	2011-7009754	KR	Redundant Array Of Independent Disks (RAID) Write Cache Sub-assembly
82180511	Granted	10-1086599	1/11/2005	40864	2005-0002604	KR	Uncertain Data Arrival Time
82043036	Granted	627225	12/17/1998	38887	2000-7011047	KR	Tape Leader Pin Asembly And Method For Making The Same
82086053	Granted	10-0965991-0000	4/25/2006	40345	10-2007-7024484	KR	Three-dimensional Nanoscale Crossbars
82201547	Granted	10-0936858-0000	4/19/2006	40184	10-2007-7024049	KR	Multiplexer Interface To A Nanoscale-crossbar
82226336	Granted	10-1390430	10/3/2007	41752	10-2009-7009024	KR	Electrically Actuated Switch
82244567	Granted	10-1438469	5/22/2008	9/1/2014	2010-7014868	KR	HYBRID MICROSCALE-NANOSCALE NEUROMORPHIC INTEGRATED CIRCUIT
83834201	Published		9/2/2011		2014-7008680	KR	APPARATUS TO STORE DATA AND METHODS TO READ MEMORY CELLS
83933016	Published		12/12/2011		2014-7014369	KR	MEMRISTORS AND METHODS OF FABRICATION
84110966	Published		7/27/2012		2015-7001911	KR	DYNAMIC SENSE CIRCUITRY

PATENT
REEL: 038498 FRAME: 0197

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82198424	Granted	10-0871520-0000	11/18/2005	39777	10-2007-7013892	KR	Composite Material With Controllable Resonant Cells
82230518	Published		7/30/2008		2010-7002259	KR	Optical Interconnect
82232513	Granted	10-1508619	7/30/2008	3/30/2015	2010-7004502	KR	System And Methods For Routing Optical Signals
82233452	Granted	10-1492576	10/15/2008	2/5/2015	2010-7010650	KR	OPTICAL INTERCONNECT SYSTEM PROVIDING COMMUNICATION BETWEEN COMPUTER SYSTEM COMPONENTS
82234952	Granted	10-1474813	7/30/2008	12/15/2014	2010-7002202	KR	Microresonator System And Methods Of Fabricating The Same
82235015	Granted	10-1513324	10/23/2008	4/13/2015	2010-7008980	KR	Three-dimensional Die Stacks With Inter-device And Intra-device Optical Interconnect
82235264	Published		7/16/2008		2010-7001795	KR	Plasmon-enhanced Electromagnetic-radiation-emitting Devices And Methods For Fabricating The Same
82238318	Granted	10-1409307	1/31/2008	41802	10-2010-7019390	KR	MEMS-BASED PELLICLE BEAMSPLITTER
82240130	Published		10/23/2008		2010-7009034	KR	Three-dimensional Memory Module Architectures
82247627	Published		4/29/2010		2010-7027424	KR	OPTICAL WAVEGUIDES AND METHODS OF MAKING THE SAME
82774441	Published		1/7/2009		2011-7015604	KR	PHOTONIC WAVEGUIDE
83706049	Published		4/20/2011		2013-7029774	KR	LIGHT-DETECTION SYSTEMS
83932080	Published		12/9/2011		2014-7014368	KR	Optical Connections
83987013	Published		2/29/2012		2014-7021329	KR	UNIDIRECTIONAL RING LASERS
83992346	Published		4/11/2012		2014-7020693	KR	ROUTING OPTICAL SIGNALS
82223399	Granted	10-1036097-0000	7/11/2007	40676	10-2009-7002870	KR	Defect-and-failure-tolerant Demultiplexer Using Series Replication And Error-control Encoding
82692037	Granted	10-1444514	10/31/2008	9/18/2014	2011-7009758	KR	Prioritized Optical Arbitration Systems And Methods
82929798	Published		3/7/2011		10-2012-7006685	KR	DATA STORAGE APPARATUS AND METHODS
83680934	Published		3/16/2011		10-2013-7027251	KR	SYSTEMS AND METHODS FOR FINE GRANULARITY MEMORY SPARING
83862748	Published		10/7/2011		2014-7009069	KR	MAPPING PERSISTENT STORAGE
82233755	Granted	1487290	5/21/2008	42026	2010-7001469	KR	TAMPER-EVIDENT CONNECTOR
82241564	Granted	10-1324844	3/25/2008	41575	2010-7020960	KR	System And Method For Transforming PCIE SR-IOV Functions To Appear As Legacy Functions
82653943	Allowed		1/30/2009		2011-7017908	KR	SYSTEM AND METHOD FOR INTEGRATING CAPACITY PLANNING AND WORKLOAD MANAGEMENT
90024626	Application		9/24/2015		2015-7026437	KR	REGULATING MEMORY ACTIVATION RATES
90025977	Application		3/28/2013		2015-7026674	KR	Shared Memory System
83728688	Published		6/16/2011		10-2013-7033118	KR	System and Method for Policy Generation
82214717	Granted	10-1395170	10/16/2007	41767	10-2009-7010048	KR	CROSSBAR-MEMORY SYSTEMS AND METHODS FOR WRITING TO AND READING FROM CROSSBAR MEMORY JUNCTIONS OF CROSSBAR-MEMORY SYSTEMS
82218836	Granted	10-1099988	1/26/2007	40898	2008-7018510	KR	Mixed-scale Electronic Interface

PATENT
REEL: 038498 FRAME: 0198

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0199

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82631633	Granted	10-1438468	7/31/2008	41883	2011-7004655	KR	Multi-layer Reconfigurable Switches
82678337	Granted	10-1528657	10/29/2008	6/8/2015	2011-7012143	KR	Electrically Actuated Device And Method Of Controlling The Formation Of Dopants Therein
83255748	Granted	10-1528180	1/31/2011	6/5/2015	2013-7015620	KR	Method and Circuit for Switching a Memristive Device
83256532	Granted	10-1528209	1/31/2011	42160	2013-7014986	KR	Method and Circuit for Switching a Memristive Device in an Array
83762917	Granted	10-1434242	11/29/2013	41871	2013-7031876	KR	Electrically Actuated Switch
83858251	Published		10/21/2011		2014-7013577	KR	MEMRISTIVE ELEMENT BASED ON HETERO-JUNCTION OXIDE
84020515	Published		4/26/2012		2014-7026691	KR	CUSTOMIZABLE NONLINEAR ELECTRICAL DEVICES
84111000	Published		7/27/2012		2015-7001716	KR	STORING MEMORY WITH NEGATIVE DIFFERENTIAL RESISTANCE MATERIAL
90055197	Acknowledged		3/13/2013			KR	MEMRISTORS WITH DOPANT-COMPENSATED SWITCHING
82226642	Granted	10-1386056	1/31/2008	4/10/2014	10-2009-7016073	KR	Electronic And Optical Circuit Integration Through Wafer Bonding
82230326	Granted	10-1460120	6/25/2008	11/4/2014	2009-7027100	KR	Micro-electro-mechanical Systems And Photonic Interconnects Employing The Same
82230383	Published		6/16/2008		2009-7026644	KR	OPTICAL INTERCONNECT
82230575	Granted	10-1510357	7/16/2008	4/1/2015	2010-7001023	KR	Optical Device Including Waveguide Grating Structure
82230638	Granted	10-0987885-0000	4/20/2007	10/7/2010	10-2008-7026289	KR	Self-authenticating Quantum Random Bit Generators
82239503	Granted	10-1395169	1/31/2008	41767	10-2010-7019364	KR	FREE SPACE OPTICAL INTERCONNECT
82243370	Granted	10-1520130	10/23/2008	42131	2010-7009004	KR	Photonic Interconnects For Computer System Devices
82245491	Granted	10-1448574	5/7/2008	41913	2010-7027526	KR	OPTICAL ENGINE FOR POINT-TO-POINT COMMUNICATIONS
82405425	Granted	10-1453136	5/9/2008	41926	2010-7027758	KR	Optical Splitter Device
82554387	Granted	10-1508029	5/23/2008	3/26/2015	2010-7029031	KR	Optical Interconnect
83699783	Published		4/20/2011		2013-7029697	KR	SUB-WAVELENGTH GRATING-BASED OPTICAL ELEMENTS
83734828	Published		5/23/2011		2013-7033074	KR	OPTICAL TRANSMISSION SYSTEM
83770222	Published		6/15/2011		2013-7035177	KR	MICRO-RING RESONATOR
83959977	Published		1/31/2012		2014-7018092	KR	OPTICAL ARCHITECTURES, OPTICAL DISTRIBUTION MATRICES, AND METHODS OF MANUFACTURING OPTICAL STRUCTURES
84020538	Published		4/30/2012		2014-7027452	KR	HYBRID MOS OPTICAL MODULATOR
82579356	Granted	10-0943012-0000	4/3/2007	2/10/2010	10-2008-7026598	KR	Merging Multi-Line Log Entries
82579548	Granted	10-1451640	12/28/2007	10/10/2014	10-2009-7011683	KR	Storing Log Data Efficiently While Supporting Querying To Assist in Computer Network Security
84076330	Published		7/20/2012		10-2014-7030448	KR	MIGRATING APPLICATIONS BETWEEN NETWORKS
83881898	Published		10/27/2011		10-2014-7011182	KR	SHIFTABLE MEMORY EMPLOYING RING REGISTERS
83991315	Published		3/2/2012		2014-7020610	KR	VERSIONED MEMORIES USING A MULTI-LEVEL CELL
83991570	Published		4/27/2012		2014-7020614	KR	LOCAL CHECKPOINTING USING A MULTI-LEVEL CELL

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82904519	Published		7/31/2009		2012-7002664	KR	PROVIDING FAULT-TOLERANT SPREAD SPECTRUM CLOCK SIGNALS IN A SYSTEM
82104950	Granted	10-1088983	3/12/2004	40872	2004-0016892	KR	An Interactive Service Searching Method Using Meta-date Uds(guid)system
83714218	Published		5/31/2011		10-2013-7031661	KR	APPLICATION SECURITY TESTING
82241429	Granted	101397377	2/26/2008	5/13/2014	20107018700	KR	Method And Apparatus For Performing A Host Enumeration Process
84075969	Published		7/27/2012		2014-7030428	KR	SYSTEMS AND METHODS FOR DETECTING A DIMM SEATING ERROR
90022725	Application		3/27/2013		2015-7026806	KR	Non-Volatile Memory Based Synchronous Logic
90028922	Acknowledged		4/2/2013			KR	STATE-RETAINING LOGIC CELL
82579373	Granted	10-1519936	10/25/2007	42131	2009-7004991	KR	Tracking Changing State Data To Assist In Computer Network Security
83784122	Published		10/20/2011		10-2014-7006262	KR	SYSTEMS AND METHODS FOR EVALUATION OF EVENTS BASED ON A REFERENCE BASELINE ACCORDING TO TEMPORAL POSITION IN A SEQUENCE OF EVENTS
84077649	Published		7/20/2012		10-2014-7030759	KR	POLICY-BASED SCALING OF NETWORK RESOURCES
82195853	Granted	1224295	4/26/2006	1/14/2013	2007-7027373	KR	Nanoscale Interconnection Interface
83099509	Published		4/19/2010		2012-7027269	KR	NANOSCALE SWITCHING DEVICES WITH PARTIALLY OXIDIZED ELECTRODES
83215490	Granted	10-1474812	9/27/2010	12/15/2014	2013-7009542	KR	DEVICE STRUCTURE FOR LONG ENDURANCE MEMRISTORS
83243067	Published		10/29/2010		2013-7013370	KR	MEMRISTIVE DEVICES AND MEMRISTORS WITH RIBBON-LIKE JUNCTIONS AND METHODS FOR FABRICATING THE SAME
83863051	Published		11/4/2011		2014-7012163	KR	DECODER CIRCUITS HAVING METAL-INSULATOR-METAL THRESHOLD SWITCHES
83960011	Published		2/29/2012		2014-7021056	KR	Memristor with Channel Region in Thermal Equilibrium with Containing Region
82219142	Granted	10-0965970-0000	4/20/2007	6/16/2010	10-2008-7025644	KR	Optical-based, Self-authenticating Quantum Random Number Generators
82242680	Granted	10-1443729	4/2/2008	41899	2010-7022137	KR	PRISM BEAMSPLITTERS
82595686	Granted	10-1464285	7/25/2008	41960	2011-7001879	KR	Light-emitting Devices
82654458	Granted	10-1515870	9/4/2008	4/22/2015	2011-7007804	KR	Dielectric Waveguide Intersection With Reduced Losses
82716719	Granted	10-1485218	10/31/2008	42019	2011-7012109	KR	Optical Broadcast With Buses With Shared Optical Interfaces
82790058	Granted	10-1464031	1/9/2009	11/14/2014	2011-7018511	KR	CONFIGURABLE POINT-TO-POINT OPTICAL COMMUNICATIONS SYSTEM BETWEEN SERVERS
82844167	Granted	10-1552892	3/23/2009	42255	2011-7025147	KR	INDIRECT-BANDGAP-SEMICONDUCTOR, LIGHT-EMITTING DIODE
83277648	Published		1/7/2011		10-2013-7016872	KR	DYNAMIC OPTICAL CROSSBAR ARRAY

PATENT
REEL: 038498 FRAME: 0200

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0201

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83278375	Published		1/21/2011		2013-7017807	KR	WAVEFRONT SYNTHESIZER SYSTEMS
83791132	Published		7/29/2011		2014-7004037	KR	FIBER OPTICS CONNECTORS
83821165	Published		8/31/2011		10-2014-7007735	KR	Thermal Shunt
83930207	Published		12/9/2011		2014-7014575	KR	Control of Light Wavefronts
83948859	Published		1/18/2012		2014-7016505	KR	INTEGRATED SUB-WAVELENGTH GRATING ELEMENT
83951478	Published		1/18/2012		2014-7016773	KR	HIGH DENSITY LASER OPTICS
83992431	Published		4/25/2012		2014-7020907	KR	ANALYZING LIGHT BY MODE INTERFERENCE
83992451	Published		4/26/2012		2014-7021302	KR	OPTICAL SLAB
84076009	Published		5/29/2012		2014-7032499	KR	DEVICES INCLUDING INDEPENDENTLY CONTROLLABLE ABSORPTION REGION AND MULTIPLICATION REGION ELECTRIC FIELDS
84112926	Published		7/30/2012		2015-7001824	KR	OPTICAL WAVEGUIDE
90028739	Application		8/21/2015		20157022799	KR	PHOTONIC WAVEGUIDE
90041285	Application		9/11/2015		1020157025026	KR	COUPLED RING RESONATOR SYSTEM
90041308	Application		9/11/2015		1020157025027	KR	BACKLIGHT HAVING COLLIMATING REFLECTOR
90041328	Application		9/23/2015		1020157026338	KR	MODE CONVERSION FOR OPTICAL ISOLATION
82223513	Granted	10-1409310	3/21/2008	41802	10-2009-7021905	KR	Three-dimensional Crossbar Array Systems And Methods For Writing Information To And Reading Information Stored In Three-dimensional Crossbar Array Junctions
82242551	Granted	10-1388801	3/10/2008	41746	2010-7022611	KR	Two-phase Optical Communication Methods And Optical Bus Systems For Implementing The Same
82728103	Published		12/19/2008		2011-7014054	KR	Redundant Data Storage For Uniform Read Latency
83769031	Published		7/27/2011		10-2014-7002368	KR	Efficient Data-Storage Devices that Include Memory Elements Characterized by Potentially Large Switching Latencies
83998863	Published		1/30/2012		2014-7021355	KR	WORD SHIFT STATIC RANDOM ACCESS MEMORY (WS-SRAM)
84077669	Published		5/31/2012		2014-7030518	KR	LOCAL ERROR DETECTION AND GLOBAL ERROR CORRECTION
83933616	Published		10/31/2011		10-2014-7014481	KR	EMAIL TAGS
82675345	Allowed		11/13/2009		2011-7012823	KR	Data Centre And Apparatus And Method For Data Centre Cooling
84106259	Published		5/24/2012		2014-7032746	KR	Fiber Connector Assembly
90056384	Acknowledged		4/3/2013			KR	MICROCONTROLLER AT A CARTRIDGE OF A CHASSIS
82103636	Granted	10-1099960	12/21/2004	12/21/2011	2004-0109292	KR	Method And Apparatus For Reducing Soft Errors
82238174	Granted	10-1408390	4/28/2008	41800	10-2010-7024255	KR	Adjustable Server-transmission Rates Over Fixed-speed Backplane Connections Within A Multi-server Enclosure
82241606	Granted	10-1445434	4/28/2008	41904	2010-7024309	KR	Virtual-interrupt-mode Interface And Method For Virtualizing An Interrupt Mode
84060082	Published		4/27/2012		2014-7029986	KR	SHIELDING A MEMORY DEVICE

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82201901	Granted	10-0989971-0000	11/8/2006	40470	10-2008-7012213	KR	Control Layer For A Nanoscale Electronic Switching Device
82918782	Granted	10-1530118	7/10/2009	42167	2012-7003636	KR	MEMRISTIVE JUNCTION WITH INTRINSIC RECTIFIER
83778620	Granted	10-1515874	6/24/2011	42116	2014-7001426	KR	HIGH-RELIABILITY HIGH-SPEED MEMRISTOR
83992322	Published		3/16/2012		2014-7020735	KR	VARIED MULTILAYER MEMRISTIVE DEVICE
84193767	Application		1/18/2013		2015-7017740	KR	INTERCONNECTION ARCHITECTURE FOR MULTILAYER CIRCUITS
82226999	Granted	10-1409309	1/10/2008	6/12/2014	10-2009-7014487	KR	Capacitively Coupling Layers Of A Multilayer Device
82230554	Published		6/16/2008		2009-7026489	KR	Optical Interconnect
82232495	Published		7/30/2008		2010-7004542	KR	Photonic Guiding Device
82234613	Granted	10-1546692	10/15/2008	42234	2010-7008315	KR	METHOD AND SYSTEM OF TRACKING OPTICAL BEAM SHIFT
82238546	Granted	10-1434238	1/30/2008	8/20/2014	2010-7019098	KR	NANOSTRUCTURES AND METHODS OF MAKING THE SAME
83791163	Published		7/29/2011		2014-7004189	KR	OPTICAL POWER SPLITTERS
83821216	Published		8/31/2011		2014-7007865	KR	MULTIMODE FIBER FOR MODULATABLE SOURCE
83852059	Published		9/30/2011		2014-7009790	KR	OPTICAL POWER SPLITTER INCLUDING A ZIG-ZAG
83862172	Published		11/1/2011		2014-7011909	KR	DIRECT MODULATED LASER
83930304	Published		12/9/2011		2014-7014567	KR	Optical Connections
83959816	Published		1/31/2012		2014-7017867	KR	COMBINATION UNDERFILL-DAM AND ELECTRICAL-INTERCONNECT STRUCTURE FOR AN OPTO-ELECTRONIC ENGINE
84076106	Published		7/25/2012		2014-7030649	KR	Avalanche Photodiodes with Defect-assisted Silicon Absorption Regions
84136979	Published		7/31/2012		2015-7002540	KR	NETWORK TRAFFIC PROCESSING SYSTEM
82579304	Granted	10-1007899-0000	5/4/2005	1/6/2011	10-2006-7025550	KR	Pattern Discovery In A Network Security System
82235054	Granted	10-1492299	10/23/2008	42039	2010-7009006	KR	All Optical Fast Distributed Arbitration In A Computer System Device
82621133	Granted	10-1467623	8/8/2008	41968	2011-7005394	KR	Independently Controlled Virtual Memory Devices In Memory Modules
84118244	Published		6/28/2012		2014-7036603	KR	Multi-Level Cell Memory
90037369	Application		3/12/2013		2015-7024834	KR	PROGRAMMABLE ADDRESS MAPPING AND MEMORY ACCESS OPERATIONS
84076355	Published		6/25/2012		2014-7030626	KR	TRANSLATED SESSION INFORMATION TO PROVISION A NETWORK PATH
82253201	Granted	252243	4/23/2002	39422	PA/a/2003/009712	MX	Method And System For Reporting XML Data Based On Precomputed Context And A Document Object Model
82253627	Granted	245107	7/19/2002	39191	PA/a/2004/000592	MX	Method and System for Weld Process Monitoring
82254152	Granted	257485	6/12/2003	39597	PA/a/2004/010670	MX	Multi-Tiered Enterprise Management System And Method Including A Presentation Services Unit External To The Enterprise
82254521	Granted	251524	12/12/2002	11/15/2007	PA/a/2004/005929	MX	System and Method for Managing Wireless Vehicular Communications

PATENT
REEL: 038498 FRAME: 0202

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82254758	Granted	256124	11/21/2003		PA/a/2005/005225	MX	Implementing Geo-fencing on Mobile Device
82254962	Granted	252293	12/3/2003	12/7/2007	PA/a/2005/005958	MX	METHOD AND SYSTEM FOR WELD PROCESS MONITORING
82271105	Granted	220719	2/26/1999	38140	PA/a/2000/008324	MX	Multi Position Telephone Unit
82271186	Granted	218454	11/30/1999	37993	PA/a/2000/007549	MX	Telecommunication Conferencing System And Method
82253558	Granted	250877	12/6/2002	39381	PA/a/2004/005591	MX	Network User Authentication System And Method
82256297	Granted	255472	2/7/2005	3/19/2008	PA/a/2006/009123	MX	System and Method for Testing a Clamping Force
82252862	Granted	205711	10/29/1997	12/18/2001	PA/a/1999/003748	MX	Fail-Safe Event Driven Transaction Processing System and Method
82253483	Granted	247659	10/15/2002	7/31/2007	PA/a/2004/003537	MX	Method and System for Communicating Telematics Messages
82271135	Granted	219751	11/30/1999	4/7/2004	PA/a/2000/007550	MX	Telecommunication Apparatus And Method For Forwarding Packets Using Separate Collision Domains
82251533	Granted	209053	2/12/1996	37456	PA/a/1997/006084	MX	System and Method for Electronic Transfer of Funds Using An Automated Teller Machine to Dispense the Transferred Funds
82255592	Granted	256126	1/22/2004	4/9/2008	PA/a/2005/007575	MX	SYSTEM AND METHOD FOR AUTOMATED CODE GENERATION USING LANGUAGE NEUTRAL SOFTWARE CODE
81942218	Granted	MY-114126-A	7/6/1994	8/30/2002	PI94001754	MY	Shock Damage Avoidance By Fall Detection And Protective Acti In A Disk Drive
82251587	Granted	811211	2/12/1996	10/16/2002	96906429.4	NL	System and Method for Electronic Transfer of Funds Using An Automated Teller Machine to Dispense the Transferred Funds
82721363	Granted	985298	5/28/1998	3/30/2011	98923848	NL	Method And Apparatus For Providing Security In A Star Network Connection Using Public Key Cryptography
84022797	Granted	2374250	1/19/2009	10/29/2014	9838521.4	NL	Load Balancing
84155343	Granted	2497023	11/2/2009	2/25/2015	9850993.8	NL	Multiprocessing Computing With Distributed Embedded Switching
83185314	Granted	1715488	12/17/1998	2/11/2009	6011296.8	NL	Tape Leader Pin Assembly And Method For Making The Same
82066865	Granted	815677	1/17/1997	3/16/2005	97900685.5	NL	Multicarrier Communication System And Method For Peak Power Control
82012856	Granted	757351	6/10/1996	8/16/2001	96109263.2	NL	Computer Frame Structure With Modular Housing
82251956	Granted	509240	7/15/1999	3/3/2003	509240	NZ	System and Method for Selectively Defining Access to Application Features
82253561	Granted	533457	12/6/2002	7/13/2006	533457	NZ	Network User Authentication System And Method
82579374	Granted	574567	10/25/2007	5/25/2012	574567	NZ	Tracking Changing State Data To Assist In Computer Network Security
82579549	Granted	577198	12/28/2007	3/30/2012	577198	NZ	Storing Log Data Efficiently While Supporting Querying To Assist in Computer Network Security

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84162981	Application		8/30/2012		705217	NZ	ENCRYPTED DATA STORE FOR RECORDS
84163287	Application		9/12/2012		705270	NZ	VALIDATING A METADATA TREE USING A METADATA INTEGRITY VALIDATOR
84164197	Application		9/12/2012		705222	NZ	METADATA TREE WITH KEY ROTATION INFORMATION
84208496	Application		9/30/2012		706475	NZ	ELECTRONIC HEALTH RECORD SYSTEM WITH CUSTOMIZABLE COMPLIANCE POLICIES
84078895	Application		6/8/2012		701084	NZ	PATIENT INFORMATION INTERFACE
84237781	Application		10/31/2012		707675	NZ	Patient oriented hospital care approach and system
82579305	Granted	550752	5/4/2005	1/7/2010	550752	NZ	Pattern Discovery In A Network Security System
82252736	Granted	332074	3/27/1997	5/27/1999	332074	NZ	Automated System and Method for Checkless Check Transaction
84164264	Application		9/19/2012		705211	NZ	METADATA TREE OF A PATIENT WITH LOCKBOXES
82251539	Granted	303483	2/12/1996	36033	303483	NZ	System and Method for Electronic Transfer of Funds Using An Automated Teller Machine to Dispense the Transferred Funds
82252472	Granted	323283	11/18/1996	36301	323283	NZ	System and Method for Accounting of Computer Data Storage Utilization
82948277	Granted	326982	12/31/1996	36658	326982	NZ	EVALUATION OF CONTENT OF A DATA SET USING MULTIPLE AND/OR COMPLEX QUERIES
83097209	Published		4/29/2013		PCT/CN2013/075021	PCT	HOST MOBILITY MESSAGING
83099513	Published		1/31/2013		PCT/US2013/024097	PCT	SELECTING CIRCUITS OF A MULTI-LEVEL INTEGRATED CIRCUIT
83100627	Published		1/31/2013		PCT/CN2013/071180	PCT	Memory Efficient Dynamic Indexed Shape Graph for Routing Tables
83105820	Published		3/14/2013		PCT/US2013/031600	PCT	MULTIVERSIONED NONVOLATILE MEMORY HIERARCHY FOR PERSISTENT MEMORY
83139723	Published		1/31/2013		PCT/CN2013/000106	PCT	Generating a Hint for a Query
83139734	Published		1/31/2013		PCT/CN2013/000108	PCT	Event Log System
83139794	Published		1/31/2013		PCT/US2013/024072	PCT	NETWORK CONTROLLER PROVISIONED MACSEC KEYS
83140126	Published		1/30/2013		PCT/US2013/023792	PCT	CONTROLLING A TOPOLOGY OF A NETWORK
83140349	Published		1/23/2013		PCT/US2013/022672	PCT	Balancing Access Point Workloads
83140516	Published		1/18/2013		PCT/CN2013/070639	PCT	PREVENTING AN INPUT/OUTPUT BLOCKING ATTACK TO A WIRELESS ACCESS POINT
83140945	Published		3/31/2013		PCT/US2013/034749	PCT	SCHEDULE FOR ACCESS TO SHARED WIRELESS MEDIUM BASED ON PROFILE DATA
83141563	Published		5/29/2013		PCT/US2013/043191	PCT	WRITABLE DEVICE BASED ON ALTERNATING CURRENT
83148980	Published		4/16/2013		PCT/US2013/036796	PCT	DISTRIBUTED EVENT CORRELATION SYSTEM
83153047	Published		6/28/2013		PCT/US2013/048759	PCT	Fault Tolerance for Persistent Main Memory

PATENT
REEL: 038498 FRAME: 0204

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83153067	Published		5/16/2013		PCT/US2013/041374	PCT	MULTI-MODE AGENT
83167064	Published		4/2/2013		PCT/US2013/035008	PCT	SHARING A WEB BROWSER SESSION BETWEEN DEVICES IN A SOCIAL GROUP
83167088	Published		4/3/2013		PCT/US2013/035133	PCT	DEVICE PAIRING FOR CONTENT SHARING
83199238	Published		7/4/2013		PCT/CN2013/078800	PCT	DETERMINING A LEGITIMATE ACCESS POINT RESPONSE
83200380	Published		6/18/2013		PCT/US2013/046401	PCT	CONFIRM PROPER SEATING OF A DUAL INLINE MEMORY MODULE
83200481	Published		5/22/2013		PCT/US2013/042261	PCT	OPTICAL DEVICES INCLUDING A HIGH CONTRAST GRATING LENS
83204391	Published		4/30/2013		PCT/US2013/038870	PCT	GROUPING CHUNKS OF DATA INTO A COMPRESSION REGION
83204545	Published		8/27/2013		PCT/US2013/056722	PCT	TRAVEL TIME AND ROUTING
83204549	Published		5/29/2013		PCT/US2013/043027	PCT	PASSIVE SECURITY OF APPLICATIONS
83204568	Published		6/19/2013		PCT/RU2013/000520	PCT	DOCUMENT TOPIC IDENTIFICATION
83204580	Published		7/19/2013		PCT/US2013/051311	PCT	VIRTUAL MACHINE RESOURCE MANAGEMENT SYSTEM AND METHOD THEREOF
83204585	Published		7/19/2013		PCT/US2013/051328	PCT	Map with Different Degrees of Overlapping Geocoded Pixels
83204648	Published		6/12/2013		PCT/US2013/045416	PCT	DISTRIBUTED WORKER-SOURCED PROCESS ENGINEERING
83204675	Published		6/20/2013		PCT/US2013/046849	PCT	GENERATING A FINGERPRINT REPRESENTING A RESPONSE OF AN APPLICATION TO A SIMULATION OF A FAULT OF AN EXTERNAL SERVICE
83204694	Published		6/28/2013		PCT/US2013/048567	PCT	SIMULATING SENSORS
83204754	Published		4/12/2013		PCT/US2013/036501	PCT	LOCATION DETERMINATION OF A MOBILE DEVICE
83204809	Published		6/28/2013		PCT/US2013/048578	PCT	EXPIRATION TAG OF DATA
83205141	Published		4/24/2013		PCT/US2013/038017	PCT	LOCATION SIGNATURES
83205150	Published		4/24/2013		PCT/US2013/038023	PCT	DISPLACEMENT SIGNATURES
83205195	Published		6/3/2013		PCT/IN2013/000352	PCT	RESTORING A FILE SYSTEM OBJECT
83205315	Published		9/26/2013		PCT/US2013/061902	PCT	CONTROLLING USAGE OF RESOURCES BASED ON OPERATING STATUS AND COMMUNICATIONS
83205361	Published		6/27/2013		PCT/US2013/048185	PCT	USER INTERFACE CONFORMANCE
83205367	Published		6/27/2013		PCT/US2013/048112	PCT	PAYMENT PROCESSING
83205959	Published		6/28/2013		PCT/US2013/048777	PCT	MEMORY COMPONENT CAPABLE TO COMMUNICATE AT MULTIPLE DATA WIDTHS
83206128	Published		5/31/2013		PCT/US2013/043686	PCT	MEMORY ERROR DETERMINATION
83206821	Published		6/27/2013		PCT/IN2013/000398	PCT	Assessing Value Of A Brand Based On Online Content
83207820	Published		7/31/2013		PCT/US2013/052990	PCT	DATA MOVE ENGINE TO MOVE A BLOCK OF DATA
83207854	Published		4/30/2013		PCT/CN2013/075033	PCT	TOP-K Prefix Histogram Construction for String Data

PATENT
REEL: 038498 FRAME: 0205

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83209046	Published		4/30/2013		PCT/US2013/038842	PCT	DATABASE TABLE COLUMN ANNOTATION
83209059	Published		5/20/2013		PCT/US2013/041879	PCT	Determining Demand of a Company
83209245	Published		4/30/2013		PCT/US2013/038738	PCT	DEPENDENCIES BETWEEN FEATURE FLAGS
83209620	Published		4/30/2013		PCT/US2013/038857	PCT	Coordinating Application Deployment with a Platform Tier
83210525	Published		4/30/2013		PCT/US2013/038937	PCT	MEMORY NETWORK
83210563	Published		4/30/2013		PCT/US2013/038936	PCT	MEMORY NODE ERROR CORRECTION
83211155	Published		5/16/2013		PCT/US2013/041360	PCT	REPORTING DEGRADED STATE OF DATA RETRIEVED FOR DISTRIBUTED OBJECT
83211336	Published		5/14/2013		PCT/US2013/040970	PCT	Detection of a Security Event
83213729	Published		5/30/2013		PCT/US2013/043276	PCT	DISABLING AND INITIATING NODES BASED ON SECURITY ISSUE
83215517	Published		5/29/2013		PCT/US2013/043157	PCT	AUX POWER CONTROLLER
83216293	Published		4/3/2013		PCT/US2013/035147	PCT	ZONEABLE POWER REGULATION
83254172	Published		6/4/2013		PCT/US2013/044036	PCT	IDENTIFYING RELEVANT CONTENT FOR DATA GATHERED FROM REAL TIME COMMUNICATIONS
83260632	Published		5/30/2013		PCT/US2013/043414	PCT	SECURITY APPARATUS TO HOUSE A DEVICE
83266011	Published		11/15/2013		PCT/US2013/070291	PCT	MEMORY MODULE LATCHES AND EJECTORS
83266040	Published		6/7/2013		PCT/US2013/044820	PCT	TARGET CHANNEL IDENTIFICATION FOR A WIRELESS COMMUNICATION
83266057	Published		8/28/2013		PCT/US2013/057094	PCT	Refresh Rate Adjust
83266580	Published		8/22/2013		PCT/US2013/056269	PCT	PASSIVE DEVICE TO RECEIVE A CONTROL INPUT AND SUPPLY OUTPUT POWER
83266586	Published		11/15/2013		PCT/US2013/070450	PCT	PRODUCT DATA ANALYSIS
83266595	Published		7/29/2013		PCT/US2013/052461	PCT	DATABASE ANALYSIS AND VALIDATION
83266600	Published		7/30/2013		PCT/US2013/052773	PCT	CONNECTOR FOR A COMPUTING ASSEMBLY
83267336	Published		8/30/2013		PCT/US2013/057669	PCT	LOCALIZATION USING TIME-OF-FLIGHT
83267356	Published		9/16/2013		PCT/US2013/059935	PCT	SWITCHING RESISTANCE MEMORY DEVICES WITH INTERFACIAL CHANNELS
83267809	Published		6/26/2013		PCT/US2013/047765	PCT	Modifying an Analytic Flow
83267814	Published		6/24/2013		PCT/US2013/047252	PCT	GENERATING A LOGICAL REPRESENTATION FROM A PHYSICAL FLOW
83267835	Published		11/13/2013		PCT/US2013/069782	PCT	WORKFLOW CHANGE IMPACT
83268558	Published		7/31/2013		PCT/US2013/053012	PCT	Data Stream Processing Using a Distributed Cache
83268625	Published		9/30/2013		PCT/US2013/062557	PCT	NO ROLLBACK THRESHOLD FOR AUDIT TRAIL
83268665	Published		11/5/2013		PCT/US2013/068546	PCT	Forum Inspection Based on Correlation Rating of Response Poster
83268676	Published		8/28/2013		PCT/US2013/057002	PCT	MANAGING A PRESENTATION

PATENT
REEL: 038498 FRAME: 0206

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83268688	Published		6/27/2013		PCT/US2013/048321	PCT	DEVICE FOR DISPLAYING ELECTRONIC COMMUNICATIONS RECEIVED FROM COMMUNICATIONS SERVICES
83268745	Published		7/22/2013		PCT/US2013/051522	PCT	HEAT SINK
83268871	Published		8/30/2013		PCT/US2013/057738	PCT	MAINTAIN A SERVICE ON A CLOUD NETWORK BASED ON A SCALE RULE
83268876	Published		9/30/2013		PCT/US2013/062535	PCT	CALL HANDLING AND SCHEDULING BASED ON A SET OF RULES
83268917	Published		9/6/2013		PCT/US2013/058415	PCT	MANAGING A SENSORY FACTOR
83268925	Published		9/13/2013		PCT/IN2013/000557	PCT	Intelligent Auto-Scaling
83268933	Published		9/30/2013		PCT/US2013/062695	PCT	TRACING SOURCE CODE FOR END USER MONITORING
83268968	Published		8/29/2013		PCT/IN2013/000528	PCT	Automatically Configuring A Virtual Router
83269160	Published		9/20/2013		PCT/US2013/060998	PCT	SNAPSHOT MESSAGE
83269197	Application		6/28/2013		PCT/US2013/048449	PCT	INTERRUPTION OF OUTPUT POWER AND AUXILIARY POWER
83269229	Published		8/30/2013		PCT/US2013/057735	PCT	ZEROCONF PROFILE TRANSFERRING TO ENABLE FAST ROAMING
83269260	Published		7/9/2013		PCT/US2013/049654	PCT	WRITE FLOW CONTROL FOR MEMORY MODULES THAT INCLUDE OR INTERFACE WITH NON-COMPLIANT MEMORY TECHNOLOGIES
83269271	Published		7/25/2013		PCT/US2013/052031	PCT	RESPONSE CONTROL FOR MEMORY MODULES THAT INCLUDE OR INTERFACE WITH NON-COMPLIANT MEMORY TECHNOLOGIES
83269377	Published		6/21/2013		PCT/US2013/047050	PCT	ADAPTIVE LOCATION PERTURBATION
83269400	Published		11/15/2013		PCT/US2013/070320	PCT	IDENTIFYING A CONFIGURATION ELEMENT VALUE AS A POTENTIAL CAUSE OF A TESTING OPERATION FAILURE
83269414	Published		11/12/2013		PCT/US2013/069754	PCT	Augmented Reality Marker
83269418	Published		11/15/2013		PCT/US2013/070308	PCT	INDICATING A TRAIT OF A CONTINUOUS DELIVERY PIPELINE
83269440	Published		11/27/2013		PCT/US2013/072390	PCT	PRODUCTION SAMPLING FOR DETERMINING CODE COVERAGE
83269896	Published		8/30/2013		PCT/US2013/057678	PCT	COMPLETION PACKET RETURN
83269907	Published		11/14/2013		PCT/US2013/070125	PCT	MARK CACHE ENTRY
83269913	Published		9/23/2013		PCT/US2013/061139	PCT	WORKFLOW AND USER CREDENTIALS
83269930	Published		6/24/2013		PCT/US2013/047330	PCT	CONTEXTUAL-BASED LOCALIZATION BASED ON MANUAL TESTING
83269938	Application		9/30/2013		PCT/US2013/062639	PCT	OVERLAYS TO MODIFY DATA OBJECTS OF SOURCE DATA
83269947	Published		9/19/2013		PCT/US2013/060546	PCT	APPLICATION MENU MODIFICATION RECOMMENDATIONS
83269990	Published		9/30/2013		PCT/US2013/062777	PCT	PERSONALIZED LEARNING SYSTEM AND METHOD THEREOF
83269996	Published		8/20/2013		PCT/US2013/055693	PCT	PAYMENT UNIFICATION SERVICE

PATENT
REEL: 038498 FRAME: 0207

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83270248	Published		9/25/2013		PCT/US2013/061582	PCT	BASEBOARD MANAGEMENT CONTROLLER PROVIDING PEER SYSTEM IDENTIFICATION
83270259	Published		9/24/2013		PCT/US2013/061284	PCT	SLOT BASED MANAGEMENT CONTROLLER ADDRESS BACKGROUND
83270265	Application		6/25/2013		PCT/US2013/047541	PCT	POWERING NODES
83270270	Published		12/2/2013		PCT/US2013/072600	PCT	SYSTEM WIDE MANAGEABILITY
83270291	Published		8/1/2013		PCT/IN2013/000476	PCT	DIRECTORY CREATION ON FILE SYSTEM
83270305	Published		7/31/2013		PCT/US2013/053062	PCT	COMPARING USER INTERFACES
83270310	Published		9/25/2013		PCT/US2013/061686	PCT	FLEXIBLE DATA FORMAT FOR DATABASE MANAGEMENT SYSTEMS
83270935	Published		7/30/2013		PCT/US2013/052794	PCT	Resource Allocator
83270946	Published		11/14/2013		PCT/IN2013/000695	PCT	MULTICAST DATA MANAGEMENT
83270972	Published		6/24/2013		PCT/US2013/047285	PCT	TENSION FEEDBACK FOR TAPE TENSION
83270980	Published		9/30/2013		PCT/US2013/062624	PCT	HIERARCHICAL THREAT INTELLIGENCE
83271003	Published		9/14/2013		PCT/US2013/059837	PCT	PREDICTING EXECUTION TIMES OF CONCURRENT QUERIES
83271490	Published		8/30/2013		PCT/US2013/057739	PCT	NETWORK ELEMENT STATUS IDENTIFICATION BASED ON SERVICE
83271495	Published		7/22/2013		PCT/US2013/051488	PCT	PRESENTING DATA IN A SCALABLE FORMAT
83271510	Published		7/31/2013		PCT/US2013/053087	PCT	AUTOMATED REMOTE NETWORK TARGET COMPUTING DEVICE ISSUE RESOLUTION
83271596	Published		9/23/2013		PCT/IN2013/000571	PCT	Troubleshooting Openflow Networks
83271641	Published		7/26/2013		PCT/US2013/052343	PCT	SERVICE-LEVEL AGREEMENT ANALYSIS
83271690	Published		7/12/2013		PCT/US2013/050331	PCT	ANALYZING TARGET SOFTWARE FOR SECURITY VULNERABILITIES
83271704	Published		7/17/2013		PCT/US2013/050937	PCT	EVENT MANAGEMENT SYSTEMS
83271768	Published		6/24/2013		PCT/US2013/047296	PCT	PROCESSING A DATA FLOW GRAPH OF A HYBRID FLOW
83271805	Published		11/15/2013		PCT/US2013/070409	PCT	SELECTING AND ALLOCATING
83271825	Published		7/31/2013		PCT/US2013/053046	PCT	HYBRID SECURE NON-VOLATILE MAIN MEMORY
83271848	Published		7/31/2013		PCT/US2013/053098	PCT	Advanced Versioned Memory
83271864	Published		8/15/2013		PCT/US2013/055212	PCT	REACTIVE DIAGNOSTICS IN STORAGE AREA NETWORKS
83272309	Published		7/31/2013		PCT/US2013/053076	PCT	PROVIDING SUBSCRIBER OPTIONS
83272314	Published		8/15/2013		PCT/US2013/055216	PCT	PROACTIVE MONITORING AND DIAGNOSTICS IN STORAGE AREA NETWORKS
83272340	Published		9/4/2013		PCT/US2013/058036	PCT	PROVIDING RECURSIVELY-GENERATED INSTANTIATED COMPUTING RESOURCE IN A MULTI-TENANT ENVIRONMENT
83272352	Published		9/4/2013		PCT/US2013/058044	PCT	POLICY BASED SELECTION OF RESOURCES FOR A CLOUD SERVICE

PATENT
REEL: 038498 FRAME: 0208

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83272385	Application		7/15/2013		PCT/US2013/050505	PCT	BASE LAYER ARCHITECTURE INFRASTRUCTURE DEVICE
83272409	Published		7/31/2013		PCT/US2013/052870	PCT	CONFIGURING A COMMUNICATION INTERCONNECT FOR ELECTRONIC DEVICES
83272423	Published		7/31/2013		PCT/US2013/053041	PCT	Voltage Control for Crosspoint Memory Structures
83272535	Published		7/31/2013		PCT/US2013/052916	PCT	MEMORY UNIT
83272554	Published		10/30/2013		PCT/US2013/067570	PCT	EXECUTION OF A TOPOLOGY
83272583	Published		10/30/2013		PCT/US2013/067492	PCT	REALIZED TOPOLOGY SYSTEM MANAGEMENT DATABASE
83273156	Published		10/30/2013		PCT/US2013/067423	PCT	TOPOLOGY REMEDIATION
83273161	Published		10/30/2013		PCT/US2013/067414	PCT	STITCHING AN APPLICATION MODEL TO AN INFRASTRUCTURE TEMPLATE
83273176	Published		10/30/2013		PCT/US2013/067406	PCT	MANAGING THE LIFECYCLE OF A CLOUD SERVICE MODELED AS TOPOLOGY DECORATED BY A NUMBER OF POLICIES
83273371	Published		7/15/2013		PCT/US2013/050547	PCT	Rebuilding Drive Data
83273379	Published		7/30/2013		PCT/US2013/052718	PCT	INDICATING A DIMENSION OF A SEQUENTIAL ACCESS STORAGE MEDIUM SUBJECT TO EXPANSION AND CONTRACTION
83273413	Published		7/30/2013		PCT/US2013/052668	PCT	PROCESS PARTIAL RESPONSE CHANNEL
83273952	Published		9/19/2013		PCT/US2013/060586	PCT	SOFTWARE DEFINED OPTICAL NETWORK
83275657	Published		6/24/2013		PCT/US2013/047351	PCT	HARD ZONING CORRESPONDING TO FLOW
83275666	Published		7/26/2013		PCT/US2013/052291	PCT	NETWORK CONFIGURATION USING SERVICE IDENTIFIER
83276216	Published		8/29/2013		PCT/US2013/057185	PCT	SEPARATING STORAGE TRANSACTION LOGS
83276224	Published		6/25/2013		PCT/US2013/047536	PCT	FLUSHING DIRTY DATA FROM CACHE MEMORY
83276819	Published		9/30/2013		PCT/CN2013/084746	PCT	CONTROLLING A PROXY TOOL WITH INJECTED WIDGET CODE
83277132	Published		7/23/2013		PCT/US2013/051674	PCT	WORK CONSERVING BANDWIDTH GUARANTEES USING PRIORITY
83277630	Published		8/1/2013		PCT/IN2013/000477	PCT	ADDRESS RESOLUTION REWRITING
83278328	Published		8/21/2013		PCT/US2013/055908	PCT	DEVICE INCLUDING MIRRORS AND FILTERS TO OPERATE AS A MULTIPLEXER OR DE-MULTIPLEXER
83410344	Published		9/27/2013		PCT/US2013/062168	PCT	Application Control Flow Models
83410837	Published		7/31/2013		PCT/US2013/052943	PCT	OFF-MEMORY-MODULE ECC-SUPPLEMENTAL MEMORY SYSTEM
83417506	Published		7/26/2013		PCT/US2013/052274	PCT	RAIL FOR MOUNTING A RACK-MOUNTABLE COMPONENT
83421213	Published		7/30/2013		PCT/US2013/052766	PCT	TWO-DIMENSIONAL TORUS TOPOLOGY
83423340	Published		8/13/2013		PCT/US2013/054696	PCT	REPRESENTING NUMERICAL DATA IN A MOBILE DEVICE
83513384	Published		11/14/2013		PCT/US2013/070083	PCT	ESTIMATING DATA
83588838	Published		1/27/2014		PCT/CN2014/071529	PCT	MULTI-BIT TRIE BASED INDEXED SHAPE GRAPH

PATENT
REEL: 038498 FRAME: 0209

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83593389	Published		12/19/2013		PCT/US2013/076493	PCT	CONNECTOR TO SECURE A SOLID STATE DEVICE IN AN OFF MOTHERBOARD LOCATION
83593450	Published		1/10/2014		PCT/US2014/011034	PCT	CALL HOME CLUSTER
83593476	Published		1/30/2014		PCT/US2014/013727	PCT	COPY MESSAGE FROM APPLICATION BUFFER TO SEND BUFFER WITHIN KERNEL
83593481	Published		12/17/2013		PCT/US2013/075872	PCT	A GENERIC MODEL TO IMPLEMENT A CLOUD COMPUTING SERVICE
83593513	Published		12/2/2013		PCT/US2013/072648	PCT	ADJUSTABLE FAN SPEED
83597887	Published		9/27/2013		PCT/US2013/062321	PCT	CONNECTOR DEVICE TO REMOVABLY CONNECT AND LOCK TO A FRAME
83597892	Published		9/27/2013		PCT/US2013/062156	PCT	ENERGIZING A POWER SUPPLY IN RESPONSE TO A DISABLEMENT OF A RELAY
83597924	Application		2/6/2014		PCT/US2014/015165	PCT	DISK DRIVE MODULE
83597929	Application		2/5/2014		PCT/US2014/014840	PCT	DISK DRIVE MODULE
83597973	Published		9/5/2013		PCT/US2013/058204	PCT	MESH TOPOLOGY STORAGE CLUSTER WITH AN ARRAY BASED MANAGER
83598033	Published		12/19/2013		PCT/US2013/076451	PCT	PAYMENT TRANSACTION
83598056	Published		12/16/2013		PCT/US2013/075288	PCT	TAGGING A PROGRAM CODE PORTION
83598076	Published		9/27/2013		PCT/US2013/062201	PCT	Processing a Hybrid Flow Associated with a Service Class
83598081	Published		12/19/2013		PCT/US2013/076477	PCT	HYBRID FLOWS CONTAINING A CONTINOUS FLOW
83598087	Published		10/24/2013		PCT/US2013/066616	PCT	REAL-TIME INTER-PERSONAL COMMUNICATION
83598092	Published		12/3/2013		PCT/US2013/072725	PCT	CODE ROUTINE PERFORMANCE PREDICTION USING TEST RESULTS FROM CODE INTEGRATION TOOL
83598179	Application		3/28/2014		PCT/IN2014/000200	PCT	RESOURCE DIRECTORY
83598207	Application		2/20/2014		PCT/US2014/017294	PCT	EMULATING A USER PERFORMING SPATIAL GESTURES
83598222	Published		12/16/2013		PCT/US2013/075344	PCT	DETERMINING PREFERRED COMMUNICATION EXPLANATIONS USING RECORD-RELEVANCY TIERS
83598227	Published		12/17/2013		PCT/US2013/075794	PCT	SYNCHRONIZING A CLOUD SERVICE TEMPLATE WITH AN INFRASTRUCTURE TEMPLATE
83598239	Application		2/19/2014		PCT/US2014/017160	PCT	ROLE BASED ASSESSMENT FOR AN IT MANAGEMENT SYSTEM
83598244	Published		11/18/2013		PCT/US2013/070588	PCT	EVENT-DRIVEN AUTOMATION TESTING FOR MOBILE DEVICES
83598261	Application		1/21/2014		PCT/US2014/012250	PCT	Automatically Discovering Topology Of An Information Technology (IT) Infrastructure
83598285	Published		12/19/2013		PCT/US2013/076436	PCT	PERSONALIZED SHOPPING AND ROUTING
83602681	Published		9/27/2013		PCT/US2013/062352	PCT	FORWARDED LOG LINES

PATENT
REEL: 038498 FRAME: 0210

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83602687	Published		1/31/2014		PCT/US2014/014194	PCT	DEVICE PROVIDED SCRIPT TO CONVERT COMMAND
83602724	Application		1/28/2014		PCT/US2014/013280	PCT	ONLINE FILE SYSTEM METADATA ANALYSIS AND CORRECTION
83602732	Application		1/31/2014		PCT/US2014/013987	PCT	FILE SYSTEM ANALYSIS IN USER DAEMON
83602738	Published		2/14/2014		PCT/US2014/016435	PCT	ASSIGN PLACEMENT POLICY TO SEGMENT SET
83602756	Published		9/27/2013		PCT/US2013/062371	PCT	DATA MANAGEMENT ON MEMORY MODULES
83602761	Published		12/19/2013		PCT/US2013/076395	PCT	TRANSMISSION OF COMMAND STRINGS AND STATUS STRINGS VIA MEMORY BUS
83602773	Published		1/8/2014		PCT/US2014/010691	PCT	Dynamically Applying A Software Patch To A Computer Program
83602795	Published		11/27/2013		PCT/US2013/072267	PCT	AUTHORIZING APPLICATION ACCESS TO VIRTUAL PRIVATE NETWORK RESOURCE
83602822	Published		1/15/2014		PCT/CN2014/070659	PCT	MANAGING A DISTRIBUTION OF A PAYLOAD FOR A FLIGHT
83602913	Published		1/29/2014		PCT/US2014/013600	PCT	END USER MONITORING TO AUTOMATE ISSUE TRACKING
83602948	Published		1/10/2014		PCT/CN2014/070429	PCT	MONITORING AN OBJECT TO PREVENT AN OCCURRENCE OF AN ISSUE
83612362	Application		10/9/2013		PCT/IN2013/000611	PCT	INFORMATION TECHNOLOGY RESOURCE PLANNING
83612677	Application		11/27/2013		PCT/US2013/072145	PCT	META DATA AND DATA VERIFICATION
83618640	Application		11/26/2013		PCT/US2013/072014	PCT	ELECTRICAL CONNECTOR ADAPTER
83618653	Published		1/9/2014		PCT/US2014/010804	PCT	SUPPORT DATA DEDUPLICATION
83623254	Published		10/29/2013		PCT/US2013/067194	PCT	Validating a Query Execution
83623268	Published		10/21/2013		PCT/CN2013/085580	PCT	EXTRACT DATA FROM AN XML STREAM
83623294	Published		10/31/2013		PCT/US2013/067685	PCT	MONITORING PRINTERS
83623317	Published		10/31/2013		PCT/US2013/067687	PCT	INITIALIZING PRINTERS
83623376	Published		10/30/2013		PCT/US2013/067629	PCT	DATACENTER REPLICATION
83623385	Published		10/31/2013		PCT/US2013/067703	PCT	MEMRISTIVE DEVICE SWITCHING BY ALTERNATING POLARITY PULSES
83623403	Application		12/20/2013		PCT/US2013/076960	PCT	DIGITAL SWITCHBOARD
83623419	Published		10/31/2013		PCT/US2013/067825	PCT	NETWORK DATABASE HOSTING
83623428	Published		10/17/2013		PCT/US2013/065494	PCT	TESTING A WEB SERVICE USING INHERITED TEST ATTRIBUTES
83623439	Application		10/31/2013		PCT/US2013/067841	PCT	CACHE CONTROLLER FOR NON-VOLATILE MEMORY
83623445	Published		10/31/2013		PCT/IN2013/000677	PCT	CLASSIFYING A DOCUMENT USING PATTERNS
83623451	Published		10/29/2013		PCT/US2013/067339	PCT	OPTIMIZING A FORECAST WITH A DISAGGREGATION RATIO AT A FORECAST LEVEL
83623460	Published		10/30/2013		PCT/US2013/067541	PCT	DETERMINING A BUSINESS STRATEGY
83623523	Published		11/27/2013		PCT/CN2013/087963	PCT	Systems and Methods for Unsupervised Joint Relation Extraction Between Entities

PATENT
REEL: 038498 FRAME: 0211

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83623549	Published		10/24/2013		PCT/US2013/066544	PCT	NETWORK TRAFFIC CLASSIFICATION AND REDIRECTION
83623557	Published		10/9/2013		PCT/US2013/063978	PCT	DISPLAYING MULTIVARIATE DATA IN MULTIPLE DIMENSIONS
83623586	Published		10/15/2013		PCT/US2013/065116	PCT	COUPLING-MODULATED OPTICAL RESONATOR
83623615	Published		9/30/2013		PCT/US2013/062599	PCT	INTERPRETING SIGNALS RECEIVED FROM REDUNDANT BUSES
83623620	Application		10/2/2013		PCT/US2013/062959	PCT	ATTACHING CONNECTORS
83628995	Application		11/1/2013		PCT/US2013/068073	PCT	PROTOCOL AGNOSTIC STORAGE ACCESS IN A SOFTWARE DEFINED NETWORK TOPOLOGY
83628999	Application		12/4/2013		PCT/US2013/073204	PCT	DATA SANITIZATION
83629056	Published		10/30/2013		PCT/CN2013/086203	PCT	USER AUTHENTICATION
83629234	Published		1/8/2014		PCT/US2014/010645	PCT	SERVICE DISCOVERY MANAGEMENT
83629287	Published		10/31/2013		PCT/US2013/067757	PCT	COMPRESSING AND COMPACTING MEMORY ON A MEMORY DEVICE
83629310	Published		10/31/2013		PCT/US2013/067756	PCT	MEMORY ACCESS FOR BUSY MEMORY
83629337	Published		1/23/2014		PCT/US2014/012742	PCT	Atomically Committing Write Requests
83629345	Application		1/16/2014		PCT/US2014/011873	PCT	LATCH-FREE CONCURRENT SEARCHING
83629379	Published		10/28/2013		PCT/US2013/067096	PCT	OPTIMIZATION OF INVENTORY THROUGH PRIORITIZATION AND CATEGORIZATION
83631529	Published		10/30/2013		PCT/US2013/067540	PCT	DOMAIN NAME AND INTERNET PROTOCOL ADDRESS APPROVED AND DISAPPROVED MEMBERSHIP INFERENCE
83631895	Published		10/31/2013		PCT/US2013/067766	PCT	MEMORY INTEGRITY CHECKING
83634804	Application		1/17/2014		PCT/US2014/012028	PCT	FILE LOCATOR
83634810	Published		10/30/2013		PCT/US2013/067493	PCT	ASYNCHRONOUS GARBAGE COLLECTION IN A DISTRIBUTED DATABASE SYSTEM
83640297	Published		10/30/2013		PCT/US2013/067547	PCT	DETERMINING AGGREGATION INFORMATION
83640365	Published		10/31/2013		PCT/CN2013/086274	PCT	USER INTERFACE TESTER
83640405	Published		10/30/2013		PCT/US2013/067488	PCT	SOFTWARE COMMIT RISK LEVEL
83663145	Application		10/30/2013		PCT/US2013/067485	PCT	PROCESS MODEL CATALOG
83663231	Published		10/31/2013		PCT/US2013/067790	PCT	DETERMINING MODEL QUALITY
83663256	Published		10/31/2013		PCT/US2013/067682	PCT	DAYS OF INVENTORY DETERMINATION BASED ON CONSTRAINTS
83668066	Published		10/29/2013		PCT/US2013/067302	PCT	METERING REAL TIME SERVICE DATA
83668102	Published		10/31/2013		PCT/US2013/067738	PCT	OPTIMIZING A COMPUTING TASK FOR DEPLOYMENT ON A WORKLOAD TUNED SERVER
83668125	Published		10/17/2013		PCT/US2013/065434	PCT	STORING DATA AT A REMOTE LOCATION BASED ON PREDETERMINED CRITERIA

PATENT
REEL: 038498 FRAME: 0212

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0213

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83668143	Published		9/27/2013		PCT/US2013/062171	PCT	REUSABLE ZONE
83668157	Published		10/3/2013		PCT/US2013/063251	PCT	MANAGING A NUMBER OF SECONDARY CLOUDS BY A MASTER CLOUD SERVICE MANAGER
83668206	Published		10/16/2013		PCT/US2013/065234	PCT	REGULATING ENTERPRISE DATABASE WAREHOUSE RESOURCE USAGE
83689717	Application		12/20/2013		PCT/IN2013/000784	PCT	STORAGE CAPACITY REGRESSION
83696884	Published		9/30/2013		PCT/US2013/062715	PCT	SELECTIVELY-ENABLED BACK-UP POWER
83703597	Published		10/28/2013		PCT/US2013/067104	PCT	OPTIMIZING A CONSULTING ENGAGEMENT
83705286	Application		12/9/2013		PCT/US2013/073933	PCT	NoSQL Database Data Consistency
83705295	Application		12/6/2013		PCT/US2013/073694	PCT	NOSQL DATABASE DATA VALIDATION
83706062	Published		10/30/2013		PCT/US2013/067531	PCT	MANAGEMENT OF THE LIFECYCLE OF A CLOUD SERVICE MODELED AS A TOPOLOGY
83719020	Published		12/2/2013		PCT/US2013/072650	PCT	MERGING DATA FROM A SOURCE TABLE INTO A TARGET TABLE
83733715	Application		12/6/2013		PCT/IN2013/000754	PCT	File Lookup in a File System
83733721	Application		1/29/2014		PCT/US2014/013659	PCT	Initiator Injection for Diagnostic Information
83733742	Application		5/30/2014		PCT/US2014/040331	PCT	NETWORK OPERATION RULE
83733756	Published		3/14/2014		PCT/US2014/028909	PCT	A SWITCHING FABRIC INCLUDING A VIRTUAL SWITCH
83733787	Published		3/13/2014		PCT/US2014/026327	PCT	COMPONENT MULTICAST PROTOCOL
83734549	Application		3/20/2014		PCT/US2014/031292	PCT	IDENTIFYING ELECTRONIC COMPONENTS FOR AUGMENTED REALITY
83734580	Published		3/3/2014		PCT/US2014/019801	PCT	DRAM ROW SPARING
83734586	Published		1/31/2014		PCT/US2014/014024	PCT	REDUCING READ LATENCY OF MEMORY MODULES
83734758	Published		1/28/2014		PCT/US2014/013447	PCT	TASK MANAGEMENT BASED ON SEMANTIC ANALYSIS
83734881	Published		12/20/2013		PCT/US2013/076784	PCT	Discarding Data Points in a Time Series
83735152	Published		1/31/2014		PCT/US2014/014255	PCT	STORING DATA BASED ON A WRITE ALLOCATION POLICY
83735167	Published		1/28/2014		PCT/US2014/013415	PCT	METHOD AND SYSTEM FOR SURFACE WEAR DETERMINATION
83735287	Application		4/30/2014		PCT/US2014/036205	PCT	VERIFICATION REQUEST
83735307	Published		2/18/2014		PCT/US2014/016780	PCT	RISK ASSESSMENT
83735390	Published		12/18/2013		PCT/US2013/075904	PCT	PATCHING OF VIRTUAL MACHINES DURING DATA RECOVERY
83735840	Application		5/15/2014		PCT/US2014/038207	PCT	NETWORK TRAFFIC TUNING
83735854	Application		4/30/2014		PCT/US2014/036098	PCT	Communication Between Processor And Logic Device
83735859	Application		8/13/2014		PCT/US2014/050858	PCT	DATA PLANE TO FORWARD TRAFFIC BASED ON COMMUNICATIONS FROM A SOFTWARE DEFINED (SDN) CONTROLLER DURING A CONTROL PLANE FAILURE
83735888	Application		2/28/2014		PCT/US2014/019339	PCT	UNIBODY SOCKETS INCLUDING LATCH EXTENSIONS

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83747140	Published		12/14/2013		PCT/US2013/075216	PCT	POWERING LOADS WITH A POWER SUPPLY AND AN UNINTERRUPTIBLE POWER SUPPLY
83747155	Application		5/12/2014		PCT/US2014/037709	PCT	Generating A Model Based on Input
83747639	Application		1/8/2014		PCT/US2014/010600	PCT	PACKET INSPECTION TO DETERMINE DESTINATION NODE
83748045	Published		3/3/2014		PCT/US2014/019938	PCT	CALENDAR SCHEDULING
83748062	Published		1/10/2014		PCT/US2014/010951	PCT	AUTO COMPLETION OF SOURCE CODE CONSTRUCTS
83748068	Application		4/11/2014		PCT/US2014/033756	PCT	LIQUID COOLANT SUPPLY
83748074	Application		3/28/2014		PCT/US2014/032234	PCT	DATA RESTORATION
83748079	Application		2/28/2014		PCT/US2014/019262	PCT	ALLOCATING COSTS OF SHARED RESOURCES
83748100	Application		1/30/2014		PCT/IN2014/000077	PCT	ANALYZING NETWORK TRAFFIC IN A COMPUTER NETWORK
83748105	Application		4/11/2014		PCT/US2014/033846	PCT	ENVIRONMENT PREFERENCE
83748117	Application		4/24/2014		PCT/US2014/035280	PCT	DISC DRIVE MODULE
83748122	Application		1/17/2014		PCT/US2014/011962	PCT	AUTOMATIC ADJUSTMENT OF DOCUMENTS
83748649	Published		1/31/2014		PCT/US2014/014237	PCT	BUSINESS PROCESS MANAGMENT
83748686	Application		4/8/2014		PCT/US2014/033366	PCT	REDACTABLE DOCUMENT SIGNATURES
83748726	Application		4/1/2014		PCT/US2014/032466	PCT	DEVICE-TYPE BASED CONTENT MANAGEMENT
83749084	Application		1/24/2014		PCT/US2014/013001	PCT	IDENTIFYING DEVIATIONS IN DATA
83749099	Published		2/6/2014		PCT/US2014/015016	PCT	LAWFUL INTERCEPT REPORTING
83749113	Published		1/30/2014		PCT/US2014/013771	PCT	SIGNAL INTERFACE COMPONENT FOR A PRINTED CIRCUIT BOARD
83749118	Published		1/30/2014		PCT/US2014/013785	PCT	THERMAL RELIEF PAD
83756229	Published		1/30/2014		PCT/US2014/013738	PCT	MIGRATING DATA BETWEEN MEMORIES
83756235	Published		1/30/2014		PCT/US2014/013735	PCT	MEMORY DATA VERSIONING
83757737	Published		1/31/2014		PCT/US2014/014051	PCT	RESISTIVE RATIO-BASED MEMORY CELL
83757758	Published		1/29/2014		PCT/US2014/013506	PCT	SHUTDOWN OF COMPUTING DEVICES
83757763	Published		1/28/2014		PCT/US2014/013419	PCT	MANAGING A MULTI-LANE SERIAL LINK
83757897	Published		1/31/2014		PCT/US2014/014165	PCT	RENDERING DATA INVALID IN A MEMORY ARRAY
83762933	Published		1/30/2014		PCT/US2014/013764	PCT	DATA STORING IN MEMORY ARRAYS
83763697	Published		1/31/2014		PCT/US2014/014233	PCT	PERSISTENT MEMORY CONTROLLER BASED ATOMICITY ASSURANCE
83763732	Published		1/24/2014		PCT/US2014/013062	PCT	BIT-FLIP CODING
83763772	Published		1/25/2014		PCT/US2014/013078	PCT	BIDIRECTIONAL OPTICAL MULTIPLEXING EMPLOYING A HIGH CONTRAST GRATING
83763792	Published		1/31/2014		PCT/US2014/013978	PCT	PRINTED CIRCUIT BOARD ASSEMBLY
83763797	Published		1/31/2014		PCT/US2014/014272	PCT	ENCODED CROSS-POINT ARRAY
83763837	Published		2/28/2014		PCT/US2014/019352	PCT	SENSING CIRCUIT FOR RESISTIVE MEMORY ARRAY
83763848	Published		1/31/2014		PCT/US2014/014050	PCT	ACTIVE-CONTROL OPTICAL RESONATOR
83763918	Application		5/15/2014		PCT/US2014/038059	PCT	ACCESSING DATA CONTENT USING CLOSURES

PATENT
REEL: 038498 FRAME: 0214

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83763949	Application		1/31/2014		PCT/US2014/014174	PCT	IDENTIFYING A COMPONENT WITHIN AN APPLICATION EXECUTED IN A NETWORK
83764135	Published		1/24/2014		PCT/US2014/012915	PCT	PROPOSAL GENERATION FOR A NETWORK
83764170	Application		1/15/2014		PCT/US2014/011652	PCT	SECURITY AND ACCESS CONTROL
83764261	Application		1/31/2014		PCT/US2014/014035	PCT	HOUSING FOR EXPANSION CARDS
83764266	Application		4/24/2014		PCT/US2014/035364	PCT	STRUCTURING PAGE IMAGES IN A MEMORY
83764293	Published		1/31/2014		PCT/US2014/014259	PCT	CACHE COHERENCE IN MULTI-COMPUTE-ENGINE SYSTEMS
83764321	Published		2/21/2014		PCT/US2014/017715	PCT	Performing Write Operations On Main Memory
83765140	Published		2/14/2014		PCT/US2014/016501	PCT	ELECTRONIC DEVICE AND CIRCUIT BOARDS THEREOF
83765157	Application		3/7/2014		PCT/US2014/021526	PCT	NETWORK SECURITY FOR ENCRYPTED CHANNEL BASED ON REPUTATION
83765162	Application		2/21/2014		PCT/US2014/017613	PCT	SCORING FOR THREAT OBSERVABLES
83765168	Application		4/18/2014		PCT/US2014/034590	PCT	RATING THREAT SUBMITTER
83765174	Published		12/19/2013		PCT/US2013/076650	PCT	ANALYZE CODE THAT USES WEB FRAMEWORK USING LOCAL PARAMETER MODEL
83765180	Application		1/31/2014		PCT/US2014/014034	PCT	APPLICATION TEST USING ATTACK SUGGESTIONS
83765211	Published		1/31/2014		PCT/US2014/014258	PCT	COMPUTING DEVICES OPERABLE ON RECOVERED WASTE HEAT
83765225	Application		3/20/2014		PCT/US2014/031332	PCT	DYNAMIC MEMORY EXPANSION BY DATA COMPRESSION
83766571	Published		2/28/2014		PCT/US2014/019586	PCT	MAPPING MODE SHIFT
83766579	Published		2/28/2014		PCT/US2014/019598	PCT	DELAY DESTAGE OF DATA BASED ON SYNC COMMAND
83767387	Application		1/17/2014		PCT/US2014/012103	PCT	BLOOM FILTER BASED LOG DATA ANALYSIS
83770166	Published		1/28/2014		PCT/US2014/013454	PCT	DATA MIGRATION
83774311	Application		3/14/2014		PCT/US2014/028697	PCT	RESOURCE RESTRICTION
83776275	Published		1/31/2014		PCT/US2014/014012	PCT	SIGNAL RETURN PATH
83776281	Published		1/31/2014		PCT/US2014/014232	PCT	USER INTERFACE LEVEL TUTORIALS
83776286	Application		2/6/2014		PCT/US2014/015040	PCT	RESOURCE MANAGEMENT
83776301	Application		4/28/2014		PCT/US2014/035736	PCT	CACHE MANAGEMENT
83776601	Published		1/31/2014		PCT/US2014/014295	PCT	PROBE TIP ASSEMBLY
83776635	Application		1/29/2014		PCT/US2014/013500	PCT	PREDICTIVE ANALYTICS UTILIZING REAL TIME EVENTS
83776641	Published		2/24/2014		PCT/US2014/018094	PCT	VIRTUAL NETWORK FUNCTION MANAGEMENT WITH DEACTIVATED VIRTUAL MACHINES
83776650	Published		2/25/2014		PCT/US2014/018345	PCT	MULTIPLE POOLS IN A MULTI-CORE SYSTEM

PATENT
REEL: 038498 FRAME: 0215

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83776656	Published		1/31/2014		PCT/US2014/014202	PCT	FUNCTIONAL UNIT PROMOTION TO MANAGEMENT UNIT
83776661	Published		1/31/2014		PCT/US2014/014329	PCT	MANAGING DATABASE WITH COUNTING BLOOM FILTERS
83776707	Published		1/24/2014		PCT/IN2014/000050	PCT	DYNAMICALLY PATCHING KERNELS USING STORAGE DATA STRUCTURES
83777233	Published		1/29/2014		PCT/IN2014/000070	PCT	SYNCHRONIZING PER-CPU DATA ACCESS USING PER SOCKET RW-SPINLOCKS
83777285	Published		1/31/2014		PCT/US2014/014242	PCT	COMFORT-BASED GARMENT MANAGEMENT
83777319	Published		1/28/2014		PCT/US2014/013310	PCT	GROUP ALERT IN SERVER SYSTEMS
83777371	Published		1/29/2014		PCT/US2014/013528	PCT	MULTI-COLUMN STATISTIC GENERATION OF A MULTI-DIMENSIONAL TREE
83777391	Application		1/29/2014		PCT/US2014/013596	PCT	PHOTODETECTOR SYSTEM
83777420	Published		1/30/2014		PCT/US2014/013885	PCT	MEMRISTOR MEMORY WITH VOLATILE AND NON-VOLATILE STATES
83777426	Published		1/30/2014		PCT/US2014/013938	PCT	CHARGE TRAPPING MEMRISTOR
83777463	Application		1/30/2014		PCT/IN2014/000074	PCT	DATA STORAGE SYSTEM REBUILD
83777483	Published		2/6/2014		PCT/US2014/015084	PCT	TRACE PACKET AND PATH ANALYSIS IN A SOFTWARE DEFINED NETWORK
83777620	Published		2/14/2014		PCT/US2014/016634	PCT	FREE FLOW ASSURANCE OF ATOMICITY OF MULTIPLE UPDATES IN PERSISTENT MEMORY
83777632	Published		3/5/2014		PCT/US2014/020940	PCT	Processing Primary Key Modifications
83819031	Application		7/28/2014		PCT/US2014/048432	PCT	LOCATION-LOCKED DATA
83819054	Application		10/7/2014		PCT/US2014/059429	PCT	MAINTAINING FILES IN A RETAINED FILE SYSTEM
83819059	Application		7/17/2014		PCT/US2014/047044	PCT	Eliminating File Duplication In A File System
83819074	Application		3/28/2014		PCT/US2014/032278	PCT	LOAD SELECTION FOR RECEIVING POWER FROM A BATTERY MODULE
83819089	Application		5/28/2014		PCT/US2014/039837	PCT	MULTIPLE TANK COOLING SYSTEM
83820065	Application		4/29/2014		PCT/US2014/035943	PCT	UPDATING A POINTER BASED ON A VALIDATION OF A PACKET
83820070	Application		4/23/2014		PCT/US2014/035109	PCT	BACKPLANE INTERFACE SETS
83820085	Application		4/4/2014		PCT/US2014/032950	PCT	FLEXIBLE INPUT/OUTPUT ZONE IN A SERVER CHASSIS
83820090	Application		4/30/2014		PCT/US2014/036045	PCT	DUPLICATE DATA USING CYCLIC REDUNDANCY CHECK
83820105	Application		5/27/2014		PCT/US2014/039578	PCT	STORING COMPRESSED DATA
83820110	Application		4/30/2014		PCT/US2014/036079	PCT	DETERMINING LENGTHS OF ACKNOWLEDGMENT DELAYS FOR I/O COMMANDS
83820225	Application		4/10/2014		PCT/US2014/033600	PCT	GENERALIZED SNAPSHOTS BASED ON MULTIPLE PARTIAL SNAPSHOTS
83820231	Application		4/28/2014		PCT/US2014/035666	PCT	VIRTUAL POINT OF SALE
83820236	Application		5/15/2014		PCT/US2014/038055	PCT	MEASURING USER INTERFACE RESPONSIVENESS
83820251	Application		6/9/2014		PCT/US2014/041454	PCT	MEASURING COMPATIBILITY OF VIEWERS BY LEVERAGING USER-PROVIDED ELEMENT DEFINITIONS

PATENT
REEL: 038498 FRAME: 0216

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83820273	Application		5/30/2014		PCT/US2014/040392	PCT	EVALUATING USER EXPERIENCE
83820339	Application		4/30/2014		PCT/US2014/036076	PCT	EXTENDING FEATURES OF ONE DEVICE TO ANOTHER
83820353	Application		5/29/2014		PCT/US2014/040034	PCT	DETERMINING GRAPHIC USER INTERFACE NAME RECOMMENDATIONS
83820385	Application		4/17/2014		PCT/US2014/034460	PCT	CASCADING STYLE SHEET META LANGUAGE PERFORMANCE
83820390	Application		6/2/2014		PCT/US2014/040479	PCT	DELIVERING MESSAGES ACCORDING TO A DESIRED DELIVERY ORDER IN A SOFTWARE DEFINED NETWORK
83820420	Application		4/29/2014		PCT/US2014/035968	PCT	EFFICIENT ROUTING IN SOFTWARE DEFINED NETWORKS
83820491	Application		8/13/2014		PCT/US2014/050921	PCT	SECURE NON-VOLATILE RANDOM ACCESS MEMORY
83820496	Application		8/8/2014		PCT/US2014/050295	PCT	INVENTORY INFORMATION ON MANAGEMENT CONTROLLER
83820511	Application		4/30/2014		PCT/US2014/036064	PCT	FLOOD DISABLE ON NETWORK SWITCH
83820516	Application		6/17/2014		PCT/US2014/042711	PCT	DNS BASED INFECTION SCORES
83820536	Application		8/15/2014		PCT/CN2014/084538	PCT	A memory efficient packet classification method
83820563	Application		4/24/2014		PCT/US2014/035373	PCT	POWER CONSERVATION IN POWER SOURCING EQUIPMENT
83820620	Application		4/25/2014		PCT/IN2014/000271	PCT	Managing Link Failures in Software Defined Networks
83820954	Application		6/30/2014		PCT/US2014/044905	PCT	DYNAMICALLY APPLYING A PATCH TO A COMPUTER APPLICATION
83820974	Application		3/25/2014		PCT/US2014/031640	PCT	TRANSMITTING NETWORK TRAFFIC IN ACCORDANCE WITH NETWORK TRAFFIC RULES
83821029	Application		4/28/2014		PCT/US2014/035690	PCT	DATA DISTRIBUTION BASED ON NETWORK INFORMATION
83821066	Application		6/30/2014		PCT/US2014/044890	PCT	ACCESS CACHE LINE FROM LOWER LEVEL CACHE
83821101	Application		5/29/2014		PCT/US2014/039902	PCT	VOLTAGE SELECTORS COUPLED TO PROCESSOR CORES
83821962	Application		4/28/2014		PCT/US2014/035695	PCT	Latching Mechanism for a Carrier Tray
83822125	Application		3/28/2014		PCT/US2014/032133	PCT	REAL-TIME MONITORING AND ANALYSIS OF QUERY EXECUTION
83822257	Application		5/6/2014		PCT/US2014/036945	PCT	BACKEND ANALYSIS AND TRANSFORMATION
83822474	Application		8/18/2014		PCT/US2014/051543	PCT	SELECTING A SUBSET OF ACCESS POINTS
83822492	Application		4/29/2014		PCT/US2014/035898	PCT	Fast Network Convergence and Intelligent Policy Application Using Programmable Network Devices
83822569	Application		3/28/2014		PCT/US2014/032156	PCT	TESTING ELECTRONIC DEVICES
83822600	Application		3/28/2014		PCT/US2014/032121	PCT	CONTROLLED NODE CONFIGURATION
83822615	Application		3/28/2014		PCT/US2014/032154	PCT	RECONCILING INFORMATION IN A CONTROLLER AND A NODE
83822620	Application		4/30/2014		PCT/CN2014/076593	PCT	TRANSLATION FOR WEB SERVICES
83822635	Application		4/29/2014		PCT/US2014/035923	PCT	CLASSIFYING APPLICATION PROTOCOL INTERFACES (APIS) AS AFFECTING USER EXPERIENCE

PATENT
REEL: 038498 FRAME: 0217

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83822641	Application		4/25/2014		PCT/US2014/035525	PCT	APPLYING A MULTI-INSTANCE SPANNING TREE PROTOCOL (MSTP) CONFIGURATION
83822661	Published		4/29/2014		PCT/US2014/035901	PCT	SOFTWARE-DEFINED NETWORK APPLICATION DEPLOYMENT
83822684	Application		7/31/2014		PCT/US2014/049006	PCT	CROSSBAR ARRAYS WITH SHARED DRIVERS
83822689	Application		5/5/2014		PCT/US2014/036736	PCT	SELECTORS WITH OXIDE-BASED LAYERS
83824670	Application		4/29/2014		PCT/US2014/035896	PCT	SOFTWARE DEFINED NETWORK ECOSYSTEM
83824685	Application		4/30/2014		PCT/US2014/036150	PCT	MIRRORS INCLUDING REFLECTIVE AND SECOND LAYERS DISPOSED ON PHOTODETECTORS
83825623	Application		4/30/2014		PCT/US2014/036056	PCT	VISUALIZING TOPICS WITH BUBBLES INCLUDING PIXELS
83825686	Application		4/24/2014		PCT/US2014/035266	PCT	PROTOCOL DETERMINATION
83825764	Application		4/9/2014		PCT/US2014/033426	PCT	IDENTIFYING SUSPICIOUS ACTIVITY IN A LOAD TEST
83825989	Application		4/1/2014		PCT/US2014/032480	PCT	PROVIDING BACKUP POWER
83826024	Application		6/20/2014		PCT/US2014/043486	PCT	SUPPORT MEMBER
83826072	Application		7/10/2014		PCT/US2014/046175	PCT	Using A Single Deployer Agent To Deploy A Plurality Of Programs On A Server
83826107	Application		6/25/2014		PCT/US2014/044065	PCT	DOCUMENTATION NOTIFICATION
83826119	Application		4/30/2014		PCT/US2014/036158	PCT	THERMAL MANAGEMENT ASSEMBLY
83828054	Application		4/30/2014		PCT/CN2014/076604	PCT	PERFORMING A MIRROR TEST FOR LOCALIZATION TESTING
83828074	Application		4/30/2014		PCT/US2014/036122	PCT	MAINTAINING AN ORIENTATION OF A GRAPH
83829920	Application		4/29/2014		PCT/US2014/035915	PCT	MEASURING USER ACTION PERFORMANCE BY CLASSIFYING USER ACTIONS
83829928	Application		4/29/2014		PCT/US2014/035938	PCT	RELATING USER ACTION FLOWS BY STORING RELATIONSHIPS BETWEEN THREADS AND OBJECTS
83829946	Application		4/29/2014		PCT/US2014/035829	PCT	COMPUTING SYSTEM MANAGEMENT USING SHARED MEMORY
83830478	Application		4/30/2014		PCT/US2014/036055	PCT	SELECTING FROM COMPUTING NODES FOR CORRELATING EVENTS
83830509	Application		4/29/2014		PCT/US2014/035911	PCT	RESISTIVE MEMORY DEVICES WITH AN OXYGEN-SUPPLYING LAYER
83830541	Application		4/30/2014		PCT/US2014/036195	PCT	RESISTIVE MEMORY DEVICES WITH A MULTI-COMPONENT ELECTRODE
83832284	Application		6/16/2014		PCT/US2014/042563	PCT	VIRTUAL NODE DEPLOYMENTS OF CLUSTER-BASED APPLICATIONS
83832536	Application		4/30/2014		PCT/US2014/036222	PCT	REGULATING MEMRISTOR SWITCHING PULSES
83832777	Application		4/25/2014		PCT/US2014/035483	PCT	A statistics-based genetic algorithm for learning classifiers of OS trace data,applied to malware detection

PATENT
REEL: 038498 FRAME: 0218

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83833297	Application		6/19/2014		PCT/US2014/043074	PCT	INSTALL RUNTIME AGENT FOR SECURITY TEST
83833343	Application		7/18/2014		PCT/US2014/047161	PCT	DETERMINING TERMS FOR SECURITY TEST
83833988	Application		5/20/2014		PCT/US2014/038854	PCT	POINT-WISE PROTECTION OF APPLICATION USING RUNTIME AGENT AND DYNAMIC SECURITY ANALYSIS
83834010	Application		5/23/2014		PCT/US2014/039312	PCT	READ AHEAD BUFFER PROCESSING
83857314	Published		3/20/2014		PCT/US2014/031327	PCT	Solid State Drive Operations
83862065	Application		3/27/2014		PCT/US2014/032012	PCT	INFORMATION TECHNOLOGY (IT) TICKET ASSIGNMENT
83874142	Application		3/31/2014		PCT/US2014/032365	PCT	PRIORITIZATION OF NETWORK TRAFFIC IN A DISTRIBUTED PROCESSING SYSTEM
83874563	Application		5/30/2014		PCT/US2014/040321	PCT	PARTIALLY SORTED LOG ARCHIVE
83931692	Application		5/2/2014		PCT/US2014/036527	PCT	WEB APPLICATION LAUNCH APPLICATION PROGRAMMING INTERFACE
83943021	Application		4/30/2014		PCT/US2014/036193	PCT	MIGRATING OBJECTS FROM A SOURCE SERVICE TO A TARGET SERVICE
83944741	Application		6/30/2014		PCT/US2014/044932	PCT	Automatic Generation of Sub-Queries
83951087	Application		5/23/2014		PCT/US2014/039279	PCT	AGGREGATING DATA FOR VISUALIZATION
83951127	Application		5/23/2014		PCT/US2014/039406	PCT	ADVANCED PERSISTENT THREAT IDENTIFICATION
83952467	Application		9/25/2014		PCT/US2014/057419	PCT	DETERMINE SECURE ACTIVITY OF APPLICATION UNDER TEST
83952485	Application		10/28/2014		PCT/US2014/062622	PCT	DETERMINE UNREFERENCED PAGE IN DEDUPLICATION STORE FOR GARBAGE COLLECTION
83952490	Application		6/10/2014		PCT/US2014/041741	PCT	REPLICATING DATA USING REMOTE DIRECT MEMORY ACCESS (RDMA)
83952496	Application		6/26/2014		PCT/US2014/044354	PCT	POST PACKAGE REPAIR (PPR) DATA IN NON-VOLATILE MEMORY
83952891	Application		7/31/2014		PCT/US2014/049130	PCT	INTERPOSER REGISTRATION ELEMENTS
83952896	Application		9/22/2014		PCT/US2014/056790	PCT	SINGLE MODE VERTICAL-CAVITY SURFACE-EMITTING LASER
83952931	Application		6/30/2014		PCT/US2014/044940	PCT	AUTOMATIC ASSOCIATION OF CONTENT FROM SOURCES
83952936	Application		7/29/2014		PCT/US2014/048580	PCT	REFERENCE CURRENTS FOR INPUT CURRENT COMPARISONS
83952956	Application		7/29/2014		PCT/US2014/048529	PCT	MULTIPHASE SELECTORS
83952994	Application		6/27/2014		PCT/US2014/044632	PCT	FINDING FAULTS IN GEOLOGICAL DATA
83952999	Application		6/30/2014		PCT/US2014/044887	PCT	PIECEWISE SMOOTH REGULARIZATION OF DATA
83953059	Application		5/15/2014		PCT/US2014/038204	PCT	NETWORK SCHEDULING
83953163	Application		5/30/2014		PCT/US2014/040296	PCT	RESOURCE USAGE DATA COLLECTION WITHIN A DISTRIBUTED PROCESSING FRAMEWORK
83953168	Application		7/30/2014		PCT/US2014/048818	PCT	OPTICAL WAVEGUIDE RESONATORS

PATENT
REEL: 038498 FRAME: 0219

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83953246	Application		8/28/2014		PCT/US2014/053232	PCT	SLOPPY FEEDBACK LOOP COMPILATION
83953403	Application		9/30/2014		PCT/CN2014/087870	PCT	COMMUNICATION OF EVENT-BASED CONTENT
83953414	Application		9/26/2014		PCT/US2014/057907	PCT	STORAGE OF HYPERVISOR MESSAGES IN NETWORK PACKETS GENERATED BY VIRTUAL MACHINES
83953438	Application		7/31/2014		PCT/US2014/049131	PCT	OBJECT IDENTIFICATION AND SENSING
83953469	Application		7/31/2014		PCT/US2014/049119	PCT	LOCALIZATION FROM ACCESS POINT AND MOBILE DEVICE
83953489	Application		9/26/2014		PCT/US2014/057786	PCT	LOGICAL SEGMENT TOPOLOGY DATA
83953515	Application		7/30/2014		PCT/US2014/048863	PCT	DETECTION OF A PLUG COUPLED TO A CONNECTOR HOUSING
83953521	Application		8/29/2014		PCT/US2014/053453	PCT	MULTIPLEXING NETWORK CONNECTIONS
83953529	Application		11/7/2014		PCT/US2014/064645	PCT	OPERATIONALLY INDEPENDENT RESET
83953544	Application		8/12/2014		PCT/US2014/050728	PCT	INFORMATION EXCHANGE GATEWAY
83953575	Application		9/12/2014		PCT/US2014/055360	PCT	ASSIGN ERROR RATE TO MEMORY
83953580	Application		7/23/2014		PCT/US2014/047786	PCT	RELAY TO PEER VIRTUAL MACHINE TRANSITION
83953595	Application		9/17/2014		PCT/US2014/056088	PCT	NEURAL NETWORK VERIFICATION
83953601	Application		6/20/2014		PCT/US2014/043390	PCT	MANUAL AND AUTOMATED TASK EXECUTION
83953649	Application		3/11/2015		PCT/US2015/019968	PCT	DYNAMICALLY ADJUSTING A MODEL FOR A SECURITY OPERATIONS CENTER
83954262	Application		8/8/2014		PCT/US2014/050258	PCT	REPLICATING A WEB TECHNOLOGY
83954302	Application		11/26/2014		PCT/US2014/067519	PCT	DETERMINING TEST APPLICATION EFFECTIVENESS
83954307	Application		8/18/2014		PCT/US2014/051408	PCT	INTERACTIVE SEQUENTIAL PATTERN MINING
83954322	Application		6/30/2014		PCT/US2014/044900	PCT	DETERMINATION OF A NETWORK CLOUD CONTAINING AN UNCONTROLLED NETWORK DEVICE BASED ON LINK DATA OF CONTROLLED NETWORK DEVICES
83954337	Application		7/31/2014		PCT/US2014/049024	PCT	DETERMINING APPLICATION CHANGE SUCCESS RATINGS
83954342	Application		6/27/2014		PCT/US2014/044570	PCT	SECURITY POLICY BASED ON RISK
83954348	Application		7/29/2014		PCT/US2014/048705	PCT	CLOUD INFRASTRUCTURE EVENT ANALYSIS
83954353	Application		9/30/2014		PCT/US2014/058224	PCT	STRING PROPERTY LABELS FOR STATIC ANALYSIS
83954373	Application		9/24/2014		PCT/US2014/057142	PCT	INFRASTRUCTURE RULE GENERATION
83954391	Application		8/28/2014		PCT/US2014/053199	PCT	DISTRIBUTED DETECTION OF MALICIOUS CLOUD ACTORS
83954396	Application		11/18/2014		PCT/US2014/066175	PCT	USER INTERFACE OVERLAY
83954402	Application		7/8/2014		PCT/US2014/045670	PCT	DISCOVERING CONNECTION OF PASSIVE CABLES
83954408	Application		7/8/2014		PCT/US2014/045679	PCT	DISCOVERING CONNECTION OF PASSIVE CABLES
83954414	Application		9/30/2014		PCT/US2014/058301	PCT	EVALUATING DOCUMENTATION COVERAGE
83954419	Application		9/3/2014		PCT/CN2014/085794	PCT	SCREEN-IMAGE BASED CLASSIFICATION
83954831	Application		9/29/2014		PCT/US2014/057946	PCT	PROVISIONED RESOURCES MANAGEMENT

PATENT
REEL: 038498 FRAME: 0220

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83954851	Application		7/31/2014		PCT/US2014/049267	PCT	DYNAMIC ADJUSTMENT OF THRESHOLDS
83954880	Application		7/31/2014		PCT/US2014/049061	PCT	REMOTE SESSION INFORMATION BASED ON PROCESS IDENTIFIER
83954915	Application		8/29/2014		PCT/US2014/053444	PCT	STATIC PROGRAM ANALYSIS IN AN OBJECT-RELATIONAL MAPPING
83954926	Application		7/1/2014		PCT/US2014/045117	PCT	MEMORY CONTROLLER
83954931	Application		5/28/2014		PCT/US2014/039703	PCT	DYNAMIC GRAPHIC ENTITY DETERMINATION
83954966	Application		8/28/2014		PCT/US2014/053106	PCT	CROSS-DOMAIN INFORMATION MANAGEMENT
83955856	Application		9/30/2014		PCT/US2014/058279	PCT	Docking Station for Blade Computing Device
83955885	Application		10/15/2014		PCT/US2014/060705	PCT	PROVIDING TRANSACTIONAL SUPPORT TO A DATA STORAGE SYSTEM
83956037	Application		8/29/2014		PCT/US2014/053552	PCT	SCALING PERSISTENT CONNECTIONS FOR CLOUD COMPUTING
83956105	Application		7/31/2014		PCT/US2014/049287	PCT	Encapsulation Packet With Class Of Service Encoding
83956200	Application		6/10/2014		PCT/US2014/041720	PCT	WAKE UP MESSAGE TRANSMISSION RATE
83957325	Application		5/27/2014		PCT/US2014/039622	PCT	VALIDATION OF A REPAIR TO A SELECTED ROW OF DATA
83957330	Application		7/7/2014		PCT/US2014/045561	PCT	SLOTTED CONNECTOR
83957605	Application		7/8/2014		PCT/US2014/045641	PCT	DUAL IN-LINE MEMORY MODULE CONNECTOR
83957683	Application		7/31/2014		PCT/US2014/049065	PCT	FRONT CABLE MANAGEMENT ASSEMBLY
83957743	Application		7/30/2014		PCT/US2014/048866	PCT	MULTI-BAY APPARATUS
83957823	Application		7/30/2014		PCT/US2014/048938	PCT	System And Method For Designing A Printed Circuit Board
83957851	Application		7/25/2014		PCT/US2014/048306	PCT	ASYMMETRICALLY SELECTING MEMORY ELEMENTS
83957866	Application		9/19/2014		PCT/US2014/056682	PCT	BUSINESS RESOURCE MODELING
83957872	Application		7/28/2014		PCT/US2014/048435	PCT	MEMRISTOR PROGRAMMING ERROR REDUCTION
83957892	Application		7/28/2014		PCT/US2014/048458	PCT	PLASMONIC AVALANCHE PHOTODETECTION
83957903	Application		6/13/2014		PCT/US2014/042380	PCT	DETERMINING THE LOCATION OF A MOBILE COMPUTING DEVICE
83957908	Application		6/9/2014		PCT/US2014/041602	PCT	CONTEXT-BASED EXPERIENCE
83957935	Application		7/30/2014		PCT/US2014/048918	PCT	APPARATUS HAVING A MEMORY CELL AND A SHUNT DEVICE
83957940	Application		9/30/2014		PCT/US2014/058205	PCT	MODULAR COOLING
83957946	Application		7/23/2014		PCT/US2014/047760	PCT	DELAYED READ INDICATION
83957951	Application		7/31/2014		PCT/US2014/049259	PCT	ASSIGNING REDUNDANCY IN ENCODING DATA ONTO CROSSBAR MEMORY ARRAYS
83957966	Application		7/31/2014		PCT/US2014/049271	PCT	DETERMINING A RESISTANCE STATE OF A CELL IN A CROSSBAR MEMORY ARRAY
83957971	Application		7/30/2014		PCT/US2014/048900	PCT	Using Wireless PHY layer information to determine client's mobility mode.
83957977	Application		7/31/2014		PCT/US2014/049205	PCT	ENCODING DATA WITHIN A CROSSBAR MEMORY ARRAY

PATENT
REEL: 038498 FRAME: 0221

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83957998	Application		7/21/2014		PCT/US2014/047445	PCT	Systems and procedures for determining linkage among Security Indicators and Threat Observables
83958003	Application		6/10/2014		PCT/US2014/041751	PCT	Network Security
83958018	Application		9/30/2014		PCT/US2014/058498	PCT	MODULAR UTILITIES
83958023	Application		11/7/2014		PCT/US2014/064513	PCT	DATA CONVERSION USING AN ADDRESS SPACE IDENTIFIER
83958029	Application		7/22/2014		PCT/US2014/047579	PCT	Systems and methods to identify access to Security Indicators
83958081	Application		6/25/2014		PCT/US2014/044104	PCT	BOLSTER PLATE
83958086	Application		7/31/2014		PCT/US2014/049277	PCT	MOUNTING ASSEMBLY
83958112	Application		7/8/2014		PCT/US2014/045786	PCT	MOUNTING MEMBER
83958157	Application		7/31/2014		PCT/US2014/049261	PCT	REDUNDANT POWER SUPPLY UNITS
83958192	Application		7/29/2014		PCT/US2014/048614	PCT	Processing Nodes
83958212	Application		8/13/2014		PCT/US2014/050950	PCT	NON-VOLATILE STORAGE OF MANAGEMENT DATA
83958261	Application		6/27/2014		PCT/US2014/044721	PCT	BUFFER-BASED UPDATE OF STATE DATA
83958501	Application		7/31/2014		PCT/US2014/049313	PCT	CACHE MANAGEMENT FOR NONVOLATILE MAIN MEMORY
83958705	Application		7/22/2014		PCT/US2014/047575	PCT	Conditional Sharing of Security Indicators
83958762	Application		7/29/2014		PCT/US2014/048553	PCT	THREE-DIMENSIONAL VIEW OF NETWORK MAPPING
83958767	Application		7/30/2014		PCT/US2014/048860	PCT	CONFIGURING MANAGED SERVER
83958848	Application		9/10/2014		PCT/US2014/055005	PCT	INDICATE A FUNCTIONAL STATUS OF CORRESPONDING ELECTRONIC DEVICES
83958873	Application		8/7/2014		PCT/IN2014/000516	PCT	ACTIVE DIRECTORY TOPOLOGY CREATION
83958879	Application		6/30/2014		PCT/US2014/044778	PCT	SHELF MOVABLE BETWEEN AN EXTENDED SHELF POSITION AND A SHELF STORAGE POSITION
83958894	Application		7/18/2014		PCT/US2014/047130	PCT	SEALING AN INPUT/OUTPUT PORT OF AN INPUT/OUTPUT SWITCH
83958899	Application		7/29/2014		PCT/US2014/048546	PCT	LATCH ASSEMBLY INCLUDING A COVER HAVING A CAVITY AND A LEVER DISPOSED IN THE CAVITY
83958905	Application		8/4/2014		PCT/IN2014/000512	PCT	EVENT STREAM PROCESSING
83959649	Application		6/17/2014		PCT/US2014/042802	PCT	DISTRIBUTED STORAGE DATA RECOVERY
83959657	Application		7/22/2014		PCT/US2014/047641	PCT	FILES TIERING IN MULTI-VOLUME FILE SYSTEMS
83960027	Application		7/31/2014		PCT/US2014/049082	PCT	EVENT CLUSTERS
83960039	Application		7/25/2014		PCT/US2014/048228	PCT	CONSTRAINING AUTHORIZATION TOKENS VIA FILTERING
83960044	Application		7/31/2014		PCT/US2014/049191	PCT	CREATING A SECURITY REPORT FOR A CUSTOMER NETWORK
83960482	Application		9/26/2014		PCT/US2014/057565	PCT	GENERATION OF PERFORMANCE OFFERINGS FOR INTERACTIVE APPLICATIONS

PATENT
REEL: 038498 FRAME: 0222

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83960502	Application		7/30/2014		PCT/US2014/048806	PCT	AMORPHOUS METAL ALLOY ELECTRODES IN NON-VOLATILE DEVICE APPLICATIONS
83961778	Application		9/30/2014		PCT/US2014/058343	PCT	TOPOLOGY BASED MANAGEMENT OF SECOND DAY OPERATIONS
83964656	Application		6/6/2014		PCT/US2014/041311	PCT	TOPIC RECOMMENDATION
83965795	Application		6/9/2014		PCT/US2014/041572	PCT	Expression projection in Vertica is a projection with at least one column that represents an expression
83965801	Application		6/9/2014		PCT/US2014/041580	PCT	Aggregate Projections
83965806	Application		6/9/2014		PCT/US2014/041582	PCT	A Top-K projection is a projection that stores pre-computed top k rows from each group of rows of table that includes many groups ofrows.
83965924	Application		7/24/2014		PCT/US2014/048026	PCT	EXPANDER TRANSMISSION DATA RATE DETERMINATION
83966573	Published		6/10/2014		PCT/US2014/041710	PCT	TILE-BASED GRAPHICAL EXPLORATION OF COLLECTIONS OF OBJECTS
83980573	Application		9/30/2014		PCT/US2014/058289	PCT	CROSSPOINT ARRAY DECODER
83980577	Application		9/25/2014		PCT/US2014/057364	PCT	CROSSPOINT ARRAY DECODER
83982196	Application		6/27/2014		PCT/US2014/044599	PCT	LINK DISCOVERY IN SOFTWARE-DEFINED NETWORKS USING A CONTROLLER AND NETWORK DEVICES CONTROLLED BY THE CONTROLLER
83983089	Application		6/25/2014		PCT/US2014/044160	PCT	NETWORK FUNCTION VIRTUALIZATION
83996498	Application		9/3/2014		PCT/US2014/053825	PCT	RELATIONSHIP BASED CACHE RESOURCE NAMING AND EVALUATION
83996506	Application		7/31/2014		PCT/US2014/049075	PCT	SHADOW ELEMENTS
83998384	Application		7/28/2014		PCT/US2014/048392	PCT	ACCESSING RESOURCES ACROSS MULTIPLE TENANTS
83998390	Application		7/28/2014		PCT/US2014/048384	PCT	PROVIDING DATA BACKUP
83998444	Application		7/21/2014		PCT/US2014/047441	PCT	RADIAL HISTOGRAM MATCHING
84016354	Application		9/5/2014		PCT/US2014/054292	PCT	BACKUP POWER AND LOAD DISCOVERY
84018350	Application		9/24/2014		PCT/US2014/057318	PCT	BLOCK PRIORITY INFORMATION
84018358	Application		9/22/2014		PCT/US2014/056847	PCT	NON-VOLATILE STORAGE DEVICE
84019703	Application		8/28/2014		PCT/US2014/053236	PCT	WORKFLOW CUSTOMIZATION
84019864	Application		8/26/2014		PCT/US2014/052714	PCT	TESTING A CLOUD SERVICE COMPONENT ON A CLOUD PLATFORM
84022079	Application		10/13/2014		PCT/US2014/060284	PCT	PARTIAL SNAPSHOT CREATION
84026925	Application		1/23/2015		PCT/US2015/012730	PCT	SCHEDULER-ASSIGNED PROCESSOR RESOURCE GROUPS
84027749	Application		1/16/2015		PCT/US2015/011852	PCT	SHARED INTERMEDIATE HASH VALUES
84027753	Application		2/19/2015		PCT/US2015/016695	PCT	POST-SAMPLING CONFLICT DETECTION
84028877	Application		9/24/2014		PCT/US2014/057199	PCT	OPERATING SYSTEM AGNOSTIC VALIDATION OF FIRMWARE IMAGES

PATENT
REEL: 038498 FRAME: 0223

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84028881	Application		9/30/2014		PCT/US2014/058333	PCT	PROCESSING QUERY OF DATABASE AND DATA STREAM
84028949	Application		11/26/2014		PCT/US2014/067651	PCT	SPECULATIVE EXECUTION OF A STREAM OF CHANGES
84028954	Application		11/26/2014		PCT/US2014/067599	PCT	DATABASE TRANSFER OF CHANGES
84029862	Application		8/29/2014		PCT/US2014/053369	PCT	FAN MODULE ASSEMBLY
84029919	Application		1/21/2015		PCT/US2015/012184	PCT	VIRTUAL STORAGE
84029962	Application		1/13/2015		PCT/US2015/011108	PCT	SERVER RESPONSE TIME MONITORING
84029977	Application		11/25/2014		PCT/US2014/067389	PCT	IMPLANTABLE DEVICE FOR DETECTING LIGHT CORRELATING TO VESSEL PATENCY
84029988	Application		12/23/2014		PCT/US2014/072022	PCT	DETERMINING POWER DIFFERENCE IN SENSOR SIGNALS
84030002	Application		11/25/2014		PCT/US2014/067381	PCT	DISTRESS SIGNAL DEVICE
84030016	Application		9/26/2014		PCT/US2014/057805	PCT	BEHAVIOR TRACKING AND MODIFICATION USING MOBILE AUGMENTED REALITY
84030022	Application		9/26/2014		PCT/US2014/057642	PCT	CACHING NODES
84030028	Application		9/26/2014		PCT/US2014/057645	PCT	COMPUTING NODES
84030059	Application		9/9/2014		PCT/US2014/054774	PCT	AUTO-CONFIGURATION AND MANAGEMENT OF STORAGE RESOURCES
84030080	Application		11/17/2014		PCT/US2014/065916	PCT	LINKING AN ENTITY RELATING TO PRODUCT DEVELOPMENT TO A DOCUMENT PORTION
84030541	Application		10/29/2014		PCT/US2014/062849	PCT	TRANS-FABRIC INSTRUCTION SET FOR A COMMUNICATION FABRIC
84030549	Application		12/19/2014		PCT/US2014/071358	PCT	MULTICAST ADVERTISEMENT MESSAGE FOR A NETWORK SWITCH IN A STORAGE AREA NETWORK
84030557	Application		2/17/2015		PCT/US2015/016162	PCT	BLADE SUB-ENCLOSURE INTERMEDIATE CONNECTOR
84030635	Application		11/3/2014		PCT/US2014/063710	PCT	HARDWARE COMPONENT IDENTIFICATION
84030647	Application		9/11/2014		PCT/US2014/055197	PCT	NON-MINIMUM COST FORWARDING FOR PACKET-SWITCHED NETWORKS
84030655	Application		12/2/2014		PCT/US2014/068009	PCT	TRACKING OF ASSETS
84030706	Application		12/10/2014		PCT/US2014/069625	PCT	FIRMWARE-BASED PROVISIONING OF OPERATING SYSTEM RESOURCES
84030767	Application		10/30/2014		PCT/EP2014/073336	PCT	VIRTUAL CONTENT DELIVERY NETWORK
84030833	Application		10/31/2014		PCT/US2014/063320	PCT	STORAGE ARRAY ALLOCATOR
84030849	Application		12/23/2014		PCT/US2014/072231	PCT	PREVENTION OFA PREDETERMINED ACTION REGARDING DATA
84030853	Application		11/24/2014		PCT/US2014/067067	PCT	APPLICATION MANAGEMENT BASED ON DATA CORRELATIONS
84030861	Application		9/18/2014		PCT/US2014/056347	PCT	DATA TO BE BACKED UP IN A BACKUP SYSTEM
84030878	Application		12/4/2014		PCT/US2014/068600	PCT	GROUPING EVENT REPORTS

PATENT
REEL: 038498 FRAME: 0224

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84030970	Application		10/31/2014		PCT/US2014/063517	PCT	END TO END QUALITY OF SERVICE IN STORAGE AREA NETWORKS
84031015	Application		2/20/2015		PCT/US2015/016817	PCT	TOOL-LESS MULTIPOINT LATCHING MECHANISM
84031019	Application		10/31/2014		PCT/US2014/063554	PCT	Group Zoning and Access Control Over a Network
84031047	Application		10/30/2014		PCT/US2014/063146	PCT	A HANDLE FOR A DRAWER
84031059	Application		10/2/2014		PCT/US2014/058767	PCT	Hard Drive Carrier
84031067	Application		11/20/2014		PCT/US2014/066692	PCT	QUERY A HARDWARE COMPONENT FOR AN ANALYSIS RULE
84031079	Application		9/22/2014		PCT/US2014/056776	PCT	TENANT DATA MAPPING FOR MULTIPLE TENANT CLOUD APPLICATIONS
84031099	Application		1/9/2015		PCT/US2015/010833	PCT	OBTAINING A NETWORK ADDRESS BASED ON AN IDENTIFIER
84031162	Application		10/31/2014		PCT/US2014/063281	PCT	INDICATING A PRIVILEGE LEVEL
84031170	Application		2/13/2015		PCT/US2015/015893	PCT	THERMAL BUS BAR
84031190	Application		10/9/2014		PCT/US2014/059882	PCT	A TRANSMITTER THAT DOES NOT RESEND A PACKET DESPITE RECEIPT OF A MESSAGE TO RESEND THE PACKET
84031216	Application		10/24/2014		PCT/US2014/062196	PCT	END-TO-END NEGATIVE ACKNOWLEDGMENT
84031225	Application		11/20/2014		PCT/US2014/066728	PCT	VIRTUAL TARGET PORT AGGREGATION
84031253	Application		11/14/2014		PCT/US2014/065615	PCT	SECURE UPDATE OF FIRMWARE AND SOFTWARE
84031288	Application		1/5/2015		PCT/US2015/010164	PCT	MULTI-TENANT UPGRADING
84031296	Application		12/22/2014		PCT/US2014/071854	PCT	FILE VALUE FILE REPLICATION
84031327	Application		9/25/2014		PCT/US2014/057463	PCT	STORAGE SPACE ALLOCATION
84031339	Application		10/31/2014		PCT/US2014/063521	PCT	ADAPTIVE COOLING ASSEMBLY
84031365	Application		11/24/2014		PCT/US2014/067009	PCT	CHANNEL STATE INFORMATION FEEDBACK PERIOD DETERMINATION BASED ON WIRELESS COMMUNICATION DEVICE MOBILITY STATE
84031373	Application		10/30/2014		PCT/US2014/063175	PCT	PARALLEL BACKUP POWER SUPPLY
84031388	Application		10/30/2014		PCT/US2014/063106	PCT	RESOURCE CONSUMING TASKS SCHEDULER
84031397	Application		10/31/2014		PCT/US2014/063490	PCT	BACKUP POWER SUPPLY CELL IN MEMORY DEVICE
84031433	Application		10/31/2014		PCT/US2014/063548	PCT	BACKUP POWER SUPPLY SUPPORT
84031476	Application		9/25/2014		PCT/US2014/057507	PCT	STORAGE OF A DATA CHUNK WITH A COLLIDING FINGERPRINT
84031480	Application		9/30/2014		PCT/US2014/058174	PCT	METRICS AUTHORIZATION BASED ON A CERTIFICATE
84031488	Application		12/19/2014		PCT/US2014/071587	PCT	AUTOMATIVE SYSTEM MANAGEMENT
84031496	Application		11/4/2014		PCT/US2014/063813	PCT	SMART LOCATION DETERMINATION
84031500	Application		9/24/2014		PCT/US2014/057151	PCT	UTILIZING ERROR CORRECTION (ECC) FOR SECURE SECRET SHARING
84031508	Application		12/16/2014		PCT/US2014/070608	PCT	DISPLAY A SUBSET OF OBJECTS ON A USER INTERFACE
84031516	Application		11/17/2014		PCT/US2014/065948	PCT	Snapshot Backup

PATENT
REEL: 038498 FRAME: 0225

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84032971	Application		10/31/2014		PCT/US2014/063535	PCT	A Meta-Data Block Within a Non-Volatile Memory Device
84032996	Application		1/28/2015		PCT/US2015/013222	PCT	ELECTROSTATIC DISCHARGE MEMRISTIVE ELEMENT SWITCHING
84033005	Application		10/20/2014		PCT/US2014/061375	PCT	Clamp Circuit
84033011	Application		10/24/2014		PCT/US2014/062158	PCT	INCREASING A READ MARGIN IN A READ CELL
84033019	Application		10/29/2014		PCT/US2014/062806	PCT	CPU WITH EXTERNAL FAULT RESPONSE HANDLING
84033028	Application		10/23/2014		PCT/US2014/061965	PCT	SUPERVISORY MEMORY MANAGEMENT UNIT
84033033	Application		10/31/2014		PCT/US2014/063330	PCT	SENSING CIRCUIT FOR RESISTIVE MEMORY
84033088	Application		10/23/2014		PCT/US2014/062010	PCT	MEMRISTIVE CROSS-BAR ARRAY FOR DETERMINING A DOT PRODUCT
84033096	Application		12/15/2014		PCT/US2014/070266	PCT	NONVOLATILE MEMORY CROSS-BAR ARRAY
84033126	Application		1/16/2015		PCT/IN2015/000024	PCT	LOCATION AWARE FAILOVER SOLUTION
84033134	Application		10/28/2014		PCT/US2014/062694	PCT	MEMCAPACITIVE CROSS-BAR ARRAY FOR DETERMINING A DOT PRODUCT
84033146	Application		9/26/2014		PCT/US2014/057684	PCT	ARRAYS OF BIT-CELLS
84033159	Application		11/18/2014		PCT/US2014/066195	PCT	MEMRISTIVE DOT PRODUCT ENGINE WITH A NULLING AMPLIFIER
84033163	Application		3/19/2015		PCT/US2015/021410	PCT	POST IN-DOUBT TRANSACTION TO NOTICE UNIT
84033177	Application		9/29/2014		PCT/US2014/057937	PCT	DYNAMIC ALLOCATION OF FLOW TABLE CAPACITY
84033194	Application		9/29/2014		PCT/US2014/057970	PCT	RETAIN DATA ABOVE THRESHOLD
84033205	Application		11/4/2014		PCT/US2014/063826	PCT	BRIDGE PORT EXTENDER
84033431	Application		12/23/2014		PCT/US2014/072054	PCT	RESOURCE PREDICTORS INDICATIVE OF PREDICTED RESOURCE USAGE
84033443	Application		11/24/2014		PCT/US2014/067069	PCT	DETERMINING A LOCATION OF A DISCONNECTED DEVICE
84033466	Application		10/31/2014		PCT/US2014/063357	PCT	DRAINING A WRITE QUEUE BASED ON INFORMATION FROM A READ QUEUE
84033495	Application		10/24/2014		PCT/US2014/062236	PCT	TURNING MIRROR OPTICAL COUPLERS
84033523	Application		12/9/2014		PCT/US2014/069193	PCT	INTERLOCK BRACKET UNIT
84033546	Application		10/27/2014		PCT/US2014/062388	PCT	MODULAR APPARATUSES AND SYSTEM FOR BACKPLANE CONNECTIONS
84033555	Application		10/30/2014		PCT/US2014/063179	PCT	TUNNEL ENCAPSULATION
84033563	Application		9/26/2014		PCT/US2014/057712	PCT	ITEM RECOMENDATION
84033584	Application		10/31/2014		PCT/US2014/063302	PCT	ALTERNATE ADDRESS NETWORK LOGIN
84033620	Application		12/19/2014		PCT/US2014/071367	PCT	BONDED FILTER SUBSTRATES
84033624	Application		10/27/2014		PCT/US2014/062373	PCT	DETERMINING TO PROCESS NETWORK PROTOCOL PACKETS
84033635	Application		10/27/2014		PCT/US2014/062342	PCT	CLASSIFICATION WITH A SWITCH

PATENT
REEL: 038498 FRAME: 0226

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84033847	Application		1/22/2015		PCT/US2015/012357	PCT	MONOLITHIC WDM VCSEL ARRAYS BY QUANTUM WELL INTERMIXING
84033861	Application		10/27/2014		PCT/US2014/062347	PCT	An Artificial Peristalsis Device
84035433	Application		11/25/2014		PCT/US2014/067242	PCT	SWITCH BETWEEN FIRST POWER SOURCE AND SECOND POWER SOURCE
84035438	Application		11/20/2014		PCT/US2014/066671	PCT	ADJUSTING A THRESHOLD OF STORAGE IN A BUFFER ACCORDING TO A LATENCY
84036538	Application		9/30/2014		PCT/US2014/058172	PCT	EXECUTABLE CODE IN A MEDIA FILE
84036621	Acknowledged					PCT	Silicon Photonics based optical circuit switch
84036929	Application		12/17/2014		PCT/US2014/070744	PCT	TEMPERATURE GRADIENTS FOR CONTROLLING MEMRISTOR SWITCHING
84037116	Application		1/29/2015		PCT/US2015/013606	PCT	HASH INDEX
84037127	Application		1/29/2015		PCT/US2015/013608	PCT	READ ONLY BUFFERPOOL
84039763	Application		9/5/2014		PCT/US2014/054429	PCT	Application Justification
84042835	Application		2/13/2015		PCT/US2015/015973	PCT	PARTITIONING MEMORY MODULES INTO VOLATILE AND NON-VOLATILE PORTIONS
84042840	Application		11/20/2014		PCT/US2014/066502	PCT	DATA TRANSFER USING BACKUP POWER SUPPLY
84042858	Application		12/18/2014		PCT/US2014/071181	PCT	STORAGE DRIVE ADAPTER
84042872	Application		11/24/2014		PCT/US2014/067153	PCT	WAIT STATE TRANSITION
84044343	Application		9/5/2014		PCT/US2014/054349	PCT	ENSURING DATA INTEGRITY OF A RETAINED FILE UPON REPLICATION
84048829	Application		9/18/2014		PCT/US2014/056337	PCT	FILE DIRECTORY STORAGE ON A STORAGE DEVICE
84051496	Application		9/26/2014		PCT/US2014/057858	PCT	RECEPTACLE FOR CONNECTING A MULTI-LANE OR ONE-LANE CABLE
84054144	Application		41911		PCT/EP2014/070838	PCT	PROVISIONING A SERVICE
84065503	Published		12/8/2014		PCT/US2014/069118	PCT	PROVIDING POLICY INFORMATION
84079007	Application		10/27/2014		PCT/US2014/062398	PCT	DYNAMICALLY APPLYING A PATCH TO A SHARED LIBRARY
84080968	Application		12/1/2014		PCT/US2014/067937	PCT	POLICY-BASED DATA PROTECTION
84084163	Application		12/11/2014		PCT/US2014/069753	PCT	DETERMINING TERM SCORES BASED ON A MODIFIED INVERSE DOMAIN FREQUENCY
84084171	Application		12/11/2014		PCT/US2014/069766	PCT	STRUCTURING OF SEMI-STRUCTURED LOG MESSAGES
84086347	Application		12/1/2014		PCT/US2014/067967	PCT	FILE SYSTEM JOURNALING
84088728	Application		10/29/2014		PCT/US2014/062928	PCT	DETERMINING OPTIMUM RESOURCES FOR AN ASYMMETRIC DISASTER RECOVERY SITE OF A COMPUTER CLUSTER
84090838	Application		3/3/2015		PCT/US2015/018483	PCT	DEVICE AUTHENTICATION AGENT
84097743	Application		11/4/2014		PCT/US2014/063836	PCT	NETWORK COMPATIBILITY DETERMINATION BASED ON FLOW REQUIREMENTS OF AN APPLICATION AND STORED FLOW CAPABILITIES OF A SOFTWARE-DEFINED NETWORK

PATENT
REEL: 038498 FRAME: 0227

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84097759	Application		11/6/2014		PCT/US2014/064241	PCT	LINK AGGREGATION CONFIGURATION FOR A NODE IN A SOFTWARE-DEFINED NETWORK
84104641	Application		1/30/2015		PCT/US2015/013679	PCT	REPLICATING NETWORK COMMUNICATIONS
84107200	Application		11/13/2014		PCT/US2014/065460	PCT	CUSTOMIZED CLOUD SERVICE
84107329	Application		12/16/2014		PCT/US2014/070570	PCT	MANAGING A STORAGE POOL
84107609	Application		1/15/2015		PCT/US2015/011564	PCT	EXTENDED ATTRIBUTE STORAGE
84107627	Application		1/15/2015		PCT/US2015/011607	PCT	FILE SYSTEM CONFIGURATION DATA STORAGE
84108001	Application		2/27/2015		PCT/US2015/018088	PCT	VISUALIZATION OF USER REVIEW DATA
84109261	Application		11/21/2014		PCT/US2014/066870	PCT	KEYBOARD OFFSET COORDINATES
84111405	Application		12/23/2014		PCT/US2014/072055	PCT	DETECTION OF ALLERGEN EXPOSURE
84111422	Application		3/5/2015		PCT/US2015/018865	PCT	ACTIVATING AN ALARM IF A LIVING BEING IS PRESENT IN AN ENCLOSED SPACE WITH AMBIENT TEMPERATURE OUTSIDE A SAFE TEMPERATURE RANGE
84111434	Application		2/13/2015		PCT/US2015/015729	PCT	MULTILAYERED MEMRISTORS
84111442	Application		1/27/2015		PCT/US2015/013079	PCT	CONFIGURATION ITEM INTEGRITY
84111450	Application		4/7/2015		PCT/EP2015/057523	PCT	MEMRISTOR FUNCTIONS BASED ON AN ORTHOGONAL ELECTRODE
84111454	Application		1/27/2015		PCT/US2015/013076	PCT	ADJUSTING FAN SPEED BASED ON A STATE CHANGE OF A CHASSIS LID
84111471	Application		1/27/2015		PCT/US2015/013080	PCT	IN-LINE MEMORY MODULE CARRIER FOR AN M.2 FORM FACTOR MODULE
84111476	Application		1/30/2015		PCT/US2015/013733	PCT	VIRTUAL SPACE CALIBRATION
84111488	Application		1/30/2015		PCT/US2015/013742	PCT	RELATIONSHIP PRESERVING PROJECTION OF DIGITAL OBJECTS
84111497	Application		1/30/2015		PCT/US2015/013902	PCT	TIME-DEPENDENT DEMOGRAPHICS FOR DIGITAL BILLBOARDS
84111505	Application		1/30/2015		PCT/US2015/013905	PCT	VEHICLE DIAGNOSTIC DATA
84111514	Application		2/20/2015		PCT/US2015/016786	PCT	REDUCTION OF BACK REFLECTIONS
84111557	Application		3/27/2015		PCT/US2015/022936	PCT	OPTICAL FIBER DISTRIBUTION
84111565	Application		2/27/2015		PCT/US2015/017958	PCT	AUXILIARY POWER SOURCE BASED ON UTILIZATION
84111636	Application		2/24/2015		PCT/US2015/017367	PCT	DETERMINING RESISTANCE STATES OF MEMRISTORS IN A CROSSBAR ARRAY
84111640	Application		7/30/2015		PCT/EP2015/067609	PCT	FRAGMENTED PACKET PROCESSING RESOURCE DETERMINATION
84111648	Application		1/30/2015		PCT/US2015/013963	PCT	Request Processing
84111665	Application		1/29/2015		PCT/US2015/013494	PCT	RESISTIVE MEMORY DEVICES AND ARRAYS
84111674	Application		1/30/2015		PCT/US2015/013817	PCT	PREVENTING DATA CORRUPTION AND SINGLE POINT OF FAILURE IN A FAULT-TOLERANT MEMORY
84111682	Application		5/21/2015		PCT/US2015/031933	PCT	Video Management for Compute Nodes

PATENT
REEL: 038498 FRAME: 0228

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84111686	Application		1/30/2015		PCT/US2015/013898	PCT	NON-IDEMPOTENT PRIMITIVES IN FAULT-TOLERANT MEMORY
84111700	Application		2/24/2015		PCT/US2015/017242	PCT	DETERMINING A STATE OF A MEMRISTOR CELL
84111728	Application		1/16/2015		PCT/US2015/011690	PCT	MEMORY MANAGER
84111745	Application		4/6/2015		PCT/US2015/024444	PCT	ELECTRICALLY CONDUCTING OXYGEN DIFFUSION BARRIERS FOR MEMRISTORS AND SELECTORS
84111765	Application		3/9/2015		PCT/CN2015/073871	PCT	PREDICTING ACCESS POINT AVAILABILITY
84111769	Application		2/26/2015		PCT/US2015/017676	PCT	CHECKSUM REQUESTS OF FILES
84111777	Application		1/26/2015		PCT/US2015/012908	PCT	REGULATING A POWER CONSUMPTION STATE OF A CELLULAR RADIO
84111800	Application		1/30/2015		PCT/US2015/014001	PCT	CONNECTION TYPE DETECTION CIRCUIT
84111808	Application		12/22/2014		PCT/US2014/071799	PCT	RESPONSE TO AN INOPERATIVE NETWORK DEVICE MANAGED BY A CONTROLLER
84111823	Application		4/7/2015		PCT/US2015/024704	PCT	FORWARDING TABLE OF HYBRID SOFTWARE DEFINED NETWORKING SWITCH
84111829	Application		1/12/2015		PCT/US2015/011008	PCT	DATA LINK LAYER INFORMATION
84111849	Application		12/3/2014		PCT/US2014/068465	PCT	MODIFYING AN ADDRESS TO FORWARD A PACKET TO A SERVICE FUNCTION
84111871	Application		1/22/2015		PCT/US2015/012344	PCT	ROUTER TO SEND A REQUEST FROM A FIRST SUBNET TO A SECOND SUBNET
84111880	Application		11/28/2014		PCT/US2014/067814	PCT	VERIFYING A NETWORK CONFIGURATION
84111885	Application		3/13/2015		PCT/US2015/020434	PCT	DETERMINE ANOMALOUS BEHAVIOR BASED ON DYNAMIC DEVICE CONFIGURATION ADDRESS RANGE
84111912	Application		4/2/2015		PCT/US2015/024102	PCT	INTERMEDIARY NETWORK ELEMENT FOR TAP TRAFFIC
84111929	Application		3/24/2015		PCT/CN2015/074945	PCT	FIELD PROGRAMMABLE GATE ARRAY MEMORY ALLOCATION
84111934	Application		6/3/2015		PCT/US2015/033879	PCT	DELAY OF ROUTE UPDATE COMMUNICATION
84111968	Application		1/29/2015		PCT/US2015/013518	PCT	PHOTONIC INTERCONNECT INCLUDING A CYCLIC ARRAYED WAVEGUIDE GRATING
84112767	Application		1/30/2015		PCT/US2015/013954	PCT	VALIDATING DATA IN A STORAGE ARRAY
84112779	Application		1/27/2015		PCT/US2015/013144	PCT	TRANSFERRING A VARIABLE DATA PAYLOAD
84112787	Application		1/28/2015		PCT/US2015/013363	PCT	RISER MATRIX
84112824	Application		2/19/2015		PCT/US2015/016575	PCT	ENABLING ADVANCED ERROR CORRECTION CONTROL ON SUBSET OF MEMORY CONTROLLERS
84112828	Application		1/30/2015		PCT/US2015/013810	PCT	DEDICATED MEMORY SERVER
84112990	Application		3/12/2015		PCT/US2015/020085	PCT	POWER DISTRIBUTION PLAN
84112999	Application		12/23/2014		PCT/US2014/072020	PCT	Automatically Rerunning Test Executions
84113013	Application		1/16/2015		PCT/US2015/011810	PCT	ROOT CAUSE ANALYSIS OF NON-DETERMINISTIC TESTS

PATENT
REEL: 038498 FRAME: 0229

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84113034	Application		2/17/2015		PCT/US2015/016121	PCT	STORAGE AREA NETWORK SWITCH REBOOT NOTIFICATION
84113056	Application		2/27/2015		PCT/US2015/018000	PCT	SOFTWARE DEFINED NETWORK CONTROLLER FOR IMPLEMENTING TENANT SPECIFIC POLICY
84113065	Application		12/1/2014		PCT/US2014/067879	PCT	STATUSES OF EXIT CRITERIA
84113080	Application		4/7/2015		PCT/US2015/024641	PCT	BUILDING A DATA QUERY VISUALIZATION
84113099	Application		1/29/2015		PCT/US2015/013548	PCT	APPLICATION RECORDING
84113113	Application		1/30/2015		PCT/US2015/013900	PCT	COLLABORATIVE SECURITY LISTS
84113134	Application		1/30/2015		PCT/CN2015/071998	PCT	IDENTIFYING HEARTBEAT MESSAGES
84113140	Application		1/30/2015		PCT/US2015/013762	PCT	STORAGE DRIVE RISER
84113222	Application		5/11/2015		PCT/US2015/030175	PCT	BAFFLE WITH OPTICAL CONNECTOR
84113239	Application		1/30/2015		PCT/US2015/013678	PCT	SYNTHESIZING A GRAPH
84113260	Application		12/5/2014		PCT/CN2014/093088	PCT	MENU DISPLAY CONTROL
84113265	Application		1/23/2015		PCT/US2015/012722	PCT	NON-UNIFORM MEMORY ACCESS AWARE MONITORING
84113311	Application		1/28/2015		PCT/US2015/013250	PCT	PRODUCT PORTFOLIO RATIONALIZATION
84113323	Application		12/22/2014		PCT/US2014/071834	PCT	IDENTIFICATION OF APPLICATION MESSAGE TYPES
84113331	Application		1/30/2015		PCT/US2015/013813	PCT	Virtual Machines and File Services
84113340	Application		4/1/2015		PCT/US2015/023827	PCT	GRAPHS WITH NORMALIZED ACTUAL VALUE MEASUREMENTS AND BASELINE BANDS REPRESENTATIVE OF NORMALIZED MEASUREMENT RANGES
84113348	Application		1/29/2015		PCT/US2015/013451	PCT	Communications Over a Serial Attached Small Computer Interface (SAS)
84113360	Application		3/31/2015		PCT/US2015/023491	PCT	Inferring a Network Topology
84113365	Application		1/29/2015		PCT/US2015/013432	PCT	HARD DISK DRIVE POWER REMOVAL
84113369	Application		1/22/2015		PCT/US2015/012455	PCT	IN-LINE EDITOR INSERTION
84113454	Application		5/1/2015		PCT/US2015/028896	PCT	SECURE MULTI-PARTY INFORMATION RETRIEVAL
84113752	Application		1/30/2015		PCT/US2015/013946	PCT	CUCKOO HASH TABLE
84113806	Application		3/12/2015		PCT/US2015/020192	PCT	MEMORY DEVICE WRITE BASED ON MAPPING
84113815	Application		1/30/2015		PCT/US2015/013958	PCT	ORDERING UPDATES FOR NONVOLATILE MEMORY ACCESSES
84113820	Application		5/15/2015		PCT/US2015/031244	PCT	PRICE, COMPLETION TIME, AND RESOURCE ALLOCATION DETERMINATION FOR CLOUD SERVICES
84113824	Application		1/23/2015		PCT/US2015/012713	PCT	HETEROGENEOUS PLATFORM CONFIGURATIONS
84113841	Application		2/27/2015		PCT/US2015/018178	PCT	MANUFACTURER-SIGNED DIGITAL CERTIFICATE FOR IDENTIFYING A CLIENT SYSTEM
84113909	Application		2/27/2015		PCT/US2015/018053	PCT	ANALYZING HARDWARE SYSTEMS
84113929	Application		5/18/2015		PCT/US2015/031380	PCT	ASSET MANAGEMENT MODULES
84113935	Application		3/6/2015		PCT/US2015/019232	PCT	GRAPH UPDATE FLUSH TO A SHARED MEMORY
84113950	Application		3/6/2015		PCT/US2015/019295	PCT	DYNAMIC API MANAGEMENT
84114010	Application		3/18/2015		PCT/US2015/021283	PCT	SAS EXPANDER

PATENT
REEL: 038498 FRAME: 0230

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84114030	Application		4/10/2015		PCT/US2015/025277	PCT	MODIFYING WEB PAGE CODE TO INCLUDE CODE TO PROTECT OUTPUT
84114284	Application		1/30/2015		PCT/IN2015/000062	PCT	DEPLOYING SOFTWARE PRODUCTS
84114296	Application		2/27/2015		PCT/US2015/018019	PCT	RESPONSIVE SERVER IDENTIFICATION AMONG MULTIPLE DATA SERVERS LINKED TO A SHARED MEMORY
84114368	Application		1/28/2015		PCT/US2015/013324	PCT	NETWORK SWITCHING NODE WITH STATE MACHINE REPLICATION
84114376	Application		1/29/2015		PCT/US2015/013545	PCT	Multiple Computers On A Reconfigurable Circuit Board
84114393	Application		1/28/2015		PCT/US2015/013354	PCT	CONTROLLING THE RELEASE OF PERSONAL INFORMATION
84114402	Application		1/23/2015		PCT/US2015/012767	PCT	CONFIGURATION OF A VIRTUAL LOCAL AREA NETWORK IN A RING OF DEVICES
84114407	Application		3/27/2015		PCT/US2015/023044	PCT	OPTIMIZE QUERY BASED ON UNIQUE ATTRIBUTE
84114422	Application		1/30/2015		PCT/US2015/013986	PCT	SENSORS FOR COOLING SYSTEM FLUID ATTRIBUTES
84114430	Application		1/29/2015		PCT/US2015/013508	PCT	HAMMING DISTANCE COMPUTATION
84114439	Application		5/19/2015		PCT/US2015/031647	PCT	MOBILE ASSET COMPLIANCE EVALUATION
84114490	Application		2/19/2015		PCT/US2015/016537	PCT	PROVIDER OFFER
84114505	Application		1/29/2015		PCT/US2015/013443	PCT	APPLICATION UPDATES
84114510	Application		1/27/2015		PCT/US2015/013071	PCT	VIRTUAL POINT OF SALE
84114522	Application		1/22/2015		PCT/US2015/012356	PCT	SESSION KEY REPOSITORY
84114528	Application		2/18/2015		PCT/US2015/016392	PCT	CONTINUOUS VIEWING MEDIA
84114571	Application		2/27/2015		PCT/US2015/018054	PCT	MEMORY MODULE VOLTAGE REGULATOR MODULE (VRM)
84114597	Application		3/11/2015		PCT/US2015/019840	PCT	GENERATE NETWORK NAME BASED ON NETWORK NAMING STANDARD
84114602	Application		2/12/2015		PCT/US2015/015562	PCT	APPLYING A DEGREE OF TRANSPARENCY
84114611	Application		1/16/2015		PCT/US2015/011688	PCT	VIDEO ENCODER
84114619	Application		6/25/2015		PCT/US2015/037802	PCT	BIG DATA TRANSFER
84114653	Application		3/31/2015		PCT/US2015/023708	PCT	PREVENTING DATA CORRUPTION AND SINGLE POINT OF FAILURE IN FAULT-TOLERANT MEMORY FABRICS
84114722	Application		5/15/2015		PCT/US2015/031256	PCT	DYNAMICALLY CHANGING A POWER SUPPLY VOLTAGE TO A SYSTEM
84114728	Application		1/31/2015		PCT/US2015/014009	PCT	DETERMINATION OF STATUS BASED ON STATUS DOMAIN
84114743	Application		1/31/2015		PCT/US2015/014010	PCT	CONFIGURATIONS FOR IN-FACTORY AND POST-FACTORY USE
84114754	Application		1/26/2015		PCT/US2015/012926	PCT	RESOURCE ALLOCATION
84114763	Application		1/31/2015		PCT/US2015/014008	PCT	RESOURCE ALLOCATION
84114799	Application		1/29/2015		PCT/US2015/013556	PCT	Movable Rack
84114965	Application		1/30/2015		PCT/US2015/013981	PCT	INTEGRATED LIQUID COOLING OF A SERVER SYSTEM
84114991	Application		2/9/2015		PCT/US2015/014980	PCT	REDUNDANT POWER EXTENDER.
84114995	Application		1/29/2015		PCT/US2015/013598	PCT	Cloud-Hosted User Authentication

PATENT
REEL: 038498 FRAME: 0231

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84115008	Application		1/13/2015		PCT/US2015/011198	PCT	DATA CENTER CONFIGURATION
84115017	Application		4/22/2015		PCT/US2015/027177	PCT	STORAGE SYSTEM ENCLOSURES
84115052	Application		1/16/2015		PCT/US2015/011763	PCT	PLENUM TO DELIVER COOL AIR AND ROUTE MULTIPLE CABLES
84115060	Application		2/27/2015		PCT/US2015/018131	PCT	SELECTIVELY ENABLING BACKUP POWER TO NODES
84115636	Application		5/20/2015		PCT/US2015/031699	PCT	VIRTUAL MACHINE DATA PROTECTION
84115658	Application		4/27/2015		PCT/US2015/027808	PCT	MEMRISTIVE CROSSBAR ARRAY HAVING MULTI-SELECTOR MEMRISTOR CELLS
84115761	Application		1/30/2015		PCT/US2015/013987	PCT	MULTIPLE USER DATA STORAGE AND SEPARATION
84115765	Application		1/29/2015		PCT/US2015/013540	PCT	NET PROMOTER SCORE DETERMINATION
84115798	Application		3/10/2015		PCT/US2015/019792	PCT	AUTHORIZATION FOR MULTIPLE USER DATA STORAGE AND SEPARATION
84115813	Application		3/10/2015		PCT/US2015/019788	PCT	WORKFLOW MANAGEMENT FOR MULTIPLE USER DATA STORAGE AND SEPARATION
84115821	Application		1/30/2015		PCT/US2015/013759	PCT	PERFORMANCE TESTING BASED ON VARIABLE LENGTH SEGMENTATION AND CLUSTERING OF TIME SERIES DATA
84115825	Application		12/19/2014		PCT/US2014/071619	PCT	COLLABORATION WITH 3D DATA VISUALIZATIONS
84115841	Application		3/12/2015		PCT/US2015/020164	PCT	PROGRESSIVE INTERACTIVE APPROACH FOR BIG DATA ANALYTICS
84116328	Application		1/29/2015		PCT/US2015/013554	PCT	PROCESSING AN ELECTRONIC DATA STREAM USING A GRAPH DATA STRUCTURE
84136817	Application		1/15/2015		PCT/US2015/011582	PCT	Online File System Check
84141071	Application		1/30/2015		PCT/US2015/013798	PCT	PROTECTION AGAINST DATABASE INJECTION ATTACKS
84144131	Application		2/6/2015		PCT/US2015/014724	PCT	CORRELATION ENGINE COMPRISING ROOT CAUSE AND SERVICE IMPACT ANALYSES
84152848	Application		2/11/2015		PCT/US2015/015474	PCT	NETWORK SERVICE CHAIN CONSTRUCTION
84155504	Application		6/3/2015		PCT/US2015/033989	PCT	DATA RETENTIONS
84155521	Application		5/14/2015		PCT/US2015/030873	PCT	DATA TRANSFERS BASED ON STATE TRANSITION DETECTIONS
84160281	Application		6/30/2015		PCT/US2015/038532	PCT	CLOUD SERVICE TUNING
84160422	Application		2/13/2015		PCT/US2015/015867	PCT	Data Deduplication
84169137	Application		8/17/2015		PCT/US2015/045492	PCT	CONFIDENCE INDICATOR OF UNRECEIVED SECURITY MESSAGE
84169141	Application		7/1/2015		PCT/US2015/038775	PCT	LATENCY MEASURER
84169644	Application		4/17/2015		PCT/US2015/026281	PCT	DETERMINING RESISTIVE STATE OF MEMRISTORS
84169805	Application		5/12/2015		PCT/US2015/030370	PCT	NON-VOLATILE RESISTANCE MEMORY DEVICES INCLUDING A VOLATILE SELECTOR
84169813	Application		4/10/2015		PCT/US2015/025450	PCT	TEMPERATURE COMPENSATION CIRCUITS

PATENT
REEL: 038498 FRAME: 0232

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84169827	Application		6/5/2015		PCT/US2015/034539	PCT	READ CIRCUITRY FOR ELECTROSTATIC DISCHARGE SWITCHING MEMRISTIVE ELEMENT
84169847	Application		8/13/2015		PCT/US2015/045091	PCT	RECONFIGURABLE INTERCONNECTED NODES
84169851	Application		8/10/2015		PCT/US2015/044482	PCT	LOW IMPEDANCE VCSELS
84169859	Application		9/23/2015		PCT/US2015/051688	PCT	Storage Memory Direct Access
84169867	Application		6/4/2015		PCT/US2015/034272	PCT	MONOLITHIC WDM VCSELS WITH SPATIALLY VARYING GAIN PEAK AND FABRY PEROT WAVELENGTH
84169888	Application		5/22/2015		PCT/US2015/032190	PCT	TRAFFIC MANAGEMENT SYSTEM
84170050	Application		3/13/2015		PCT/US2015/020480	PCT	CONFIGURING MANAGED DEVICES
84170122	Application		3/26/2015		PCT/US2015/022805	PCT	REGISTRATION INFORMATION
84170154	Application		7/29/2015		PCT/US2015/042661	PCT	FIREWALL TO DETERMINE ACCESS TO A PORTION OF MEMORY
84170196	Application		7/28/2015		PCT/US2015/042506	PCT	DATABASE QUERY CLASSIFICATION
84170222	Application		4/22/2015		PCT/US2015/027029	PCT	COMMUNICATION USING PHASE MODULATION OVER AN INTERCONNECT
84170259	Application		4/24/2015		PCT/CN2015/077391	PCT	TRANSACTION MANAGEMENT AND COMMITTING
84170263	Application		4/28/2015		PCT/US2015/028042	PCT	MAP TABLES FOR HARDWARE TABLES
84170274	Application		5/27/2015		PCT/US2015/032570	PCT	DATA VALIDATION
84170314	Application		5/28/2015		PCT/US2015/032923	PCT	DEPENDENCY RANK BASED ON COMMIT HISTORY
84170323	Application		4/30/2015		PCT/US2015/028623	PCT	MIGRATING DATA USING DUAL-PORT NON-VOLATILE DUAL IN-LINE MEMORY MODULES
84170331	Application		4/24/2015		PCT/US2015/027474	PCT	CONTEXT-AWARE CHECKLISTS
84170357	Application		4/28/2015		PCT/US2015/027901	PCT	Hardware for System Firmware Use
84170371	Application		4/27/2015		PCT/US2015/027760	PCT	VIRTUALIZED FAN SPEED MEASUREMENT
84170383	Application		6/18/2015		PCT/US2015/036438	PCT	TRANSMITTING CONTENTS OF AN OPERATION FIELD TO A MEDIA CONTROLLER
84170391	Application		7/14/2015		PCT/US2015/040287	PCT	DETERMINING FIRST WRITE STRENGTH
84170426	Application		5/28/2015		PCT/US2015/032827	PCT	TRANSLATION OF SOURCE M-NODE IDENTIFIER TO TARGET M-NODE IDENTIFIER
84171250	Application		4/30/2015		PCT/US2015/028648	PCT	Consolidated Metadata In Databases
84171258	Application		4/28/2015		PCT/US2015/028044	PCT	MEMRISTOR APPARATUS WITH VARIABLE TRANSMISSION DELAY
84171262	Application		6/19/2015		PCT/US2015/036720	PCT	HANDLING ERRORS DURING RUN TIME BACKUPS
84171278	Application		4/30/2015		PCT/US2015/028651	PCT	Monitoring Application Operations Using User Interaction Times
84171308	Application		4/22/2015		PCT/US2015/027051	PCT	CONFIGURING NETWORK DEVICES
84171319	Application		4/30/2015		PCT/US2015/028597	PCT	PERIPHERAL DEVICE SERVER ACCESS
84171328	Application		5/11/2015		PCT/US2015/030144	PCT	PERIPHERAL DEVICE SECURITY

PATENT
REEL: 038498 FRAME: 0233

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84171362	Application		4/30/2015		PCT/US2015/028605	PCT	UPLINK PORT OVERSUBSCRIPTION DETERMINATION
84171367	Application		4/20/2015		PCT/US2015/026652	PCT	CONFIGURATION OF CONFIGURABLE COMPONENTS
84171379	Application		5/12/2015		PCT/US2015/030297	PCT	SERVER DISCRETE SIDE INFORMATION
84171391	Application		4/30/2015		PCT/US2015/028522	PCT	Cooling Via a Sleeve Connector
84171410	Application		3/18/2015		PCT/US2015/021284	PCT	AUTOMATIC DETECTION OF OUTLIERS IN MULTIVARIATE DATA
84171430	Application		5/29/2015		PCT/US2015/033167	PCT	TRANSFERRING AN IMAGE FILE OVER A NETWORK
84171442	Application		5/15/2015		PCT/US2015/030993	PCT	DEVICE MOUNTS
84171450	Application		4/30/2015		PCT/US2015/028596	PCT	EXTRACTING DATA FROM NETWORK COMMUNICATIONS
84171462	Application		5/18/2015		PCT/US2015/031316	PCT	DETECTING AN ERRONEOUSLY STORED DATA OBJECT IN A DATA CONTAINER
84171470	Application		5/19/2015		PCT/US2015/031463	PCT	DATABASE COMPARISON OPERATION TO IDENTIFY AN OBJECT
84171536	Application		5/19/2015		PCT/US2015/031499	PCT	UPDATING INFERENCE GRAPH ABSENT NODE LOCKING
84171593	Application		5/22/2015		PCT/US2015/032212	PCT	MARGINAL DISTRIBUTION IN A GRAPHICAL MODEL
84171599	Application		5/1/2015		PCT/US2015/028952	PCT	THROTTLED DATA MEMORY ACCESS
84172444	Application		3/23/2015		PCT/US2015/022068	PCT	COMPILING NETWORK POLICIES
84172452	Application		3/31/2015		PCT/US2015/023474	PCT	NETWORK POLICY DISTRIBUTION
84172464	Application		4/23/2015		PCT/US2015/027257	PCT	PRE-FILTER RULES FOR NETWORK INFRASTRUCTURE DEVICES
84172478	Application		4/9/2015		PCT/EP2015/057790	PCT	REMOVING LIBRARY OBJECTS FROM A STATIC LIBRARY
84172710	Application		3/25/2015		PCT/US2015/022527	PCT	FAST FAILOVER RECOVERY IN SOFTWARE DEFINED NETWORKS
84172718	Application		3/12/2015		PCT/US2015/020280	PCT	FREQUENCY OF A CLOCK SIGNAL
84172759	Application		3/4/2015		PCT/US2015/018733	PCT	MULTIPLE PINS OF DIFFERENT LENGTHS CORRESPONDING TO DIFFERENT DATA SIGNALING RATES
84172764	Application		4/30/2015		PCT/US2015/028439	PCT	JOURNEY AND CHARGE PRESENTATIONS AT MOBILE DEVICES
84172796	Application		4/17/2015		PCT/US2015/026273	PCT	DYNAMIC MESSAGING FOR AN APPLICATION PROGRAMMING INTERFACE
84172804	Application		4/29/2015		PCT/US2015/028110	PCT	DATA PROTECTION
84172819	Application		4/10/2015		PCT/US2015/025465	PCT	NETWORK ADDRESS OF A COMPUTING DEVICE
84172847	Application		3/12/2015		PCT/US2015/020290	PCT	COMPUTING DEVICE LOCATION
84172881	Application		5/28/2015		PCT/US2015/032814	PCT	DETERMINING POTENTIAL TEST ACTIONS
84172885	Application		5/4/2015		PCT/US2015/029007	PCT	DETERMINING IDLE TESTING PERIODS
84172893	Application		8/4/2015		PCT/US2015/043574	PCT	COMPOSING FUTURE TESTS
84172927	Application		3/31/2015		PCT/US2015/023649	PCT	FILE SYSTEM REPLICATION
84172931	Application		5/29/2015		PCT/US2015/033382	PCT	WATER WALL
84172953	Application		7/24/2015		PCT/US2015/041883	PCT	LOCK MANAGER
84173002	Application		4/8/2015		PCT/US2015/024975	PCT	Pre-Boot Device Configuration

PATENT
REEL: 038498 FRAME: 0234

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84173010	Application		4/7/2015		PCT/US2015/024707	PCT	HYBRID COOLING CONTROL OF A COMPUTING SYSTEM
84173019	Application		4/20/2015		PCT/US2015/026674	PCT	SUPPLEMENTAL AIR COOLING
84173028	Application		5/15/2015		PCT/US2015/031212	PCT	SENSOR DATA
84173065	Application		7/31/2015		PCT/US2015/043135	PCT	Optical Jumper
84173085	Application		5/15/2015		PCT/US2015/031121	PCT	BOOTING A NETWORK DEVICE COUPLED TO A STORAGE DEVICE IN A STORAGE AREA NETWORK (SAN)
84173234	Application		4/30/2015		PCT/US2015/028448	PCT	DETECTING TRANSITIONS
84173588	Application		7/30/2015		PCT/US2015/042953	PCT	INTERLEAVED ACCESS OF MEMORY
84173626	Application		4/17/2015		PCT/US2015/026398	PCT	HIERARCHICAL CLASSIFIERS
84173634	Application		4/17/2015		PCT/US2015/026476	PCT	ORGANIZING AND STORING NETWORK COMMUNICATIONS
84173649	Application		5/28/2015		PCT/EP2015/061892	PCT	LINKING DATASETS
84173654	Application		4/27/2015		PCT/EP2015/059047	PCT	Peer to Peer Management of Distributed Memory Fabrics
84173677	Application		9/22/2015		PCT/US2015/051376	PCT	FILE MANAGEMENT
84173686	Application		5/29/2015		PCT/US2015/033285	PCT	STORAGE AREA NETWORK ZONE SET
84173700	Application		6/11/2015		PCT/US2015/035333	PCT	NETWORK FRAME HOLD TIME PARAMETER
84173706	Application		5/15/2015		PCT/US2015/031263	PCT	MAXIMIZING INFORMATION VALUE OF WEB CONTENT
84185714	Application		3/16/2015		PCT/US2015/020645	PCT	UPDATING A VIRTUAL NETWORK TOPOLOGY BASED ON MONITORED APPLICATION DATA
84190157	Application		3/23/2015		PCT/US2015/022074	PCT	IMPLEMENTING POLICY INSTRUCTIONS IN MULTIPLE TABLES
84191036	Application		3/23/2015		PCT/US2015/022071	PCT	Access control to a portion of a file system object
84193887	Application		3/20/2015		PCT/US2015/021764	PCT	ANALYSIS OF INFORMATION IN A COMBINATION OF A STRUCTURED DATABASE AND AN UNSTRUCTURED DATABASE
84194256	Application		3/25/2015		PCT/US2015/022486	PCT	PROVIDING DATA FROM DATA SOURCES
84195045	Application		3/20/2015		PCT/US2015/021714	PCT	SUGGESTIONS FOR DIGITAL FORMS
84202537	Application		4/23/2015		PCT/US2015/027195	PCT	FAILURE ATOMIC UPDATE OF APPLICATION DATA FILES
84212650	Application		4/24/2015		PCT/US2015/027419	PCT	DETECTING INCONSISTENCIES IN HIERARCHICAL ORGANIZATION DIRECTORIES
84220212	Application		7/22/2015		PCT/US2015/041547	PCT	ADDING METADATA ASSOCIATED WITH A COMPOSITE NETWORK POLICY
84220221	Application		7/30/2015		PCT/US2015/043020	PCT	Data Center Network Flow Inference with Compressed Flow Sketching
84232546	Application		4/24/2015		PCT/US2015/027547	PCT	FLOW SAMPLE
84235214	Application		5/4/2015		PCT/US2015/029066	PCT	Restoring a flow path in response to a link failure in a software defined network (SDN)
84251685	To Be Filed					PCT	VIRTUAL MACHINE STORAGE MANAGEMENT

PATENT
REEL: 038498 FRAME: 0235

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84251690	Instructed					PCT	Sorting on a multi-node, multi-core system with a memory fabric of byte-addressable NVRAM
84251713	Application		9/2/2015		PCT/CN2015/088871	PCT	REPLICATING CHAIN OF AGENTS
84251719	Application		8/21/2015		PCT/US2015/046418	PCT	DIGITAL CONTEXT-AWARE MONITORING
84251740	Application		9/16/2015		PCT/US2015/050456	PCT	CONFIDENCE LEVELS IN REPUTABLE ENTITIES
84251745	Application		6/26/2015		PCT/US2015/038129	PCT	SHARING OF COMMUNITY-BASED SECURITY INFORMATION
84251788	Application		9/25/2015		PCT/US2015/052447	PCT	ASSOCIATIONS AMONG DATA RECORDS IN A SECURITY INFORMATION SHARING PLATFORM
84255627	Application		9/11/2015		PCT/US2015/049717	PCT	POWER DISTRIBUTION WITH BATTERIES
84255632	Application		6/16/2015		PCT/US2015/036061	PCT	BATTERY CHARGE VOLTAGE BASED ON AMBIENT TEMPERATURE
84259536	Application		6/30/2015		PCT/US2015/038507	PCT	TAGGED CONTENT DISTRIBUTION
84259957	Application		5/28/2015		PCT/US2015/032933	PCT	Scalabale Cloud Storage Solution
84259975	Application		7/24/2015		PCT/US2015/042009	PCT	ENABLING COMPRESSION OF A VIDEO OUTPUT
84259983	Application		42216		PCT/US2015/043107	PCT	DATA SENSING IN CROSSPOINT MEMORY STRUCTURES
84260009	Application		42146		PCT/US2015/032117	PCT	HYBRID SELECTORS
84260018	Application		8/10/2015		PCT/US2015/044502	PCT	USING A SHARED PRIORITY QUEUE FOR MULTI-THREADED SEARCHING
84260026	Application		7/24/2015		PCT/US2015/042004	PCT	MODIFICATION OF A BUS CHANNEL
84260058	Application		7/20/2015		PCT/US2015/041150	PCT	PROCESSING TIME-VARYING DATA USING A GRAPH DATA STRUCTURE
84260066	Application		8/7/2015		PCT/US2015/044315	PCT	PROCESSING DEVICE OPERATION ENABLEMENT
84260072	Application		8/10/2015		PCT/US2015/044478	PCT	EVALUATING SYSTEM BEHAVIOUR
84260103	Application		7/9/2015		PCT/US2015/039754	PCT	NON-VOLATILE MEMORY DIE DATA MIRRORING
84260107	Application		7/23/2015		PCT/US2015/041668	PCT	LOAD GENERATOR WITH A TOKEN MACHINE
84260129	Application		6/5/2015		PCT/US2015/034370	PCT	PRICING OF CLOUD RESOURCES
84260141	Application		7/21/2015		PCT/US2015/041362	PCT	PROVIDING POWER TO A SERVER
84260152	Application		6/5/2015		PCT/US2015/034431	PCT	PRICING OF CLOUD RESOURCES
84260169	Application		6/5/2015		PCT/US2015/034490	PCT	PRICE, COMPLETION TIME, AND RESOURCE ALLOCATION DETERMINATION FOR CLOUD SERVICES
84260181	Application		8/31/2015		PCT/US2015/047660	PCT	PHYSICAL MEMORY REGION BACKUP OF A VOLATILE MEMORY TO A NON-VOLATILE MEMORY
84260189	Application		9/14/2015		PCT/US2015/050036	PCT	MEMORY LOCATION REMAPPING AND WEAR-LEVELLING
84260206	Application		7/24/2015		PCT/US2015/042134	PCT	DISTRIBUTED DATASETS IN SHARED NON-VOLATILE MEMORY
84260223	Application		9/8/2015		PCT/US2015/048866	PCT	MULTICASTING IN SHARED NON-VOLATILE MEMORY
84260281	Application		6/26/2015		PCT/US2015/038015	PCT	SELF-TUNE CONTROLLER
84260582	Application		7/30/2015		PCT/US2015/042810	PCT	LOCK CONTROL
84261417	Application		7/31/2015		PCT/US2015/043104	PCT	FAULT TOLERANT COMPUTING

PATENT
REEL: 038498 FRAME: 0236

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84261434	Application		5/29/2015		PCT/US2015/033120	PCT	APPLICATION OF NETWORK FLOW RULE ACTION BASED ON PACKET COUNTER
84261443	Application		7/31/2015		PCT/US2015/043165	PCT	Hybrid coherence: A combination of directory-based and snoopy coherence with dynamic mode switching for accelerated node-to-node transfers in systems with high node counts
84261451	Application		7/27/2015		PCT/US2015/042260	PCT	HEAT DISSIPATION FOR DIES
84261475	Application		5/28/2015		PCT/US2015/032986	PCT	SECURITY VULNERABILITY DETECTION
84261521	Application		6/26/2015		PCT/CN2015/082512	PCT	LATENT TOPIC DETERMINATION
84261529	Application		8/14/2015		PCT/US2015/045327	PCT	DYNAMIC LEXER OBJECT CONSTRUCTION
84261626	Application		8/28/2015		PCT/US2015/047474	PCT	SOFTWARE PATCH FIX BASED ON CHECKSUMS
84262279	Application		8/12/2015		PCT/US2015/044849	PCT	Serdes Link Management
84262290	Application		7/23/2015		PCT/US2015/041815	PCT	BIOS Controlled Method for Preserving System Volatile Memory to Persistent Storage
84262328	Application		7/30/2015		PCT/US2015/042992	PCT	NETWORK TRAFFIC PATTERN BASED MACHINE READABLE INSTRUCTION IDENTIFICATION
84262411	Application		7/17/2015		PCT/US2015/040877	PCT	MEMRISTOR ARRAY WITH ACTIVE MEMRISTORS
84262516	Application		8/14/2015		PCT/US2015/045376	PCT	MECHANISMS TO RESET CIRCUIT BREAKERS
84262520	Application		6/5/2015		PCT/US2015/034375	PCT	DATA BLOCK WRITE MAPPED TO MEMORY BANK
84262528	Application		7/31/2015		PCT/US2015/043303	PCT	BLIND MATE SLEDS AND BASES FOR STORAGE DEVICES
84262571	Application		9/23/2015		PCT/US2015/051612	PCT	SIDEWALL ANTI-CATION-DIFFUSION BARRIER
84262583	Application		9/24/2015		PCT/US2015/051807	PCT	COMMUNICATION PATH LOSS
84262639	Application		9/24/2015		PCT/US2015/051882	PCT	SELECTOR WITH POROUS OXIDE LAYER
84262683	Application		7/27/2015		PCT/US2015/042188	PCT	COMPONENT COMPATIBILITY VERIFICATION
84262702	Application		7/22/2015		PCT/US2015/041594	PCT	STARTUP CIRCUIT TO INITIALIZE VOLTAGE REFERENCE CIRCUIT
84262714	Application		9/23/2015		PCT/US2015/051596	PCT	SNAPSHOT STORAGE MANAGEMENT
84262720	Application		7/30/2015		PCT/US2015/043026	PCT	FIRMWARE UPDATE OF AN INTERCONNECT DEVICE
84262748	Application		9/4/2015		PCT/US2015/048713	PCT	SECURE LOGIN INFORMATION
84262768	Application		7/8/2015		PCT/US2015/039543	PCT	PHOTONIC CIRCUIT DESIGN SYSTEMS
84262780	Application		6/1/2015		PCT/US2015/033530	PCT	RING PROTECTION NETWORK MODULE
84262792	Application		9/4/2015		PCT/US2015/048728	PCT	HYBRID GRAPH PROCESSING
84262797	To Be Filed					PCT	A High-Performance In-Memory Data Shuffling Engine
84262805	Application		7/23/2015		PCT/US2015/041735	PCT	RING WAVEGUIDE MODULATORS
84262817	Application		9/4/2015		PCT/US2015/048492	PCT	PUMP BASED ISSUE IDENTIFICATION
84262834	To Be Filed					PCT	Usage Hints for Shared Data Structures
84262851	Application		7/23/2015		PCT/US2015/041814	PCT	MIGRATION FOR CLOUD MANAGEMENT SYSTEMS
84262892	Application		7/31/2015		PCT/US2015/043207	PCT	ACTIVATION OF A SWITCH TO INCREASE DUTY CYCLE
84262900	Application		6/4/2015		PCT/US2015/034276	PCT	DETERMINING LOCATION OF WIRELESS-ENABLED DEVICE
84262908	Application		6/22/2015		PCT/US2015/036901	PCT	CONTROL OF APPLICATION LOG CONTENT

PATENT
REEL: 038498 FRAME: 0237

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84262963	Application		7/30/2015		PCT/US2015/042890	PCT	Transceiver Module
84262972	Application		7/31/2015		PCT/US2015/043189	PCT	Multi-Chip Module
84262989	Application		7/2/2015		PCT/US2015/039128	PCT	DIGITAL VOLTAGE SAMPLING
84262997	Application		6/26/2015		PCT/US2015/037958	PCT	DETERMINING AN ALTERNATING CURRENT (AC) CHARACTERISTIC FROM A WAVEFORM
84263012	Application		42202		PCT/US2015/040880	PCT	CURRENT RESTRICTION
84263021	Application		8/24/2015		PCT/US2015/046614	PCT	POWER DELIVERY MONITOR AND CONTROL WITH AN UNINTERRUPTIBLE POWER SUPPLY
84263029	Application		9/18/2015		PCT/US2015/051006	PCT	Printed Circuit Board
84263038	Application		42229		PCT/US2015/045085	PCT	DEVICE OPERATING STATE MODIFICATION WITH UNINTERRUPTIBLE POWER SOURCE
84263052	Application		6/19/2015		PCT/US2015/036665	PCT	FIRST SOCKET NESTED IN A SECOND SOCKET
84263060	Acknowledged					PCT	FAN CONNECTOR HOUSING
84263098	Application		7/31/2015		PCT/US2015/043268	PCT	Discovering and Publishing API Information
84263106	Application		8/5/2015		PCT/US2015/043716	PCT	VERIFICATION OF A DEVICE IDENTIFIER OF A MOBILE DEVICE
84263598	Application		7/31/2015		PCT/US2015/043185	PCT	Cloud Provisioning for Networks
84263602	Application		7/10/2015		PCT/US2015/039982	PCT	HYBRID CLOUD MANAGEMENT
84263678	To Be Filed					PCT	A Method to Support Baby Giant Frames in SDN Networks
84264042	Application		5/29/2015		PCT/US2015/033124	PCT	DETERMINING ACTIONS TO BE IMMEDIATELY PERFORMED ON A NETWORK PACKET WITH AN APPLICATION SPECIFIC INTEGRATED CIRCUIT
84264054	Application		6/12/2015		PCT/US2015/035509	PCT	APPLICATION IDENTIFICATION CACHE
84264062	Application		7/31/2015		PCT/US2015/043242	PCT	Data Copy to Non-Volatile Memory
84264099	Application		7/17/2015		PCT/US2015/040941	PCT	GENERATING A HASH TABLE IN ACCORDANCE WITH A PREFIX LENGTH
84264103	Application		7/28/2015		PCT/US2015/042447	PCT	HASH VALIDATION KEY
84264111	Application		9/4/2015		PCT/US2015/048567	PCT	DATA TABLES IN CONTENT ADDRESSABLE MEMORY
84264123	To Be Filed					PCT	OPEN SHORTEST PATH FIRST ROUTING FOR HYBRID NETWORKS
84264131	To Be Filed					PCT	DYNAMIC ALLOCATION OF RESOURCES WITHIN NETWORK DEVICES
84264139	Application		7/22/2015		PCT/US2015/041546	PCT	PROVIDING A COMPOSITE NETWORK POLICY
84264143	To Be Filed					PCT	Real-time Verification of High Level Policies in SDN Networks
84264600	Instructed					PCT	Memristor sensing circuits utilizing reference cells for improved performance
84264626	Application		42184		PCT/US2015/038258	PCT	FAILURE OF NETWORK DEVICES IN CLOUD MANAGED NETWORKS

PATENT
REEL: 038498 FRAME: 0238

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0239

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84264657	Application		6/18/2015		PCT/US2015/036344	PCT	CLIENT COMMUNICATIONS IN MULTI-TENANT DATA CENTER NETWORKS
84264661	Application		8/17/2015		PCT/US2015/045490	PCT	LOADING CUSTOM CODE INTO BINARY CODE
84264767	Application		9/19/2015		PCT/US2015/051109	PCT	DETERMINING OUTPUT PRESENTATION TYPE
84264807	To Be Filed					PCT	BACKUP CHANGES IN TRANSACTION LOG FILE
84264829	Application		6/5/2015		PCT/US2015/034433	PCT	CROSSBAR ARRAYS WITH OPTICAL SELECTORS
84264843	Application		7/29/2015		PCT/US2015/042723	PCT	NON-VOLATILE RESISTANCE MEMORY DEVICES INCLUDING A VOLATILE SELECTOR WITH COPPER AND TANTALUM OXIDE
84264952	Application		42216		PCT/EP2015/067690	PCT	COMMIT BASED MEMORY OPERATION IN A MEMORY SYSTEM
84264956	Application		42216		PCT/EP2015/067683	PCT	METHODS TO CREATE LOGICAL TREES OF MEMORY SYSTEMS
84265090	Application		7/29/2015		PCT/US2015/042617	PCT	CONTEXT ORIENTED TRANSLATION
84265118	Application		42222		PCT/US2015/043948	PCT	APPLICATION COMPONENT WARNINGS BASED UPON PERFORMANCE RATINGS
84265135	Application		42258		PCT/US2015/049833	PCT	HUMAN-READABLE CLOUD STRUCTURES
84265156	Application		5/31/2015		PCT/US2015/033441	PCT	TESTING APPLICATIONS USING VIRTUAL REALITY
84265201	Application		8/31/2015		PCT/US2015/047722	PCT	NON-VOLATILE RESISTANCE MEMORY DEVICES INCLUDING A VOLATILE SELECTOR WITH AN ALLOY ELECTRODE AND SILICON DIOXIDE MATRIX
84265205	Application		6/25/2015		PCT/US2015/037604	PCT	MEMORY CELLS WITH VOLATILE CONDUCTING BRIDGE SELECTORS
84265213	Application		8/7/2015		PCT/US2015/044251	PCT	NETWORK TRUSTED SERVICE MANAGER
84265219	Application		42181		PCT/US2015/037978	PCT	AUTHENTICATION REQUESTS
84265227	Instructed					PCT	Rolling Upgrades : Continuous-X in Network Functions Virtualization (NFV) Environments
84265608	Acknowledged					PCT	A distributed, polymorphic type system exploiting subtyping to provide type evolution over long-lived data.
84265628	Application		42271		PCT/EP2015/072043	PCT	RESILIENT MEMORY FABRIC
84265657	Application		42216		PCT/EP2015/067660	PCT	MALWARE MODELLING
84265665	Application		7/31/2015		PCT/EP2015/067659	PCT	Hardware-based Method of Live Migration in a Multi-node System
84265685	Application		7/30/2015		PCT/EP2015/067603	PCT	MEMORY ACCESS CONTROL METHOD AND SYSTEM
84266186	Application		7/21/2015		PCT/US2015/041352	PCT	USING A SINGLE CACHE TABLE
84266350	Acknowledged					PCT	Methods of Securing Important Information on a SPI Flash ROM Device
84266361	Application		8/7/2015		PCT/US2015/044293	PCT	AIRLINE RESOURCE MANAGEMENT
84269175	Application		7/21/2015		PCT/US2015/041217	PCT	TRANSLATE DATA OPERATIONS BASED ON DATA STRIPE SIZE

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84269696	Application		6/24/2015		PCT/US2015/037428	PCT	CONTROL AERIAL MOVEMENT OF DRONE BASED ON LINE-OF-SIGHT OF HUMANS USING DEVICES
84271041	Acknowledged					PCT	ESD-Absorbing RRAM
84277710	To Be Filed					PCT	APPLICATION DEPLOYMENT TO VIRTUAL MACHINES
84279648	Application		42173		PCT/US2015/036340	PCT	NETWORK BASED SERVICE DISCOVERY VIA UNICAST MESSAGES
84282368	Application		42178		PCT/US2015/037228	PCT	Storage Reclamation in a Thin Provisioned Storage Device
84285364	Application		7/30/2015		PCT/US2015/042829	PCT	PROVIDING A PROBABILITY FOR A CUSTOMER INTERACTION
84285388	Application		7/30/2015		PCT/US2015/042831	PCT	STORING DATA IN A DEDUPLICATION STORE
84289636	Application		6/24/2015		PCT/US2015/037430	PCT	Reducing flooding of route updates of a dynamic routing protocol
84298166	Application		6/29/2015		PCT/US2015/038357	PCT	Determining a Sampling Rate for Data Traffic
84303080	Application		42214		PCT/US2015/042690	PCT	JOB SCHEDULING IN AN INFINIBAND NETWORK BASED HPC CLUSTER
84312440	Application		7/17/2015		PCT/US2015/040946	PCT	CONFLICT DETECTION IN A HYBRID NETWORK DEVICE
90015754	Application		8/7/2015		PCT/US2015/044193	PCT	ANNOTATED QUERY GENERATOR
90022703	Application		8/7/2015		PCT/US2015/044311	PCT	Generating Test Data Based on Histogram Statistics
90027143	To Be Filed					PCT	Object level dynamic implementation of concurrency control methods using machine learning algorithms running on big data
90031053	Application		42276		PCT/US2015/052869	PCT	MOUNTING EXTENSION BARS ON POWER DISTRIBUTION UNITS
90031070	To Be Filed					PCT	POWER CORD RETENTION ASSEMBLY
90031074	To Be Filed					PCT	Compact Blade Latch with Security Feature and Insertion Tool
90032041	To Be Filed					PCT	Determining the strength of links between threat objects and its influence on scoring
90033928	To Be Filed					PCT	Automated Real-time Discovery of Liquid Cooling Connections for Data Center Systems
90034013	To Be Filed					PCT	DEVICE MOUNTS
90034148	Acknowledged					PCT	On the use of Bayesian Inference for Estimating the Characteristics of Processing Systems for the Purpose of Splitting Uncertain Workflows
90034156	Acknowledged					PCT	Failure Atomic Sections on The Machine via JUSTDO Logging
90034168	Application		8/28/2015		PCT/US2015/047384	PCT	Managing Manifests for Replication
90034176	Application		8/28/2015		PCT/US2015/047391	PCT	Collision Handling During an Asynchronous Replication
90035084	Acknowledged					PCT	Silent Shredder: Zero-Cost Zeroing NVMM Controller
90035093	Acknowledged					PCT	Auto throttling to manage power consumption and cooling

PATENT
REEL: 038498 FRAME: 0240

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90035101	Acknowledged					PCT	Auto entry and exit from power down states
90035106	Acknowledged					PCT	A Flat Scalable Switch Fabric Architecture for Blade Enclosure
90035110	Acknowledged					PCT	Auto management of paging mode
90035118	Acknowledged					PCT	Active server backplane that allows different I/O protocol
90035126	Acknowledged					PCT	QSFP+ Dual 10GBASE-T Transceiver
90035130	Acknowledged					PCT	Bus retime and expansion
90035138	To Be Filed					PCT	Tool to generate Infrastructure Templates
90035167	Acknowledged					PCT	Feedback-integrated Mechanism for Improved Topics Extraction from Application-derived Textual Documents
90035175	To Be Filed					PCT	Target orchestrated in-band diagnostic data collection and management in a storage area network
90035187	To Be Filed					PCT	Provisioning of BYOD for guests, integrated with the Calendar Application
90035195	Acknowledged					PCT	Self Generating Graph Models in Web Analytics
90035207	Acknowledged					PCT	Automated Real-time Fault Tree Discovery and Status Reporting for Data Center Systems
90035212	Acknowledged					PCT	Sensor Network for Multi-Location & Pattern Leakage Detection
90035221	Acknowledged					PCT	A Novel Inverterless UPS Solution for HDVC 240V Input in a Server Application
90035233	To Be Filed					PCT	Using Virtualized Environment with Shared Non-Volatile Memory Integrated with Memory Performance Emulator for Evaluating Application Performance
90035241	Application		42258		PCT/US2015/049726	PCT	SWITCH PROCESS VIRTUAL ADDRESS SPACE
90035253	To Be Filed					PCT	Accelerated Client Server Programming Models Using Address Space Switching
90035272	To Be Filed					PCT	Zookeeper based Property Service for Dynamic Management of Java Application Properties.
90035276	Acknowledged					PCT	Field-Programmable CMOS Driver for Mach-Zehnder Modulator -- UHU
90035284	Acknowledged					PCT	Direct install, tool-less removable blade shelf for a blade enclosure
90035292	Acknowledged					PCT	LPOT (locally-powered optical transceiver) module
90035301	Acknowledged					PCT	Castle - Modularly configurable EM switch system
90035324	Acknowledged					PCT	A System and method to introduce or modify a sequential or declarative orchestration steps dynamically
90035335	Application		42272		PCT/US2015/052285	PCT	Defect Assessment

PATENT
REEL: 038498 FRAME: 0241

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90035339	Acknowledged					PCT	This invention is a hardware appliance to support the processing of Airline Retailing for travelers. Airline Retailing is composed of seat availability processing, shopping, merchandizing and internet booking.
90035347	Acknowledged					PCT	System and method to implement a hot-warm-cold data temperature driven storage management lifecycle for content objects in cloud based infrastructure
90035355	Acknowledged					PCT	A History-Based Algorithm for Predicting Work Item Handling Time
90035367	To Be Filed					PCT	Security Vulnerability machine transformation & Analyzer as a Service to enable assess vulnerabilties
90036930	To Be Filed					PCT	Optimized and efficient volume placement and monitoring utilizing 3PAR performance metrics and Federation
90036938	Acknowledged					PCT	Elastic User Interface Framework - Part of Fluid.IT (nee Tandem) project
90036942	Acknowledged					PCT	Multilayer pattern matching
90036950	Acknowledged					PCT	Efficient mapping of compute requirements to new hosts - reversing greedy solution to high dimensional identical knapsack problems
90036964	To Be Filed					PCT	One LCD Security Bezel can work in 2 different orientaitons
90037019	Acknowledged					PCT	Analog Present Identifier
90037039	Application		42258		PCT/US2015/049572	PCT	SECURING DATA WITH MEMRISTORS
90037048	To Be Filed					PCT	Flow Control Pass-Through for TippingPoint IPS products can improve a customers' network-level congestion experience.
90037056	To Be Filed					PCT	Dual path PCB layout concept for High Speed I/O signals (PCIe, SAS, UPI etc) enables two servers with different I/O CFG requirements to share common PCB design.
90037062	To Be Filed					PCT	Custom Communication - a technology that allows the end user, and context, to determine the optimal communication technology to use based on preference, needs , availability , and corporate policy.
90037070	To Be Filed					PCT	Mechanisms for recovering content from cryptographically secured non-volatile memory
90037082	Application		42264		PCT/US2015/050632	PCT	EFFICIENTLY STORING INTIALIZATION VECTORS
90037090	To Be Filed					PCT	A system to prevent disclosure of automatically generated passwords via instant messaging systems.
90037102	Acknowledged					PCT	Method for efficiently generating a random graph with a given degree distribution
90037110	Application		42265		PCT/US2015/050937	PCT	AUTOMATIC QUERY

PATENT
REEL: 038498 FRAME: 0242

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90037122	To Be Filed					PCT	Incremental k-Nearest Neighbor Graph Construction on Streaming Data via Orthogonal Transform based Indexing
90037253	Acknowledged					PCT	Multiple Simultaneous Value Objects
90037257	Acknowledged					PCT	Lock-Free Scalable Shared Cuckoo Maps
90037265	To Be Filed					PCT	Scalable Fault-Tolerant Multiprocess Garbage Collection for Unmanaged Languages
90037274	To Be Filed					PCT	Inbound Pointer Management for Multiprocess Garbage Collection
90037282	To Be Filed					PCT	Hash-Based Clustering
90037290	Application		42270		PCT/US2015/051746	PCT	GRAPH DATABASE QUERY CLASSIFICATION
90037294	Application		42251		PCT/US2015/048502	PCT	CLASSIFIER
90037319	To Be Filed					PCT	Recovery from data corruption in clustered storage systems
90037348	Application		42265		PCT/US2015/050867	PCT	DATA REPLICATION MANAGEMENT
90037360	To Be Filed					PCT	PIP-OBJ Deduplication of meta data
90037377	To Be Filed					PCT	Smart SAN end to end fabric configuration using custom TLV LLDP protocol packets
90037388	Application		42270		PCT/US2015/051623	PCT	SELECTING AND LOADING FIRMWARE VOLUMES
90037396	To Be Filed					PCT	Switch Firmware Upgrade using Behavior Feedback Information
90037419	To Be Filed					PCT	Method to match variable length strings longer than hardware DPI engine with applications to SDN pipelines
90037423	To Be Filed					PCT	A Joint MU-MIMO Client Selection and Rate Adaptation Design for Wireless Networks Using Limited Feedback
90037431	To Be Filed					PCT	High Availability PCIe Serial Hot-Plug Controller addresses the need for PCIe FRU replacement in Highly Available Systems.
90037439	To Be Filed					PCT	Carbon-free data center using fuel cells and liquid-cooled IT
90037445	To Be Filed					PCT	Mixing 2 phase commit protocols for distributed transactions where a subset of participants implement the presumed prepared protocol
90037694	To Be Filed					PCT	A digitally auto-tuning control strategy is proposed to improve transient response for minimum overshoot and undershoot of output voltage in dc-dc power converter for server system power application.
90037751	Application		42234		PCT/US2015/045756	PCT	IDENTIFYING RANDOMLY GENERATED CHARACTER STRINGS

PATENT
REEL: 038498 FRAME: 0243

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90037755	Acknowledged					PCT	This innovation builds upon IT asset management and Data analytics to create industry-wide peer groups to aid in procurement for IT customers. It helps verify, vet and procure IT solutions and shortens procurement cycles in the process.
90037760	To Be Filed					PCT	Using non-volatile memory aware threads to make multi-threaded applications durable.
90037783	Application		9/18/2015		PCT/US2015/051062	PCT	MULTI-LEVEL SENSING CIRCUITS FOR CROSSBAR MEMORY ARRAYS
90037791	To Be Filed					PCT	Thermal Aware Scheduling
90037795	To Be Filed					PCT	Volatile resistive based RAM device architecture for neuromorphic computing hardware application
90037806	To Be Filed					PCT	Method for Using Capacitance to Detect Penetration Attacks
90037815	To Be Filed					PCT	SnTO product Privacy Risks Management Methodology
90037823	To Be Filed					PCT	A personalized evolving system for handling the confirmation process before performing risky operations
90037843	To Be Filed					PCT	Fully Functional Wireless Interface for Windows Guest Domain in Xen Hypervisor using Paravirtual Wireless frontend and backend drivers.
90037855	Application		42275		PCT/US2015/052650	PCT	THREAT SCORE DETERMINATION
90037863	To Be Filed					PCT	Dynamic Typing of User Defined Transformation Function
90037875	To Be Filed					PCT	Using Eye Tracking to estimate the coverage of the manual testing
90037894	To Be Filed					PCT	Liquid Work auto-balances and reschedules blocks of time based on the changing need/availability of people's schedules and other constraints to ensure that employees have time to get their JOB done (and not be stuck in meetings)
90037926	To Be Filed					PCT	High Availability Sample Store System provides non-blocking access to analog conversion data to redundant hosts.
90037938	To Be Filed					PCT	PANDA (power, air & network distribution adapter) bay and system for optical transceivers
90037960	To Be Filed					PCT	Input/output memory management unit (IOMMU) non-volatile memory (NVM) aware for cache policy management.
90037964	To Be Filed					PCT	Methods to Prevent a Mismatched Connection Between Different High Speed I/O Fabrics on an Active Backplane That Supports Multiple I/O Fabrics

PATENT
REEL: 038498 FRAME: 0244

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90037972	To Be Filed					PCT	Method to detect terminated data flows in link aggregation as soon as the last TCP data packet is transmitted. Early detection of terminated data flows ensures that no stale entries are ever present in the flow database.
90037984	To Be Filed					PCT	Opportunistic write back
90037992	To Be Filed					PCT	System and method for Stateless Volumisation of OS images and peripheral drivers.
90039506	Acknowledged					PCT	Automatic fast mesh network formation
90039518	To Be Filed					PCT	A method for applying link analysis over an application code graph, combined with runtime performance metrics, for ranking the impact of a code change.
90039589	To Be Filed					PCT	Method of prioritizing voice and video traffic based on radio resource / WMM queue utilization
90039601	To Be Filed					PCT	A Consistency checker mechanism for SDN devices to detect inconsistency between devices flow state and a controller database in a Software-Defined Network (SDN) environment
90039609	Acknowledged					PCT	Pulsar: Improving Throughput Estimation in Enterprise LTE Small Cells
90039621	To Be Filed					PCT	Flexible Orthogonal Policy Recombination and Translation
90039643	Application		42275		PCT/US2015/052561	PCT	LATENCY TRACKING METADATA FOR A NETWORK SWITCH DATA PACKET
90039647	To Be Filed					PCT	Two-Stage Code Generation for Single Table Network Devices
90040234	Application		42247		PCT/US2015/047696	PCT	DOMAIN CLASSIFICATION
90045815	Application		42244		PCT/US2015/047351	PCT	MANAGING A DATABASE INDEX FILE
90045824	Application		42247		PCT/US2015/047662	PCT	MERGING INCOMING DATA IN A DATABASE
90050947	Application		42271		PCT/US2015/051986	PCT	PROCESS AND THREAD LAUNCH FEATURES
90050951	Application		42275		PCT/US2015/052741	PCT	EXECUTING TRANSACTIONS BASED ON SUCCESS OR FAILURE OF THE TRANSACTIONS
90056999	Acknowledged					PCT	Task-Based Conflict Resolution
90060809	Application		42269		PCT/US2015/051390	PCT	MANAGING APPENDABLE STATE OF AN IMMUTABLE FILE
90060849	Application		42268		PCT/US2015/051119	PCT	IDENTIFICATION OF A DNS PACKET AS MALICIOUS BASED ON A VALUE
90066001	Instructed					PCT	Optical connector incorporating single piece sealing gasket and compression spring.
90068057	Acknowledged					PCT	A method for tracking of quality and development based on model-less representations (environments, versions, activities ...)

PATENT
REEL: 038498 FRAME: 0245

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90068077	Acknowledged					PCT	Badge and Performance Tracking for Security Information Sharing Platforms
90068085	Acknowledged					PCT	Threat Sharing Market Place Verification and Privacy
90068294	Instructed					PCT	Contamination resistant optical fiber connector for mid-board optics.
90068520	Instructed					PCT	Novel transconductance boosting for transimpedance amplifier bandwidth extension
90068574	Instructed					PCT	Sharing Data between a Relational Database System and Graph Engine
90068578	Instructed					PCT	Malware Detection in Web-Proxy Logs Using Interactive Analytics
90068823	Instructed					PCT	MU-MIMO-Aware Access Point Selection for Wireless Networks
83854599	Application		41723		PCT/US2014/031695	PCT	TRUSTED CONTROLLER-AGENT COMMUNICATION
83954327	Application		10/30/2014		PCT/US2014/063195	PCT	AUTOMATIC RE-ROUTING OF NETWORK TRAFFIC IN A SOFTWARE-DEFINED NETWORK
83983149	Application		8/25/2014		PCT/US2014/052534	PCT	SELECTING AN OPTIMAL NETWORK DEVICE FOR REPORTING FLOW TABLE MISSES UPON EXPIRY OF A FLOW IN A SOFTWARE DEFINED NETWORK
84111839	Application		6/3/2015		PCT/US2015/033897	PCT	ADDRESS CACHE FOR TUNNEL ENDPOINT ASSOCIATED WITH AN OVERLAY NETWORK
84111899	Application		4/3/2015		PCT/US2015/024294	PCT	TAP TECHNOLOGY SELECTION
84264127	Application		42185		PCT/US2015/038418	PCT	ACTION REFERENCES
84265836	Application		42209		PCT/US2015/041980	PCT	SIMULTANEOUS PROCESSING OF FLOW TABLES
90037035	Application		9/30/2015		PCT/US2015/053100	PCT	IDENTIFICATION OF AN SDN ACTION PATH BASED ON A MEASURED FLOW RATE
90039514	Acknowledged					PCT	Software Define Network (SDN) module to infer the VLAN ID for a given node based on data collected by an Intrusion Prevention System (IPS) and SDN Controller topology information
90039534	Application		42269		PCT/US2015/051379	PCT	ENCRYPTED DATA PACKET
84031347	Application		41955		PCT/US2014/065193	PCT	DATA WRITE BACK
84031424	Application		41943		PCT/US2014/063401	PCT	LOAD DISCOVERY
84031447	Application		41955		PCT/US2014/065235	PCT	DATA BACKUP
84115065	Application		5/15/2015		PCT/US2015/031250	PCT	ENABLING A LOW OUTPUT VOLTAGE TO LOADS
84173024	Application		4/16/2015		PCT/US2015/026233	PCT	Power Outlet Strips
84262842	Application		6/29/2015		PCT/US2015/038323	PCT	BACKUP POWER SUPPLY CONTROLLERS
84262859	Application		7/7/2015		PCT/US2015/039348	PCT	PHASE SHEDDING
84262925	Application		7/2/2015		PCT/US2015/038992	PCT	Configuring a Voltage Regulator

PATENT
REEL: 038498 FRAME: 0246

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90030669	To Be Filed					PCT	Smart Array Controller that uses Type IV NVDIMM technology such as memristor for caching memory
90035229	Acknowledged					PCT	A Novel Distribution Module System to Facilitate both DC and AC power in a Distributed Energy System; When a DES Module is used as an Independant Power Unit
90055163	Application		42258		PCT/US2015/049764	PCT	AVERAGING MODULES
84031407	Application		41943		PCT/US2014/063542	PCT	SERVER DEVICE WITH CAPACITIVE CIRCUIT
90037699	To Be Filed					PCT	Real-time chemistry monitoring and provisioning for data center facilities
84266652	Application		7/22/2015		PCT/US2015/041589	PCT	MONITORING A SENSOR ARRAY
83269156	Published		7/26/2013		PCT/US2013/052240	PCT	FIRST DATA IN RESPONSE TO SECOND READ REQUEST
83272485	Published		7/30/2013		PCT/US2013/052671	PCT	Recovering Stranded Data
83602769	Published		9/27/2013		PCT/US2013/062396	PCT	MEMORY SPARING ON MEMORY MODULES
83749106	Published		1/29/2014		PCT/US2014/013491	PCT	MEMORY MODULE CONNECTOR
83820075	Application		4/29/2014		PCT/US2014/035810	PCT	SWITCHES COUPLING VOLATILE MEMORY DEVICES TO A POWER SOURCE
84029904	Application		11/4/2014		PCT/US2014/063842	PCT	MEMORY ARRAY DRIVER
84030989	Application		11/25/2014		PCT/US2014/067274	PCT	MEMORY CONTROLLER WITH MEMORY RESOURCE MEMORY MANAGEMENT
84031261	Application		41943		PCT/US2014/063332	PCT	SYSTEMS AND METHODS FOR RESTRICTING WRITE ACCESS TO NON-VOLATILE MEMORY
84033113	Application		41935		PCT/US2014/061919	PCT	DETERMINING A CHIP SELECT FROM PHYSICAL RANK INFORMATION
84114026	Application		2/6/2015		PCT/US2015/014794	PCT	REFRESHING AN IDENTIFIED PARTIAL ARRAY
84172958	Application		4/30/2015		PCT/US2015/028610	PCT	MEMORY MODULE ERROR TRACKING
84260054	Application		42213		PCT/US2015/042500	PCT	Hardware Flush Assist
84262447	Application		6/26/2015		PCT/US2015/038176	PCT	CIRCUITS TO PERFORM LOW-HEADROOM RRAM OPERATIONS
83209050	Published		5/20/2013		PCT/US2013/041876	PCT	Monitoring Resources in A Partnership Program
83820258	Application		3/27/2015		PCT/US2015/022951	PCT	METHOD AND SYSTEM FOR INVENTORY AVAILABILITY PREDICTION
83822242	Application		4/30/2014		PCT/IN2014/000290	PCT	CORRELATION BASED INSTRUMENTS DISCOVERY
83953654	Application		10/29/2014		PCT/US2014/062860	PCT	DETECTION OF POTENTIAL GREY MARKET ACTIVITIES
84030737	Application		11/3/2014		PCT/IN2014/000707	PCT	SOCIAL MEDIA ANALYTICS AND RESPONSE
84169111	Application		2/20/2015		PCT/US2015/016826	PCT	SEARCH QUERY MODIFICATION USING PERSONALIZED PROFILE
83956193	Application		6/27/2014		PCT/US2014/044516	PCT	RADIO FREQUENCY IDENTIFICATION CAPSULE
83958715	Application		6/27/2014		PCT/US2014/044495	PCT	REPRESENTING A METRIC FOR MARKETING CHANNELS
84030906	Application		9/29/2014		PCT/US2014/058035	PCT	SEISMIC BASED FRACKING FLUID DISPOSAL
83200374	Published		6/18/2013		PCT/US2013/046273	PCT	AUTOMATIC TRANSFER SWITCH MODULE

PATENT
REEL: 038498 FRAME: 0247

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83217772	Published		4/3/2013		PCT/US2013/035166	PCT	Disabling Counterfeit Cartridges
83268721	Published		6/25/2013		PCT/US2013/047504	PCT	FAN MODULE
83597897	Published		12/3/2013		PCT/US2013/072874	PCT	LIMITING INRUSH OF CURRENT TO A CAPACITOR BASED ON AN INTERVAL
83597940	Application		2/13/2014		PCT/US2014/016321	PCT	HANDLE MECHANISM
83702972	Application		1/6/2014		PCT/US2014/010322	PCT	MANIFOLDS HAVING SLIDABLE DRIPLESS CONNECTORS
83748110	Application		5/15/2014		PCT/US2014/038168	PCT	FLUID MANIFOLD
83828067	Application		4/28/2014		PCT/US2014/035681	PCT	POWER SUPPLY CHASSIS INCLUDING A RELEASE LEVER
83954842	Application		7/30/2014		PCT/US2014/048988	PCT	RETENTION ASSEMBLY
83958838	Application		9/10/2014		PCT/US2014/055002	PCT	FOLDABLE MEMORY CARTRIDGE
84033511	Application		12/16/2014		PCT/US2014/070553	PCT	LATCHING SYSTEM
84042854	Application		11/26/2014		PCT/US2014/067617	PCT	STORAGE DRIVE CARRIER MODULE
84170319	Application		6/5/2015		PCT/US2015/034586	PCT	THERMAL MANAGEMENT APPARATUS
84171375	Application		4/29/2015		PCT/US2015/028277	PCT	Cable Assembly
84171438	Application		4/24/2015		PCT/US2015/027592	PCT	ADAPTER ASSEMBLIES
84260014	Application		7/30/2015		PCT/US2015/042971	PCT	TRANSCEIVER MODULES
83272439	Published		7/15/2013		PCT/US2013/050502	PCT	Socket and Adapter
83958008	Application		7/31/2014		PCT/US2014/049105	PCT	PROTECTING MEMORY STORAGE CONTENT
84032987	Application		1/14/2015		PCT/US2015/011358	PCT	Reduced Core Count System Configuration
84170402	Application		4/17/2015		PCT/US2015/026305	PCT	STORING STATE MACHINE INFORMATION IN A NON-VOLATILE MEMORY
83597986	Published		9/5/2013		PCT/US2013/058216	PCT	STORAGE ARRAY CONFIRMATION OF USE OF A PATH
83629009	Application		10/31/2013		PCT/US2013/067787	PCT	TARGET PORT PROCESSING OF A DATA TRANSFER
83776291	Published		2/24/2014		PCT/US2014/017971	PCT	SAS ZONE CONFIGURATION MANAGEMENT
83825691	Application		4/23/2014		PCT/US2014/035134	PCT	DETERMINING CONNECTIVITY INFORMATION FOR A STORAGE DEVICE
83857264	Application		3/20/2014		PCT/US2014/031328	PCT	Storage System Transactions
84031118	Application		2/2/2015		PCT/US2015/014087	PCT	UNMAP STORAGE SPACE
84031195	Application		9/4/2014		PCT/US2014/054110	PCT	Storage System Bandwidth Determination
84033531	Application		11/4/2014		PCT/US2014/063823	PCT	DEDUPLICATING DATA ACROSS SUBTENANTS
84113047	Application		4/3/2015		PCT/US2015/024346	PCT	PERSISTENT MEMORY VERSIONING AND MERGING
84124056	Application		1/5/2015		PCT/US2015/010155	PCT	Storing excess data in a RAID 60 array
84171544	Application		6/19/2015		PCT/US2015/036591	PCT	NETWORK COMMUNICATIONS
90034164	Application		42244		PCT/US2015/047381	PCT	Managing Sets of Transactions for Replication
83272402	Published		7/22/2013		PCT/US2013/051501	PCT	MODULE CONNECTIVITY DEVICE
83691239	Published		9/30/2013		PCT/US2013/062576	PCT	OPTICAL BLIND-MATE CONNECTOR AND ADAPTER
83776265	Published		1/31/2014		PCT/US2014/014226	PCT	RETURN PATH CAPACITOR FOR CONNECTED DEVICES
84030763	Application		10/30/2014		PCT/US2014/063174	PCT	ENCRYPTION FOR TRANSACTIONS IN A MEMORY FABRIC

PATENT
REEL: 038498 FRAME: 0248

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84033073	Application		10/31/2014		PCT/US2014/063294	PCT	BLIND-MATING OPTICAL FERRULE ASSEMBLIES
84259965	Application		7/28/2015		PCT/US2015/042434	PCT	MONITORING NETWORK UTILIZATION
84259991	Application		7/30/2015		PCT/US2015/042933	PCT	COMPONENT SENSING
83602809	Published		12/20/2013		PCT/CN2013/090077	PCT	POLICY RULES FOR NETWORK RESOURCE
90031061	To Be Filed					PCT	A unique way to identify NIC management port in server system
83139043	Published		1/24/2013		PCT/IN2013/000051	PCT	Address Resolution In Software-Defined Networks
83629052	Published		10/11/2013		PCT/US2013/064671	PCT	PROVISIONING A NETWORK FOR NETWORK TRAFFIC DURING A SESSION
83766550	Application		3/31/2014		PCT/US2014/032429	PCT	CREDIT DISTRIBUTION TO CLIENTS
84033611	Application		41943		PCT/US2014/063289	PCT	POWER SOURCE ADJUSTMENT
84172460	Application		42117		PCT/US2015/027259	PCT	NETWORK INFRASTRUCTURE DEVICE TO IMPLEMENT PRE-FILTER RULES
84172706	Application		3/26/2015		PCT/US2015/022655	PCT	RING NETWORK UPLINK DESIGNATION
84264027	Application		7/17/2015		PCT/US2015/040934	PCT	COMBINING PREFIX LENGTHS INTO A HASH TABLE
84264107	Application		9/4/2015		PCT/US2015/048555	PCT	CONTENT ADDRESSABLE MEMORY
90035183	To Be Filed					PCT	Distributed data processing using embedded networking ASIC processors.
90039617	Application		9/25/2015		PCT/US2015/052226	PCT	PRE-PROCESSING OF DATA PACKETS WITH NETWORK SWITCH APPLICATION-SPECIFIC INTEGRATED CIRCUIT
84171587	Application		8/14/2015		PCT/US2015/045280	PCT	IN-LINE DEVICE
90039577	To Be Filed					PCT	Redundancy Design of Cluster Controllers in Handling External Authentication Server Interactions
90039634	To Be Filed					PCT	Auto-upgrade option for self-organizing, plug-n-play, autonomous WLAN networks
83734811	Application		4/4/2014		PCT/US2014/032920	PCT	STORING AND RETRIEVING CIPHERTEXT IN DATA STORAGE
83763742	Published		1/31/2014		PCT/US2014/014060	PCT	COMMUNICATING BETWEEN A CLUSTER AND A NODE EXTERNAL TO THE CLUSTER
84031527	Application		12/15/2014		PCT/US2014/070421	PCT	DATA RESTORATION USING ALLOCATION MAPS
84034650	Application		11/6/2014		PCT/US2014/064255	PCT	DATA CHUNK BOUNDARY
84171458	Application		5/7/2015		PCT/US2015/029608	PCT	INFORMATION CONTENT OF A DATA CONTAINER
83270985	Published		8/31/2013		PCT/US2013/057743	PCT	DESCRIBED OBJECT AND DESCRIPTOR
83273355	Published		7/31/2013		PCT/US2013/053064	PCT	Calibrating a Tape Drive
84113356	Application		1/29/2015		PCT/US2015/013406	PCT	COATING SURFACES OF CONDUCTIVE OBJECTS
83958884	Application		7/17/2014		PCT/US2014/047098	PCT	DATA LOAD FROM A DATA SOURCE INTO A TARGET FILE
84030010	Application		8/28/2014		PCT/US2014/053154	PCT	IDENTIFY SERVER CLUSTER BY APPLYING SOCIAL GROUP ANALYSIS

PATENT
REEL: 038498 FRAME: 0249

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84117644	Application		41992		PCT/US2014/071374	PCT	SETTING FOR A NETWORK TRAFFIC MANAGEMENT DEVICE BASED ON A TEMPLATE
84260243	Application		7/27/2015		PCT/IN2015/050077	PCT	A Method to automate test cases at Pre-OS and Post OS level - Aadhi
84262756	Application		8/14/2015		PCT/US2015/045219	PCT	PROGRAM DEPLOYMENT ACCORDING TO SERVER EFFICIENCY RANKINGS.
84031158	Application		12/31/2014		PCT/US2014/073036	PCT	ENTERPRISE SERVICE BUS LOGGING
84114544	Application		1/26/2015		PCT/US2015/012895	PCT	AUTHENTICATION OF A USER
84115769	Application		3/10/2015		PCT/US2015/019794	PCT	AUTHENTICATION FOR MULTIPLE USER DATA STORAGE AND SEPARATION
83266591	Published		11/15/2013		PCT/US2013/070447	PCT	PRODUCT DATA ANALYSIS
84114833	Application		1/28/2015		PCT/US2015/013339	PCT	ELECTROMECHANICAL FORCE-SENSING SWITCH
90037327	To Be Filed					PCT	Automated Sequential Characterization and Data Collection for Multiple Fans
83269405	Published		41544		PCT/US2013/062275	PCT	EXCLUDING FILE SYSTEM OBJECTS FROM RAW IMAGE BACKUPS
83821014	Application		41870		PCT/US2014/051630	PCT	SEND BUFFER BASED ON MESSAGING TRAFFIC LOAD
84193891	Application		3/25/2015		PCT/US2015/022463	PCT	STANDARDIZED CUSTOM SURVEYS
83205372	Published		6/18/2013		PCT/US2013/046295	PCT	PRIORITIZING EVENT NOTICES UTILIZING PAST-PREFERENCE PAIRINGS
83640313	Published		10/30/2013		PCT/US2013/067556	PCT	Event Log Analysis
83640333	Application		10/31/2013		PCT/US2013/067741	PCT	Treemap Optimization
84113319	Application		2/27/2015		PCT/US2015/017955	PCT	APPLICATION EVENT TRACING
84261405	Application		7/9/2015		PCT/US2015/039775	PCT	STAGED APPLICATION ROLLOUT
90037725	Acknowledged					PCT	A method of Semi-supervised learning for classifying back end business transaction logic via url parameters originating from mobile or web user actions
90039677	To Be Filed					PCT	An improved algorithm for distributed computation and efficient scaling of a log clustering analytics pipeline
83204705	Published		6/28/2013		PCT/US2013/048556	PCT	HOOK FRAMEWORK
83267845	Published		9/30/2013		PCT/CN2013/084802	PCT	RECORD AND REPLAY OF OPERATIONS ON GRAPHICAL OBJECTS
83270321	Published		41514		PCT/CN2013/082433	PCT	TESTING MULTI-THREADED APPLICATIONS
83820095	Application		6/24/2014		PCT/US2014/043855	PCT	DETERMINING CODE COMPLEXITY SCORES
83822574	Application		4/29/2014		PCT/US2014/035913	PCT	MONITORING APPLICATION FLOW OF APPLICATIONS USING A REGULAR OR EXTENDED MODE
83862030	Application		41739		PCT/US2014/033597	PCT	PARTIAL SNAPSHOTS FOR CREATING GENERALIZED SNAPSHOTS
83960507	Application		7/29/2014		PCT/CN2014/083218	PCT	EXECUTABLE CODE ABNORMALITY DETECTION

PATENT
REEL: 038498 FRAME: 0250

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84030926	Application		1/12/2015		PCT/US2015/010972	PCT	DATA COMPARISON
84111467	Application		12/23/2014		PCT/US2014/072029	PCT	SIMULATION OF A SYNCHRONIZATION OF RECORDS
84265086	Application		9/8/2015		PCT/US2015/048843	PCT	AUTOMATIC REGRESSION IDENTIFICATION
90068061	Acknowledged					PCT	Locating UI Objects for Automation TestingUsing a Visual Non-Technical Target Description
84044872	Application		41911		PCT/US2014/058144	PCT	DETECTION OF EMAIL-RELATED VULNERABILITIES
84240200	Application		8/12/2015		PCT/US2015/044898	PCT	RETRAINING A MACHINE CLASSIFIER BASED ON AUDITED ISSUE DATA
90037078	To Be Filed					PCT	Systems and methods for automated auditing of a web form authentication sequence
83268901	Published		8/14/2013		PCT/IN2013/000501	PCT	Automating Monitoring Of A Computing Resource In A Cloud-Based Data Center
83598129	Published		12/5/2013		PCT/US2013/073277	PCT	Identifying A Monitoring Template For A Managed Service Based On A Service-Level Agreement
83598232	Published		11/26/2013		PCT/US2013/072033	PCT	Fault Management Service In A Cloud
83954951	Application		5/29/2014		PCT/US2014/039952	PCT	ISOLATING PRODUCTION ENVIRONMENT DEBUGGING SESSIONS
84011327	Application		9/10/2014		PCT/US2014/054998	PCT	CLOUD RESOURCE POOL
90038017	To Be Filed					PCT	Detecting Frustrated Users System
83953494	Application		7/18/2014		PCT/US2014/047194	PCT	TRANSLATE DATA OPERATIONS BASED ON DATA STRIPE SIZE BACKGROUND
83958091	Application		7/30/2014		PCT/US2014/048946	PCT	CONTROL POINT DISCOVERY
84142576	Application		1/15/2015		PCT/US2015/011549	PCT	WEBSITE FRAMEWORK
84169131	Application		8/20/2015		PCT/CN2015/087710	PCT	CONTAINERIZED VIRTUAL NETWORK FUNCTION
84173061	Application		6/12/2015		PCT/US2015/035631	PCT	SEARCH BASED ON FEATURES OF A PERSON
83593446	Published		1/2/2014		PCT/US2014/010030	PCT	Distributed Kernel Thread List Processing for Kernel Patching
83747629	Application		4/2/2014		PCT/IN2014/000209	PCT	DIRECT ACCESS TO NETWORK FILE SYSTEM EXPORTED SHARE
83777270	Published		1/30/2014		PCT/IN2014/000076	PCT	TRUST FRAMEWORK FOR SECURED DIGITAL INTERACTIONS BETWEEN ENTITIES
83777290	Published		1/30/2014		PCT/IN2014/000075	PCT	PERSISTENT POINTERS FOR PROGRAMS RUNNING ON NVRAM BASED COMPUTERS
90022113	Application		7/30/2015		PCT/US2015/042983	PCT	Improving Performance of Virtual Machines
83777436	Application		1/31/2014		PCT/US2014/014332	PCT	EXECUTION OF A QUERY ON DATA UPDATES AND PUSHING QUERY RESULTS
83958128	Application		7/31/2014		PCT/US2014/049264	PCT	Data Merge Processing
83958320	Application		11/18/2014		PCT/US2014/066017	PCT	VIRTUAL FILE SERVER

PATENT
REEL: 038498 FRAME: 0251

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84076316	Application		11/18/2014		PCT/US2014/066233	PCT	FILE CREATION
84107614	Application		1/15/2015		PCT/US2015/011586	PCT	DYNAMICALLY UPDATING METADATA
84141471	Application		1/22/2015		PCT/US2015/012482	PCT	PROVIDING A LOAN OF STORAGE SPACE IN A DATA STORAGE SYSTEM
84172938	Application		3/31/2015		PCT/US2015/023674	PCT	FILE SERVICE OPERATION ON EXTERNAL HOST
84210253	Application		4/15/2015		PCT/US2015/025969	PCT	CONSISTENCY CHECK ON NAMESPACE OF AN ONLINE FILE SYSTEM
84172792	Application		3/4/2015		PCT/US2015/018564	PCT	PERFORMANCE TESTING USING SERVICE CALL EXECUTORS
84172815	Application		4/6/2015		PCT/US2015/024449	PCT	CERTIFICATE GENERATION
83267799	Published		8/29/2013		PCT/US2013/057252	PCT	Queries Involving Multiple Databases and Execution Engines
83267819	Published		5/31/2013		PCT/US2013/043761	PCT	THREE DIMENSIONAL DATA VISUALIZATION
83267825	Published		8/30/2013		PCT/US2013/057612	PCT	Identifying Anomalous Behavior of a Monitored Entity
83584495	Published		12/13/2013		PCT/US2013/075016	PCT	DATA STREAM PROCESSING BASED ON A BOUNDARY PARAMETER
83598066	Published		12/17/2013		PCT/US2013/075651	PCT	ABSTRACTION LAYER BETWEEN A DATABASE QUERY ENGINE AND A DISTRIBUTED FILE SYSTEM
83623479	Application		10/15/2013		PCT/US2013/064934	PCT	ANALYZING A PARALLEL DATA STREAM USING A SLIDING FREQUENT PATTERN TREE
83819929	Application		3/31/2014		PCT/US2014/032396	PCT	CANDIDATE SERVICES FOR AN APPLICATION
83825651	Application		4/30/2014		PCT/US2014/036253	PCT	Parallel Index-based Time Series Similarity Search with In-memory Index Tables on a Multicore Big-Memory Machine
84027743	Application		1/30/2015		PCT/US2015/013952	PCT	COMMON SEARCH DISTANCES IN DATA PARTITIONS
84031241	Application		8/29/2014		PCT/US2014/053333	PCT	SECURE INFORMATION RETRIEVAL BASED ON HASH TRANSFORMS
84034593	Application		10/30/2014		PCT/US2014/063218	PCT	DATA ENTRIES HAVING VALUES FOR FEATURES
84230356	Application		5/28/2015		PCT/US2015/032786	PCT	PROCESSING NETWORK DATA USING A GRAPH DATA STRUCTURE
84260034	Application		8/6/2015		PCT/US2015/043932	PCT	INFLUENCE SPREAD MAXIMIZATION IN SOCIAL NETWORKS
90016889	Application		9/11/2015		PCT/US2015/049668	PCT	GRAPH DATABASE AND RELATIONAL DATABASE MAPPING
90037118	To Be Filed					PCT	Method for Graph Partitioning
83271715	Application		7/26/2013		PCT/US2013/052337	PCT	DATA VIEW BASED ON CONTEXT
83701850	Published		10/29/2013		PCT/US2013/067219	PCT	VIRTUAL MACHINE INTROSPECTION
84111753	Application		2/27/2015		PCT/US2015/017921	PCT	RECOMMENDING VISUALIZATIONS
84173645	Application		5/18/2015		PCT/EP2015/060913	PCT	Automated entity-resolution methods and systems
84264880	Application		7/31/2015		PCT/EP2015/067657	PCT	MALWARE MODELLING
90035097	Acknowledged					PCT	Distribution of Gen-Z Transaction Integrity Keys
90037453	To Be Filed					PCT	Managing structural types in non-volatile memories
83204745	Published		4/30/2013		PCT/US2013/038909	PCT	AD-HOC, FACE-RECOGNITION-DRIVEN CONTENT SHARING
83629264	Published		9/30/2013		PCT/US2013/062569	PCT	DELIVERING AN EMAIL ATTACHMENT AS A SUMMARY

PATENT
REEL: 038498 FRAME: 0252

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83267347	Published		9/5/2013		PCT/US2013/058170	PCT	Memristor Structures
83623353	Application		11/12/2013		PCT/US2013/069528	PCT	NONLINEAR MEMRISTOR DEVICES WITH THREE-LAYER SELECTORS
83623499	Published		10/28/2013		PCT/US2013/067071	PCT	GEOMETRY DEPENDENT VOLTAGE BIASES FOR ASYMMETRIC RESISTIVE MEMORIES
83734748	Published		3/7/2014		PCT/US2014/021598	PCT	MEMRISTOR DEVICES WITH A THERMALLY-INSULATING CLADDING
83763716	Published		41667		PCT/US2014/013360	PCT	DATA AND INSTRUCTION SET ENCRYPTION
83770111	Published		1/31/2014		PCT/US2014/014093	PCT	NEGATIVE DIFFERENTIAL RESISTANCE CIRCUIT ELEMENT
83822694	Application		4/10/2014		PCT/US2014/033583	PCT	1-SELECTOR N-RESISTOR MEMRISTIVE DEVICES
83830563	Application		4/28/2014		PCT/US2014/035745	PCT	MULTIMODAL MEMRISTOR MEMORY
83830583	Application		4/26/2014		PCT/US2014/035585	PCT	SWITCHED MEMRISTOR ANALOG TUNING
83832518	Application		4/26/2014		PCT/US2014/035586	PCT	SWITCHED MEMRISTOR ANALOG-TO-DIGITAL CONVERSION
83958486	Application		41851		PCT/US2014/049298	PCT	3D RESISTIVE MEMORY
84033173	Application		41941		PCT/US2014/062977	PCT	MEMRISTIVE DOT PRODUCT ENGINE FOR VECTOR PROCESSING
84111484	Application		2/11/2015		PCT/US2015/015393	PCT	NONVOLATILE MEMORY CROSSBAR ARRAY
84111653	Application		1/26/2015		PCT/US2015/012909	PCT	RESISTIVE MEMORY ARRAYS WITH A NEGATIVE TEMPERATURE COEFFICIENT OF RESISTANCE MATERIAL
84111716	Application		1/28/2015		PCT/US2015/013214	PCT	SELECTOR RELAXATION TIME REDUCTION
84169649	Application		4/23/2015		PCT/US2015/027284	PCT	RESISTIVE ELEMENTS TO OPERATE AS A MATRIX OF PROBABILITIES
84262736	Application		8/31/2015		PCT/US2015/047726	PCT	MATERIAL STACKS FOR LOW CURRENT UNIPOLAR MEMRISTORS
84264694	Application		8/7/2015		PCT/US2015/044246	PCT	CROSSBAR ARRAYS FOR CALCULATING MATRIX MULTIPLICATION
84270788	Application		8/20/2015		PCT/US2015/046112	PCT	SUPPLY CLAMP CIRCUITS WITH MEMRISTORS
83199564	Published		4/12/2013		PCT/US2013/036502	PCT	DISTANCE DETERMINATION OF A MOBILE DEVICE
83206033	Published		4/30/2013		PCT/US2013/038717	PCT	GOVERNING BARE METAL GUESTS
83221562	Published		4/12/2013		PCT/US2013/036498	PCT	DETERMINING AN ANGLE OF DIRECT PATH OF A SIGNAL
83267327	Published		8/14/2013		PCT/US2013/055016	PCT	TRANSMIT ANTENNA SELECTION
83267341	Published		7/31/2013		PCT/US2013/052969	PCT	DETERMINING THE POSITION OF A MOBILE DEVICE WITHIN A STRUCTURE
83733772	Application		1/31/2014		PCT/US2014/014268	PCT	LOCALIZATION USING ACCESS POINT
83957988	Application		7/30/2014		PCT/US2014/048862	PCT	Mobility-aware frame aggregation for wireless networks
83983664	Application		7/30/2014		PCT/US2014/048959	PCT	NETWORK RESOURCE ALLOCATION PROPOSALS
84033462	Application		11/6/2014		PCT/US2014/064394	PCT	NETWORK POLICY GRAPHS
84111796	Application		5/15/2015		PCT/US2015/031110	PCT	CORRECTING TIME-OF-FLIGHT MEASUREMENTS

PATENT
REEL: 038498 FRAME: 0253

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84169901	Application		3/6/2015		PCT/US2015/019213	PCT	LOCATION UPDATE SCHEDULING
84172440	Application		3/9/2015		PCT/CN2015/073874	PCT	PREDICTING AVAILABLE ACCESS POINTS
84220217	Application		5/15/2015		PCT/US2015/030973	PCT	COMPOSITION CONSTRAINTS FOR NETWORK POLICIES
90035146	Application		8/27/2015		PCT/US2015/047200	PCT	OCCUPANCY SENSING
90039597	To Be Filed					PCT	Extended Dynamic Enterprise ANDSF Lite(EDE-ANDSFLite) Management Solution forEnterprise LTE and WiFi Interworking System
83209886	Published		6/20/2013		PCT/US2013/046873	PCT	GRATING-BASED LIGHT MODULATION EMPLOYING A LIQUID CRYSTAL
83271028	Published		10/9/2013		PCT/US2013/064137	PCT	LOSS COMPENSATED OPTICAL SWITCHING
83623562	Published		10/31/2013		PCT/US2013/067880	PCT	MULTIPLEXED OPTOELECTRONIC ENGINES
83769109	Application		5/7/2014		PCT/US2014/037063	PCT	POLYMER-CLAD OPTICAL MODULATORS
83824675	Application		4/30/2014		PCT/US2014/036138	PCT	CONTROLLABLE DIAMOND WAVEGUIDE TUNER
83958526	Application		7/25/2014		PCT/US2014/048225	PCT	TUNABLE OPTICAL DEVICE
84033571	Application		10/23/2014		PCT/US2014/061960	PCT	OPTICAL FIBER INTERFACE FOR OPTICAL DEVICE PACKAGE
84033588	Application		10/24/2014		PCT/US2014/062238	PCT	OPTICAL INTERCONNECT DEVICE
84111690	Application		1/30/2015		PCT/US2015/013749	PCT	OPTICAL MODULES
84169841	Application		4/10/2015		PCT/US2015/025295	PCT	OPTICAL ZIG-ZAGS
84169855	Application		4/30/2015		PCT/US2015/028483	PCT	MONOLITHICALLY INTEGRATED PHOTODETECTOR AND RECEIVER
84262822	Application		7/27/2015		PCT/US2015/042250	PCT	DOPED ABSORPTION PHOTODIODE
90035249	Application		9/8/2015		PCT/US2015/048952	PCT	APPARTUS FOR SOLVING ISING PROBLEMS
90068499	Instructed					PCT	A Time Skew Free Automatic Gain Control for PAM-4 Optical Front-End Linear Receiver-UHU
90068505	Instructed					PCT	Dual-mode noise canceling transimpedance amplifier (TIA) for high sensitivity optical receiver
84265106	Acknowledged					PCT	SOFTWARE KIT RELEASE MANAGEMENT
84299215	Application		7/28/2015		PCT/US2015/042340	PCT	HETEROGENEOUS HOT SPARE SERVER POOL
90037851	To Be Filed					PCT	Performance-Aware Middleware for Multi-Tenant PaaS
83469453	Published		8/19/2013		PCT/US2013/055577	PCT	ADAPTIVE NETWORK SECURITY POLICIES
83689653	Published		12/19/2013		PCT/US2013/076628	PCT	NETWORK SECURITY SYSTEM TO INTERCEPT INLINE DOMAIN NAME SYSTEM REQUESTS
84111925	Application		4/10/2015		PCT/US2015/025454	PCT	NETWORK ANOMALY DETECTION
84114006	Application		1/23/2015		PCT/US2015/012654	PCT	MARKING NODES FOR ANALYSIS BASED ON DOMAIN NAME SYSTEM RESOLUTION
84261554	Application		5/27/2015		PCT/US2015/032638	PCT	IDENTIFYING ALGORITHMICALLY GENERATED DOMAINS
90037742	To Be Filed					PCT	Hardware-Based Programmable Layer 5 and Higher Metadata Capture Machine
83952472	Application		7/21/2014		PCT/US2014/047364	PCT	REMEDIAL ACTION FOR RELEASE OF THREAT DATA

PATENT
REEL: 038498 FRAME: 0254

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83607369	Published		9/26/2013		PCT/US2013/061908	PCT	Task Distribution in Peer to Peer Networks
83821071	Application		7/31/2014		PCT/US2014/049026	PCT	TEMPLATE COPY TO CACHE
83822651	Application		41759		PCT/IN2014/000291	PCT	SUPPORT ACTION BASED SELF LEARNING AND ANALYTICS FOR DATACENTER DEVICE HARDWARE/FIRMARE FAULT MANAGEMENT
84147359	Application		1/23/2015		PCT/CN2015/071461	PCT	ALIGNED VARIABLE RECLAMATION
84171607	Application		42265		PCT/US2015/051013	PCT	IMAGE BASED FAULT STATE DETERMINATION
84173041	Application		5/6/2015		PCT/US2015/029533	PCT	PRE-OPERATING SYSTEM CONTENT TRANSMISSION
84262776	Acknowledged					PCT	Cloud-based automated testing service which combines cloud and local infrastructure
84263048	To Be Filed					PCT	Mechanism and apparatus for dynamic configuration of manageability of computer systems
83734857	Published		12/6/2013		PCT/US2013/073687	PCT	TRANSITIVE LOCAL PREDICATES ACROSS MULTIPLE JOINS
84026850	Application		8/15/2014		PCT/US2014/051192	PCT	MANAGING DATABASE NODES
84115646	Application		42083		PCT/US2015/021856	PCT	BASE USER DEFINED FUNCTIONS
90035203	Acknowledged					PCT	Storing a Collection of Spherical Polygons Using Quadtrees Based on Precisely ComputingRelative Positions of Points and Arcs in WGS84 system
83269886	Published		8/29/2013		PCT/US2013/057188	PCT	APPLICATION BROADCAST AND COMPILATION
83598046	Published		2/21/2014		PCT/US2014/017621	PCT	MIGRATING CLOUD RESOURCES
83822276	Application		4/25/2014		PCT/US2014/035547	PCT	DATA MANAGEMENT IN A DISTTRIBUTED COMPUTING ENVIRONMENT
84039748	Application		9/5/2014		PCT/US2014/054400	PCT	Heterogeneous network architecture across hybrid clouds
84261488	Acknowledged					PCT	Abstraction of Mobility and Workplace Cloud Based Storage to Improve Security and Resilience
84263094	Application		6/24/2015		PCT/US2015/037414	PCT	ENTERPRISE RESOURCE PLANNING (ERP) SYSTEM INPUT TRANSLATION
84263586	Acknowledged					PCT	A newer approach to help transform legacy applications to cloud environment using business-process oriented approach, based on process mining algorithms.
84116894	Application		42034		PCT/IN2015/000060	PCT	GENERATION OF DIGITAL DOCUMENTS
84031132	Application		10/27/2014		PCT/US2014/062407	PCT	KEY SPLITTING
84170084	Application		4/29/2015		PCT/US2015/028241	PCT	Physical Barrier To Inhibit A Penetration Attack
84171421	Application		4/29/2015		PCT/US2015/028254	PCT	INHIBITING ELECTROMAGNETIC FIELD-BASED EAVESDROPPING
84262324	Application		42215		PCT/US2015/042996	PCT	NETWORK DEVICE EMULATION
90032023	To Be Filed					PCT	Visualization of score determination using linked records
83210550	Published		4/30/2013		PCT/US2013/038935	PCT	MEMORY NETWORK TO ROUTE MEMORY TRAFFIC AND I/O TRAFFIC
83513389	Published		9/26/2013		PCT/US2013/061889	PCT	UNDOING CHANGES MADE BY THREADS

PATENT
REEL: 038498 FRAME: 0255

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0256

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83629341	Application		1/16/2014		PCT/US2014/011867	PCT	NODE CLUSTER SYNCHRONIZATION
83764326	Published		41670		PCT/US2014/014068	PCT	COMMUNICATION IN A HETEROGENEOUS DISTRIBUTED SYSTEM
83776666	Published		1/31/2014		PCT/US2014/014296	PCT	ORTHOGONAL KEY-VALUE LOCKING
83820241	Application		41778		PCT/US2014/038569	PCT	SUBSTRATE SPRAYER
83830483	Application		5/30/2014		PCT/US2014/040201	PCT	MEMORY ACCESS SIGNAL DETECTION
84037132	Application		1/29/2015		PCT/US2015/013609	PCT	HEAP DATA STRUCTURE
84262507	Application		6/5/2015		PCT/US2015/034368	PCT	COMPRESSED DATA BLOCK MAPPING
90037871	To Be Filed					PCT	Bridging the gap between full shared memory coherence and the scale-out model with software-defined coherence
83206926	Published		7/11/2013		PCT/US2013/050136	PCT	TRANSDUCER ARRAY TO WRITE DATA TO TAPE
84260145	Application		42214		PCT/US2015/042679	PCT	PROTECTING A COMPUTING DEVICE FROM ENVIRONMENTAL ISSUES IN AN ENCLOSURE
83276220	Published		7/29/2013		PCT/IN2013/000472	PCT	WRITING TO FILES AND FILE META-DATA
83819064	Application		7/22/2014		PCT/US2014/047596	PCT	USING LOCATION ADDRESSED STORAGE AS CONTENT ADDRESSED STORAGE
83958122	Application		7/31/2014		PCT/US2014/049262	PCT	Prioritization Processing
84104731	Application		1/6/2015		PCT/US2015/010238	PCT	GENERATING A UNIQUE IDENTIFIER FOR AN OBJECT IN A DISTRIBUTED FILE SYSTEM
84113977	Application		1/30/2015		PCT/IN2015/000061	PCT	FAILURE ATOMIC UPDATE OF A SINGLE APPLICATION DATA FILE
84265581	Application		7/30/2015		PCT/US2015/042891	PCT	Preserving Virtual Machine Data
83668187	Published		10/25/2013		PCT/US2013/066859	PCT	PRODUCT DEMAND FORECASTING
83216163	Published		4/3/2013		PCT/US2013/035172	PCT	MICROCONTROLLER AT A CARTRIDGE OF A CHASSIS
83268629	Published		7/17/2013		PCT/US2013/050907	PCT	DETERMINE MALFUNCTION STATE OF POWER SUPPLY MODULE
83597914	Published		41604		PCT/US2013/071863	PCT	HARD DISK DRIVE CARRIER
83735157	Application		12/13/2013		PCT/US2013/075122	PCT	CONNECTOR WITH A RETAINER ASSEMBLY
83763859	Application		2/27/2014		PCT/US2014/019007	PCT	BEHAVIOR MODIFICATION OFA POWER SUPPLY IN RESPONSE TO A DETECTED CONDITION
84042862	Application		9/29/2014		PCT/US2014/058140	PCT	IMMERSION COOLED TOP-LOADING COMPUTING CARTRIDGES
84102321	Application		11/26/2014		PCT/US2014/067669	PCT	Transceiver Module
84114804	Application		1/14/2015		PCT/US2015/011434	PCT	Forming a Recess in a Multi-Layered Device
84143466	Application		2/27/2015		PCT/US2015/017964	PCT	CABLE ASSEMBLY WITH CONJOINED ONE-LANE CABLE ASSEMBLIES
84173032	Application		4/14/2015		PCT/US2015/025694	PCT	MAGNETIC FLUID CONNECTOR
84260005	Application		7/31/2015		PCT/US2015/043255	PCT	ELECTRO-OPTICAL CONNECTORS

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84260022	Application		7/31/2015		PCT/US2015/043176	PCT	HEAT EXCHANGERS
84262979	Application		7/30/2015		PCT/US2015/042882	PCT	Removable Module
90035280	Acknowledged					PCT	HPE Synergy 40 SFF Drive Module
90037942	To Be Filed					PCT	An extension holder for power cable in deep power cage
83271726	Published		7/30/2013		PCT/US2013/052635	PCT	RESOURCE MANAGEMENT BASED ON A PROCESS IDENTIFIER
83749123	Published		1/30/2014		PCT/US2014/013959	PCT	RACK CONTROL MODULE
83273375	Published		7/31/2013		PCT/US2013/053024	PCT	GENERATING WORKLOAD WINDOWS
83762940	Application		1/30/2014		PCT/US2014/013819	PCT	JOINT ENCRYPTION AND ERROR CORRECTION ENCODING
83766564	Application		3/26/2014		PCT/US2014/031907	PCT	NVM OBJECT
83775077	Published		2/24/2014		PCT/US2014/018073	PCT	REPURPOSABLE BUFFERS FOR TARGET PORT PROCESSING OF A DATA TRANSFER
83819608	Application		4/30/2014		PCT/US2014/036036	PCT	Storage System Bandwidth Adjustment
83958102	Application		7/1/2014		PCT/US2014/045098	PCT	Estimating Circuit Board Characteristics
83958314	Application		7/24/2014		PCT/US2014/048001	PCT	Storing Metadata
84031541	Application		10/13/2014		PCT/US2014/060275	PCT	CONTROLLING ACCESS TO SECURE MEDIA CONTENT
84113894	Application		42111		PCT/US2015/026426	PCT	DATA BLOCK ADDRESS-GENERATED DATA TO TEST A DATA STORAGE DEVICE
84113914	Application		42034		PCT/US2015/014002	PCT	DETECTION OF CONNECTION TYPE
84170104	Application		4/30/2015		PCT/US2015/028543	PCT	CONFIGURATION OF A PERIPHERAL COMPONENT INTERCONNECT EXPRESS LINK
84260566	Application		8/12/2015		PCT/US2015/044806	PCT	HOST-STORAGE AUTHENTICATION
84261622	Application		7/31/2015		PCT/US2015/043319	PCT	DETERMINING POWER STATE SUPPORT
90016090	Application		8/13/2015		PCT/US2015/045127	PCT	STORAGE MANAGEMENT
83593460	Published		9/30/2013		PCT/US2013/062621	PCT	OPTICAL BLIND-MATE CONNECTOR AND ADAPTER
83749272	Published		1/30/2014		PCT/US2014/013736	PCT	SENDING A DATA FLOW
83776256	Published		1/30/2014		PCT/US2014/013816	PCT	MULTIPLE COMPUTE NODES
83957833	Application		5/30/2014		PCT/US2014/040302	PCT	SUPPORTING INPUT/OUTPUT (I/O) CONNECTIVITY FOR A PRINTED CIRCUIT ASSEMBLY (PCA) IN A HOT AISLE CABLING OR A COLD AISLE CABLING ARRANGEMENT
84030688	Application		10/30/2014		PCT/US2014/063169	PCT	SECURE TRANSACTIONS IN A MEMORY FABRIC
84170310	Application		4/30/2015		PCT/US2015/028619	PCT	REPLICATING DATA USING DUAL-PORT NON-VOLATILE DUAL IN-LINE MEMORY MODULES
84173015	Application		8/6/2015		PCT/US2015/044013	PCT	DIFFERENCE DATASETS
84264433	Application		6/4/2015		PCT/US2015/034283	PCT	LIGHT COLOR ADJUSTMENT OF A SERVER PANEL LIGHT
84113868	Application		2/27/2015		PCT/US2015/018137	PCT	CLOUD NETWORK MANAGEMENT
83102183	Published		1/31/2013		PCT/US2013/024176	PCT	NETWORK SWITCH STIMULATION
83138333	Published		8/7/2013		PCT/IN2013/000486	PCT	System State Message In Software Defined Networking

PATENT
REEL: 038498 FRAME: 0257

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83140102	Published		1/30/2013		PCT/US2013/023751	PCT	Sending Traffic Policies
83629063	Published		10/11/2013		PCT/US2013/064649	PCT	UTILIZING COLLECTED DATA FROM A SOFTWARE-DEFINED NETWORKING NETWORK TO DIAGNOSE A USER EXPERIENCE
83766538	Published		2/4/2014		PCT/US2014/014543	PCT	NETWORK SWITCH EXTENSION
83820979	Application		4/30/2014		PCT/US2014/036009	PCT	REDUCING DATA IN A NETWORK DEVICE
83988344	Application		7/18/2014		PCT/US2014/047221	PCT	PIPELINE TABLE IDENTIFICATION
84033419	Application		12/2/2014		PCT/US2014/068027	PCT	SERVICE INSERTION FORWARDING
90039585	To Be Filed					PCT	Method of forwarding acceleration using a cache for 802.1BR external bridge port extenders.
83629229	Published		11/20/2013		PCT/US2013/070917	PCT	SERVICE ADVERTISEMENT CACHING
84033439	Application		9/30/2014		PCT/US2014/058273	PCT	ADVERTISING MULTIPLE SERVICE SET IDENTIFIERS
90037899	To Be Filed					PCT	GeoLocation Firewall Policy Enforcement For Proxy Connections
90039502	Acknowledged					PCT	Infrastructure for identification, Quality of Service and Application level Control for next-gen voice applications hosted in the cloud
83211145	Published		5/16/2013		PCT/US2013/041379	PCT	SELECTING A STORE FOR DEDUPLICATED DATA
83211151	Published		5/16/2013		PCT/US2013/041369	PCT	SELECTING A STORE FOR DEDUPLICATED DATA
84030874	Application		9/22/2014		PCT/US2014/056755	PCT	IDENTIFICATION OF CONTENT-DEFINED CHUNK BOUNDARIES
84107333	Application		12/15/2014		PCT/US2014/070403	PCT	SNAPSHOT CREATION
84116035	Application		3/31/2015		PCT/US2015/023555	PCT	BACKUP OPERATIONS
84173682	Application		6/12/2015		PCT/US2015/035576	PCT	DISK STORAGE ALLOCATION
83598266	Published		11/27/2013		PCT/US2013/072221	PCT	METHOD AND SYSTEM FOR FACILITATING MULTI-CURRENCY CARD PAYMENT TRANSACTIONS
84266643	Application		42205		PCT/US2015/041140	PCT	WEB APPLICATION ADJUSTMENT FOR DIFFERENT BROWSERS
84031023	Application		10/31/2014		PCT/US2014/063314	PCT	SYSTEM AND METHOD FOR VULNERABILITY REMEDIATION VERIFICATION
84031212	Application		10/31/2014		PCT/US2014/063435	PCT	SECURITY RECORD TRANSFER IN A COMPUTING SYSTEM
84031292	Application		41911		PCT/US2014/057971	PCT	SECURITY CONTROL
84115809	Application		42073		PCT/US2015/019789	PCT	DATA SANDBOXING FOR MULTIPLE USER DATA STORAGE AND SEPARATION
90046352	Application		9/4/2015		PCT/CN2015/088930	PCT	PASSWORD GENERATION WITH KEY AND DERIVATION PARAMETER
83735200	Application		1/31/2014		PCT/US2014/014333	PCT	TEST PROBE
83954358	Application		7/29/2014		PCT/US2014/048624	PCT	LOCKABLE CONNECTOR DEVICE
84172949	Application		2/26/2015		PCT/US2015/017824	PCT	HOLDING PLATFORM TO HOLD A LOAD AT AN UPRIGHT POSITION AND A LYING POSITION

PATENT
REEL: 038498 FRAME: 0258

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83268563	Published		7/30/2013		PCT/US2013/052631	PCT	DETERMINING TOPIC RELEVANCE OF AN EMAIL THREAD
83776717	Published		1/30/2014		PCT/US2014/013827	PCT	SELECTING A BACKUP PROCESS FOR A FILE SYSTEM
83618681	Published		10/31/2013		PCT/US2013/067854	PCT	NON-BLOCKING REGISTRATION IN DISTRIBUTED TRANSACTIONS
83822270	Application		4/29/2014		PCT/US2014/035908	PCT	QUERY PLAN POST OPTIMIZATION ANALYSIS AND REOPTIMIZATION
84115013	Application		4/3/2015		PCT/US2015/024325	PCT	COMPRESS AND LOAD MESSAGE INTO SEND BUFFER
83635369	Application		10/29/2013		PCT/US2013/067202	PCT	PROVIDING INFORMATION TECHNOLOGY SUPPORT
83663155	Published		10/29/2013		PCT/US2013/067199	PCT	HIERARCHICAL SERVICE TREES
83748127	Application		1/27/2014		PCT/US2014/013113	PCT	CONTINUOUS INTEGRATION WITH REUSABLE CONTEXT AWARE JOBS
83825665	Application		4/22/2014		PCT/US2014/034931	PCT	FLOW AUTOCOMPLETE
83998451	Application		7/28/2014		PCT/US2014/048397	PCT	DETECTION OF ABNORMAL TRANSACTION LOOPS
84030107	Application		11/14/2014		PCT/US2014/065586	PCT	SATISFACTION METRIC FOR CUSTOMER TICKETS
84113307	Application		1/22/2015		PCT/US2015/012371	PCT	INDEX WEIGHT CALCULATOR
90035134	Application		8/31/2015		PCT/US2015/047782	PCT	MESSAGE BASED INFORMATION TECHNOLOGY SERVICE MANAGEMENT
83618644	Application		12/14/2013		PCT/US2013/075194	PCT	Log Analysis Based on User Activity Volume
83640410	Published		10/30/2013		PCT/US2013/067539	PCT	PARAMETER SUGGESTION BASED ON USER ACTIVITY
84031504	Application		12/17/2014		PCT/US2014/070817	PCT	EVALUATING PERFORMANCE OF APPLICATIONS UTILIZING USER EMOTIONAL STATE PENALTIES
84171286	Application		4/30/2015		PCT/US2015/028401	PCT	CLASSIFICATION OF APPLICATION EVENTS USING CALL STACKS
84260062	Application		5/21/2015		PCT/US2015/032010	PCT	APPLICATION THREAD VISUALIZATION
84262813	Application		7/17/2015		PCT/US2015/040906	PCT	VISUALIZATION OF A RESOURCE CONFIGURATION WITH A VISUALIZATION RING
83598249	Published		11/26/2013		PCT/US2013/071843	PCT	RECOMMENDING APPLICATION MODIFICATIONS USING IMAGE AREA COUNTS
83663095	Published		10/30/2013		PCT/US2013/067480	PCT	RECORDING AN APPLICATION TEST
84113038	Application		12/9/2014		PCT/US2014/069290	PCT	SEPARATING TEST VERIFICATIONS FROM TEST EXECUTIONS
84172889	Application		8/4/2015		PCT/US2015/043588	PCT	SELECTIVE APPLICATION TESTING
84266554	Application		7/28/2015		PCT/US2015/042375	PCT	APPLICATION LAUNCH STATE DETERMINATION
90037819	To Be Filed					PCT	HPE Software product privacy control – Privacy risk score
90037839	To Be Filed					PCT	Leveraging application features usage by dynamic analysis of user behavior in multi tenancy web applications
83618392	Published		8/27/2013		PCT/US2013/056828	PCT	DETERMINING MALWARE BASED ON SIGNAL TOKENS
83273120	Published		10/30/2013		PCT/US2013/067439	PCT	MODIFYING REALIZED TOPOLOGIES
83273166	Published		10/30/2013		PCT/US2013/067542	PCT	INSTANTIATING A TOPOLOGY-BASED SERVICE USING A BLUEPRINT AS INPUT

PATENT
REEL: 038498 FRAME: 0259

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83829933	Application		4/25/2014		PCT/US2014/035498	PCT	OPTIMIZING SCALING BASED ON REAL USER EXPERIENCE
83961783	Application		9/30/2014		PCT/US2014/058330	PCT	TOPOLOGY BASED MANAGEMENT WITH STAGE AND VERSION POLICIES
84044262	Application		1/6/2015		PCT/US2015/010315	PCT	SUPPORTING INTEROPERABILITY IN CLOUD ENVIRONMENTS
90035363	To Be Filed					PCT	Deployment of application by automatically identifying and integrating the platform dependencies at runtime using simple definitions
83269980	Published		8/20/2013		PCT/US2013/055682	PCT	POINT OF SALE DEVICE LEVERAGING A PAYMENT UNIFICATION SERVICE
83602697	Published		12/20/2013		PCT/US2013/076873	PCT	MESSAGE ASSOCIATION WITH A CASE BASED ON A CASE HANDLE
83946240	Published		5/12/2014		PCT/US2014/037689	PCT	METHODS TO UPDATE PORTALS
84012586	Application		41845		PCT/CN2014/083898	PCT	LOCAL DATABASE CACHE
84029958	Application		41940		PCT/US2014/062603	PCT	MEDIA CONTENT DOWNLOAD TIME
84037163	Application		9/5/2014		PCT/US2014/054228	PCT	PURCHASE SUPPORT
84114575	Application		1/29/2015		PCT/US2015/013573	PCT	ENCODER
83602717	Application		10/14/2013		PCT/US2013/064893	PCT	PACKAGE DEPENDENCY MAPS FOR DISTRIBUTED COMPUTING
84031186	Application		10/8/2014		PCT/US2014/059770	PCT	RESOURCE FEDERATION
84043506	Application		9/25/2014		PCT/US2014/057469	PCT	IDENTIFICATION OF A COMPONENT FOR UPGRADE
90037427	To Be Filed					PCT	(Chameleon) Method for using Natural Language, Code Completion and Advanced Templates including Synonyms, Dynamic Templates, and Template Stringing and Conditions to Generate Computer Code
83777381	Application		41670		PCT/US2014/014248	PCT	FILE SYSTEM STORAGE
83820939	Application		7/10/2014		PCT/US2014/046183	PCT	Improving Startup Time Of Managed Code
90030657	Application		9/29/2015		PCT/US2015/052867	PCT	APPLICATION MANAGEMENT DATA
90037988	To Be Filed					PCT	System and method for stateless OS deployment to compute nodes
83268958	Published		11/13/2013		PCT/US2013/069851	PCT	NON-BINARY RANK MULTIPLICATION OF MEMORY MODULE
83757696	Published		1/30/2014		PCT/US2014/013734	PCT	ACCESS CONTROLLED MEMORY REGION
83757742	Published		1/31/2014		PCT/US2014/014055	PCT	ACCESSING A RESISTIVE STORAGE ELEMENT-BASED MEMORY CELL ARRAY
83757902	Published		1/28/2014		PCT/US2014/013376	PCT	RE-INITIALIZING MEMORY ARRAYS
83757908	Published		1/31/2014		PCT/US2014/014041	PCT	IDENTIFYING MEMORY REGIONS THAT CONTAIN REMAPPED MEMORY LOCATIONS
83757922	Published		1/31/2014		PCT/US2014/014018	PCT	REMAPPING MEMORY LOCATIONS IN A MEMORY ARRAY

PATENT
REEL: 038498 FRAME: 0260

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83952506	Application		8/8/2014		PCT/US2014/050406	PCT	ERROR COUNTERS ON A MEMORY DEVICE
83957919	Application		41884		PCT/US2014/053704	PCT	SERIALIZING ACCESS TO FAULT TOLERANT MEMORY
84030525	Application		10/29/2014		PCT/US2014/062848	PCT	INCLUDING NODE AND PROCESS IDENTIFIERS IN A TRANSACTION
84033044	Application		10/28/2014		PCT/US2014/062593	PCT	MEDIA CONTROLLER WITH COORDINATION BUFFER
84033101	Application		41941		PCT/US2014/062886	PCT	COMMITTING ALTERED METADATA TO A NON-VOLATILE STORAGE DEVICE
84111833	Application		42033		PCT/US2015/013460	PCT	ERASURE MULTI-CHECKSUM ERROR CORRECTION CODE
84112812	Application		12/22/2014		PCT/US2014/071922	PCT	STATUS FOR GENERATED DATA IMAGE
84114518	Application		12/19/2014		PCT/US2014/071673	PCT	FLUSHING DATA CONTENT IN RESPONSE TO A POWER LOSS EVENT FOR A PROCESSOR
84170247	Application		4/22/2015		PCT/US2015/027028	PCT	STATUS SIGNAL COMBINED ONTO POWER VOLTAGE
84262272	Application		7/31/2015		PCT/US2015/043236	PCT	Prioritizing Tasks for Copying to Nonvolatile Memory
90035114	Acknowledged					PCT	Autonomous Memory Device
90037968	To Be Filed					PCT	On-DRAM Patrol Scrub during refresh command
90046392	Application		9/15/2015		PCT/US2015/050124	PCT	PRINTED CIRCUIT BOARD INCLUDING THROUGH-HOLE VIAS
83271500	Published		7/31/2013		PCT/US2013/052887	PCT	Determining a Level of Risk for Making a Change Using a Neuro Fuzzy Expert System
83271517	Published		7/31/2013		PCT/US2013/052980	PCT	COMPARING RESPONSE TIMES WITH GOAL TIMES
83958059	Application		7/30/2014		PCT/US2014/048871	PCT	DETECTING VASCULAR CONDITIONS IN ANIMAL BODIES
84029981	Application		9/12/2014		PCT/US2014/055337	PCT	RADIO FREQUENCY IDENTIFICATION CARD MONITOR
90036946	Acknowledged					PCT	Instrument for Early Identification of Perceived Innovation Potential of Informational Products
83207859	Application		6/24/2013		PCT/IN2013/000390	PCT	Topic Based Classification of Documents
83209777	Published		4/30/2013		PCT/US2013/038895	PCT	Incrementally Updating Statistics
83209791	Published		5/1/2013		PCT/US2013/039055	PCT	CONTENT CLASSIFICATION
83623590	Application		10/31/2013		PCT/US2013/067679	PCT	DATA PROCESSING SYSTEM INCLUDING A SEARCH ENGINE
83734871	Published		41628		PCT/US2013/076796	PCT	Generating a Visualization of a Metric at a Level of Execution
83747145	Published		41708		PCT/US2014/022879	PCT	PARALLELIZING SQL USER DEFINED TRANSFORMATION FUNCTIONS
83776611	Application		6/12/2014		PCT/CN2014/079747	PCT	RECOMMENDING OF AN ITEM TO A USER
83822605	Application		4/28/2014		PCT/US2014/035617	PCT	Term Chain Clustification
83822671	Application		5/21/2014		PCT/US2014/039009	PCT	Bipartite Graph Display
83824766	Application		5/22/2014		PCT/US2014/039150	PCT	USER DEFINED FUNCTION, CLASS CREATION FOR EXTERNAL DATA SOURCE ACCESS
83954146	Application		7/10/2014		PCT/US2014/046189	PCT	Data Categorization Using Named Entity Extraction

PATENT
REEL: 038498 FRAME: 0261

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83954152	Application		41789		PCT/US2014/040234	PCT	A way of choosing the informative columns from a wide table that contains data of various types (numeric, categorical etc.).
83954272	Application		7/31/2014		PCT/CN2014/083379	PCT	RANK AGGREGATION BASED ON A MARKOV MODEL
83954292	Application		7/29/2014		PCT/US2014/048642	PCT	DETECTING SEMANTIC SIMILARITY IN A STRUCTURED DATASET
83954312	Application		7/23/2014		PCT/US2014/047803	PCT	PROXIMITY OF DATA TERMS BASED ON WALSH-HADAMARD TRANSFORMS
84028965	Application		11/26/2014		PCT/US2014/067633	PCT	READ-OPTIMIZED DATABASE CHANGES
84115786	Application		4/13/2015		PCT/CN2015/076453	PCT	Systems and Methods for Weak Tie Aware Social Prediction
84115829	Application		3/12/2015		PCT/US2015/020277	PCT	DATABASE RECORDS ASSOCIATED WITH A TRIE
84115849	Application		1/29/2015		PCT/US2015/013447	PCT	DATA ANALYTICS ON ENCRYPTED DATA ELEMENTS
84262830	Application		9/11/2015		PCT/US2015/049737	PCT	METHOD CALL ON AN OBJECT IN A PARALLEL CLASS HIERARCHY
84262876	Application		8/17/2015		PCT/US2015/045471	PCT	INTERACTIVE ANALYTICS INTERFACES BASED ON CONTEXT MODIFICATIONS
90037129	To Be Filed					PCT	Distributed system for real-time analytics and lossy transmission of data streams under limited computing and networking resources
90037261	Acknowledged					PCT	Type-Safe Namespaces
90037278	To Be Filed					PCT	Garbage Collection with Contingent Pointers
83631227	Published		10/31/2013		PCT/US2013/067770	PCT	TRUSTED FUNCTION BASED DATA ACCESS SECURITY CONTROL
83766584	Application		3/14/2014		PCT/US2014/029030	PCT	SEMANTIC RESTRICTION
83832801	Application		4/28/2014		PCT/EP2014/058624	PCT	Probabilistic – Non-probabilistic PnP) Multiplex Graph Queries
83957956	Application		7/23/2014		PCT/US2014/047773	PCT	ATTRIBUTE-BASED CRYPTOGRAPHY
83959665	Application		6/30/2014		PCT/US2014/044875	PCT	CONCURRENT DEAD ACTOR COLLECTION
84031043	Application		10/28/2014		PCT/US2014/062659	PCT	ENTITY ANONYMIZATION FOR A QUERY DIRECTED TO A MULTIPLEX GRAPH
84240188	Application		7/7/2015		PCT/EP2015/065514	PCT	Graph Expansion via Aggregation Vertices to Represent Query Results
84260294	Application		8/28/2015		PCT/US2015/047380	PCT	PROPAGATING BELIEF INFORMATION ABOUT MALICIOUS AND BENIGN NODES
84264771	Application		9/14/2015		PCT/US2015/049936	PCT	SECURE MEMORY SYSTEMS
84264894	Application		42230		PCT/EP2015/068792	PCT	DATA REPLICATION IN MEMORY SYSTEMS
84265624	Application		42230		PCT/EP2015/068765	PCT	Systematic policy-based type-aware integrity and confidentiality marking of large-scale data (for the Machine)

PATENT
REEL: 038498 FRAME: 0262

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84265661	Application		42216		PCT/EP2015/067661	PCT	MALWARE MODELLING
84265681	Application		7/30/2015		PCT/EP2015/067543	PCT	Cryptographic Identities of Nodes in TheMachine
90037026	Application		8/28/2015		PCT/US2015/047497	PCT	EXTRACTED DATA CLASSIFICATION TO DETERMINE IF A DNS PACKET IS MALICIOUS
90037859	To Be Filed					PCT	Instant memory snapshots for memory forensics and malware detection on a memory fabric machine
83271812	Published		11/15/2013		PCT/US2013/070418	PCT	SELECTING A TASK OR A SOLUTION
83629272	Published		9/27/2013		PCT/US2013/062348	PCT	NOTIFYING A USER OF CRITICAL EMAILS VIA TEXT MESSAGES
83953153	Application		6/10/2014		PCT/US2014/041773	PCT	PURCHASING OPTION INCLUDING AN EXECUTION QUALITY-UNCERTAINTY PAIR
83953585	Application		8/8/2014		PCT/IN2014/000520	PCT	TRUNCATION POINT SELECTION
84112978	Application		1/30/2015		PCT/US2015/013849	PCT	BROADCASTING USER PRESENCE WITH RESPECT TO AN INDOOR POSITIONING SYSTEM
83623367	Published		10/29/2013		PCT/US2013/067268	PCT	RESISTIVE CROSSPOINT MEMORY ARRAY SENSING
83763853	Published		1/31/2014		PCT/US2014/014227	PCT	NON-VOLATILE MEMORY WITH MULTIPLE LATENCY TIERS
83952941	Application		11/14/2014		PCT/US2014/065606	PCT	MEMORY CONTROLLERS
83957856	Application		7/28/2014		PCT/US2014/048449	PCT	ADJUSTING SWITCHING PARAMETERS OF A MEMRISTOR ARRAY
84033038	Application		10/31/2014		PCT/US2014/063394	PCT	REUSING SNEAK CURRENT IN ACCESSING MEMORY CELLS
84033456	Application		10/30/2014		PCT/US2014/063213	PCT	DOUBLE BIAS MEMRISTIVE DOT PRODUCT ENGINE FOR VECTOR PROCESSING
84033685	Application		41992		PCT/US2014/071345	PCT	NEGATIVE DIFFERENTIAL RESISTANCE (NDR) DEVICE BASED ON FAST DIFFUSIVE METAL ATOMS
84111438	Application		3/20/2015		PCT/US2015/021686	PCT	MEMRISTIVE DEVICE WITH DOPED SOL-GEL SWITCHING LAYER
84111501	Application		2/27/2015		PCT/US2015/017976	PCT	SUPERLINEAR SELECTORS
84111644	Application		1/30/2015		PCT/US2015/013877	PCT	DETERMINING A CURRENT IN A MEMORY ELEMENT OF A CROSSBAR ARRAY
84111704	Application		1/23/2015		PCT/US2015/012715	PCT	FILM-EDGE TOP ELECTRODE
84169666	Application		4/15/2015		PCT/US2015/025860	PCT	RESISTIVE RANDOM ACCESS MEMORY (RRAM) SYSTEM
84169832	Application		8/11/2015		PCT/US2015/044724	PCT	THERMAL INKJET ELECTROSTATIC DISCHARGE MEMRISTIVE SWITCHING ELEMENTS
84171246	Application		4/16/2015		PCT/US2015/026215	PCT	RESISTIVE MEMORY ARRAYS FOR PERFORMING MULTIPLY-ACCUMULATE OPERATIONS
84171266	Application		4/29/2015		PCT/US2015/028208	PCT	DISCRETE-TIME ANALOG FILTERING
90037779	To Be Filed					PCT	BIASING CROSSBAR MEMORY ARRAYS
83139306	Published		1/31/2013		PCT/US2013/024132	PCT	INDEXED SHAPED GRAPH CREATION
83629043	Published		10/31/2013		PCT/US2013/067740	PCT	Wireless Software-Defined Networking

PATENT
REEL: 038498 FRAME: 0263

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83733783	Published		2/10/2014		PCT/US2014/015621	PCT	DISTANCE ESTIMATION
83820541	Application		7/7/2014		PCT/CN2014/081718	PCT	Inheritance of ANQP Elements
84033190	Application		12/9/2014		PCT/US2014/069386	PCT	STORAGE MEDIA SECTIONS WITH ALTERNATIVE CELLS
84220815	Application		6/4/2015		PCT/CN2015/080790	PCT	GT-Ranking Method on High Performance WLAN Availability Prediction
84264147	Application		6/26/2015		PCT/US2015/038011	PCT	TRANSMISSIONS OF UNICAST FRAMES TO CLIENT DEVICES
90039651	To Be Filed					PCT	Boosting Graph for More Efficient WLAN Discovery
83271019	Published		7/31/2013		PCT/US2013/052802	PCT	OPTICAL CONNECTOR ALIGNMENT
83623553	Published		10/22/2013		PCT/US2013/066081	PCT	HYBRID CIRCUIT-PACKET SWITCH
83734739	Published		2/28/2014		PCT/US2014/019393	PCT	LASING OUTPUT BASED ON VARYING MODAL INDEX
84033559	Application		41940		PCT/US2014/062619	PCT	PHOTONIC INTERPOSER WITH WAFER BONDED MICROLENSES
84111541	Application		4/10/2015		PCT/US2015/025266	PCT	OVERMOLDED FILTERS
84262607	Application		7/21/2015		PCT/US2015/041323	PCT	RING-RESONATOR MODULATION OF AN OPTICAL SIGNAL
90035320	To Be Filed					PCT	Ring modulator and tunable multiplexer
83825917	Application		4/30/2014		PCT/US2014/036197	PCT	SERVICE ONBOARDING
84031464	Application		1/22/2015		PCT/US2015/012362	PCT	POLICY BASED WORKLOAD SCALER
84107173	Application		11/19/2014		PCT/US2014/066392	PCT	TESTING A CLOUD SERVICE
84262710	Application		7/30/2015		PCT/US2015/042964	PCT	Billing Workflow Injection for OpenStack
90035343	Acknowledged					PCT	Dynamic Slave Node selection from node pool based on Job in a Build system (Jenkins). The proposed solution describes an intelligent way to select slave nodes based on job type.
83820521	Application		4/30/2014		PCT/US2014/036149	PCT	PACKET LOGGING
83833319	Application		4/15/2014		PCT/US2014/034202	PCT	CONFIGURABLE NETWORK SECURITY
84173662	Application		5/29/2015		PCT/US2015/033343	PCT	POTENTIAL BLOCKING IMPACTS
84264702	Application		7/31/2015		PCT/US2015/043053	PCT	PROXY-CONTROLLED COMPARTMENTALIZED DATABASE ACCESS
90037052	To Be Filed					PCT	Distributed Design of LoadBalancer
83623424	Published		9/30/2013		PCT/US2013/062675	PCT	SERVER DOWNTIME METERING
83820126	Application		41759		PCT/IN2014/000292	PCT	ON DEMAND REMOTE DIAGNOSTICS FOR HARDWARE COMPONENT FAILURE AND DISK DRIVE DATA RECOVERY USING EMBEDDED STORAGE MEDIA
83820481	Application		4/10/2014		PCT/US2014/033644	PCT	CONNECTION CLASSIFICATION
83822625	Application		3/31/2014		PCT/US2014/032332	PCT	MEMORY UNIT WITH DATA SEGMENT INFORMATION IN HEADER
83953459	Application		8/29/2014		PCT/US2014/053314	PCT	RESOURCE TREES BY MANAGEMENT CONTROLLER
83953479	Application		11/13/2014		PCT/IN2014/000719	PCT	DUAL PURPOSE BOOT REGISTERS
84113748	Application		42009		PCT/US2015/010143	PCT	STORAGE DEVICE FLASHING OPERATION
84171332	Application		4/30/2015		PCT/US2015/028574	PCT	DEEP OFF POWER STATES

PATENT
REEL: 038498 FRAME: 0264

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83734845	Published		12/6/2013		PCT/US2013/073693	PCT	FLEXIBLE SCHEMA TABLE
84172491	Application		4/30/2015		PCT/US2015/028636	PCT	DYNAMIC FUNCTION INVOCATION
84264622	Application		8/7/2015		PCT/US2015/044345	PCT	IDENTIFYING SHORTEST PATHS
90015758	Application		42222		PCT/US2015/044071	PCT	QUERY PATH WITH AGGREGATE PROJECTION
83598037	Published		2/21/2014		PCT/US2014/017607	PCT	MIGRATING CLOUD RESOURCES
84114435	Application		2/10/2015		PCT/US2015/015146	PCT	DRUG DISPENSER
84263606	Application		7/8/2015		PCT/US2015/039526	PCT	Orchestration Template Generation
84265223	Application		8/21/2015		PCT/US2015/046374	PCT	ADJUSTING CLOUD-BASED EXECUTION ENVIRONMENT BY NEURAL NETWORK
84228721	Application		4/20/2015		PCT/US2015/026585	PCT	SECURITY INDICATOR SCORES
84251784	Application		6/26/2015		PCT/US2015/038139	PCT	ALERTS FOR COMMUNITIES OF A SECURITY INFORMATION SHARING PLATFORM
84264665	Application		6/18/2015		PCT/US2015/036508	PCT	PROTECTED LOADING OF A MODULE
90031991	To Be Filed					PCT	Source reliability and authenticity and their effects on score computation
90068081	Acknowledged					PCT	Analyst Profile Obfuscation and Privacy Preserving Badge Management for Security Information Sharing
83209857	Published		5/30/2013		PCT/US2013/043237	PCT	SEPARATE MEMORY CONTROLLERS TO ACCESS DATA IN MEMORY
83210567	Published		5/29/2013		PCT/US2013/042980	PCT	INVOKING AN ERROR HANDLER TO HANDLE AN UNCORRECTABLE ERROR
83213767	Published		3/15/2013		PCT/CN2013/072674	PCT	CO-PROCESSOR-BASED ARRAY-ORIENTED DATABASE PROCESSING
83271855	Published		7/31/2013		PCT/US2013/053040	PCT	INDEXING ACCELERATORS WITH MEMORY-LEVEL PARALLELISM SUPPORT
83273853	Published		7/31/2013		PCT/US2013/052930	PCT	GLOBAL ERROR CORRECTION
83820501	Application		7/15/2014		PCT/US2014/046728	PCT	DATABASE TRANSACTION REPLAY
83830491	Application		4/30/2014		PCT/US2014/036236	PCT	PARTITIONABLE TERNARY CONTENT ADDRESSABLE MEMORY (TCAM) FOR USE WITH A BLOOM FILTER
83953256	Application		7/31/2014		PCT/US2014/049101	PCT	PLATFORM CONFIGURATION SELECTION BASED ON A DEGRADED MAKESPAN
84030631	Application		10/31/2014		PCT/US2014/063479	PCT	INTEGRATED HETEROGENEOUS PROCESSING UNITS
84089394	Application		10/26/2014		PCT/US2014/062305	PCT	PROCESSING A QUERY USING TRANSFORMED RAW DATA
84113788	Application		42013		PCT/US2015/010862	PCT	Garbage collection for persistent memory
84114412	Application		42034		PCT/US2015/013969	PCT	MEMORY NETWORK TO PRIORITIZE PROCESSING OF A MEMORY ACCESS REQUEST
84261542	Application		7/24/2015		PCT/US2015/041899	PCT	SCHEDULING JOBS IN A COMPUTING CLUSTER

PATENT
REEL: 038498 FRAME: 0265

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90035217	To Be Filed					PCT	An Extended Performance Emulation Environment for Next-Generation Non-Volatile Memory with STORE operations Using Commodity Hardware
90037799	To Be Filed					PCT	Multistage Hybrid Cooling Solution with Passive and Active Cooling
83822479	Application		4/29/2014		PCT/US2014/035805	PCT	NETWORK MANAGEMENT USING PORT ANNOUNCEMENTS
83954859	Application		7/31/2014		PCT/US2014/049268	PCT	SERVICE REQUEST MODIFICATION
84115056	Application		2/20/2015		PCT/US2015/016802	PCT	PROVIDING A REDUNDANT CONNECTION IN RESPONSE TO A MODIFIED CONNECTION
83852635	Published		4/3/2014		PCT/US2014/032868	PCT	PRIORITIZING AT LEAST ONE FLOW CLASS FOR AN APPLICATION ON A SOFTWARE DEFINED NETWORKING CONTROLLER
83998056	Application		8/11/2014		PCT/US2014/050541	PCT	PREVENTING FLOW TABLE MISSES IN A SOFTWARE DEFINED NETWORK
84033648	Application		10/29/2014		PCT/US2014/062865	PCT	DYNAMICALLY INCLUDING AN ACTIVE TUNNEL AS A MEMBER OF A VIRTUAL NETWORK
84097764	Application		11/5/2014		PCT/US2014/064058	PCT	MAXIMUM TRANSMISSION UNIT INSTALLATION FOR NETWORK TRAFFIC ALONG A DATAPATH IN A SOFTWARE DEFINED NETWORK
84111956	Application		5/15/2015		PCT/US2015/031094	PCT	REDIRECTING A PRINT JOB
90039605	Application		8/31/2015		PCT/US2015/047712	PCT	CONTROL CHANNEL USAGE MONITORING IN A SOFTWARE-DEFINED NETWORK
83764251	Application		1/27/2014		PCT/US2014/013197	PCT	Voltage Regulation for Battery Strings
83957335	Application		41851		PCT/US2014/049099	PCT	REMOVABLE TEST AND DIAGNOSTICS CIRCUIT
84031378	Application		41943		PCT/US2014/063556	PCT	SHARED BACKUP POWER SELF-REFRESH MODE
84031438	Application		11/12/2014		PCT/US2014/065222	PCT	SERVER NODE SHUTDOWN
84033482	Application		1/28/2015		PCT/US2015/013213	PCT	MEMORY MODULE PERSISTENT DATA BACK-UPS
84042845	Application		12/2/2014		PCT/US2014/068239	PCT	BACKUP POWER COMMUNICATION
84256899	Application		7/31/2015		PCT/US2015/043311	PCT	POWER MODULE HEALTH TEST
84262913	Application		7/30/2015		PCT/US2015/042914	PCT	ACTIVATION OF A SWITCH TO INCREASE DUTY CYCLE
90031470	To Be Filed					PCT	Variable E-fuse Soft Start Protection
90035237	Application		9/29/2015		PCT/US2015/052936	PCT	SERVER TRAY BACKUP POWER REDUNDANCY
83826077	Application		7/31/2014		PCT/US2014/049320	PCT	AIR AND FLUID COOLING OF A DATA CENTER
84031146	Application		2/13/2015		PCT/US2015/015890	PCT	COOLANT DISTRIBUTION UNIT
84114976	Application		1/31/2015		PCT/US2015/014007	PCT	MEMORY COOLING PAD
84172992	Application		3/24/2015		PCT/US2015/022246	PCT	LIQUID COOLING WITH A COOLING CHAMBER
83953565	Application		9/30/2014		PCT/US2014/058377	PCT	ARTIFACT PROJECTION
83958065	Application		9/24/2014		PCT/US2014/057148	PCT	ASSIGNING A DOCUMENT TO PARTIAL MEMBERSHIP IN COMMUNITIES

PATENT
REEL: 038498 FRAME: 0266

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84111458	Application		1/30/2015		PCT/US2015/013705	PCT	Dynamic Modulation for Near Eye Display
84262647	Application		6/26/2015		PCT/CN2015/000467	PCT	MOBILE DEVICE LOCATOR
83269857	Published		8/27/2013		PCT/US2013/056711	PCT	MANAGEMENT ACTIONS FOR CALENDAR CONFLICTS
83960930	Application		7/30/2014		PCT/US2014/048829	PCT	PRODUCT RISK PROFILE
84031484	Application		41947		PCT/US2014/063837	PCT	WEB SERVICES GENERATION BASED ON CLIENT-SIDE CODE
84113373	Application		42058		PCT/US2015/017016	PCT	NAVIGATION MENU BASED ON CROWD DATA
83273366	Published		7/31/2013		PCT/US2013/052891	PCT	Coating Magnetic Tape Heads
83705290	Application		12/6/2013		PCT/US2013/073591	PCT	Replicating Metadata Associated with a File
83713588	Application		12/6/2013		PCT/US2013/073616	PCT	FILE RETENTION
83777601	Published		3/5/2014		PCT/US2014/020937	PCT	Processing Primary Key Modifications
84031512	Application		9/30/2014		PCT/US2014/058286	PCT	AN OVERLAY STREAM OF OBJECTS
84080958	Application		12/1/2014		PCT/US2014/067945	PCT	DISTRIBUTED SEGMENTED FILE SYSTEMS
84141396	Application		1/20/2015		PCT/US2015/012057	PCT	Secure File Deletion
84173690	Application		7/16/2015		PCT/US2015/040722	PCT	DISTRIBUTED FILE SYSTEM WITH TENANT FILE SYSTEM ENTITY
84191111	Application		3/23/2015		PCT/US2015/022064	PCT	Database Management
84200600	Application		3/26/2015		PCT/US2015/022793	PCT	CHARGING A USER'S STORAGE QUOTA FOR EXTENDED ATTRIBUTES
84113925	Application		1/30/2015		PCT/US2015/013864	PCT	SECURE API COMMUNICATION
84149030	Application		3/25/2015		PCT/US2015/022384	PCT	DEMAND FORECASTING AND SIMULATION
83957698	Application		7/31/2014		PCT/US2014/049069	PCT	NEXT GENERATION FORM FACTOR (NGFF) CARRIER
83958889	Application		7/31/2014		PCT/US2014/049306	PCT	Backup Power Assembly Having Blind Mate Connector
84113218	Application		12/17/2014		PCT/US2014/070830	PCT	DISABLING DEVICE INCLUDING ADHESIVE TO DISABLE AN ELECTRICAL INTERFACE
84171400	Application		4/3/2015		PCT/US2015/024329	PCT	CONNECTOR MOUNTS
84173006	Application		4/17/2015		PCT/US2015/026465	PCT	RACK ENCLOSURE WITH PERFORATIONS FOR COOLING
84262950	Application		7/30/2015		PCT/US2015/042886	PCT	Transceiver Module
84263016	Application		9/30/2015		PCT/US2015/053089	PCT	POSITIONABLE COVER TO SET COOLING SYSTEM
90033923	Application		8/28/2015		PCT/US2015/047552	PCT	TRAYS TO RECEIVE STORAGE DEVICES
90035297	Acknowledged					PCT	RISC (Rack-integrated secondary cooling) plenums
84260119	Acknowledged					PCT	Flush-set accounting in CPU caches, home agents, and memory controllers
83273360	Published		7/29/2013		PCT/US2013/052541	PCT	Metadata Extraction, Processing, and Loading
83735131	Published		1/23/2014		PCT/US2014/012784	PCT	Volume Migration For A Storage Area Network
83777627	Published		2/14/2014		PCT/US2014/016627	PCT	OBJECT BASED PERSISTENT MAIN MEMORY
83820100	Application		6/30/2014		PCT/US2014/044853	PCT	RUNTIME DRIVE DETECTION AND CONFIGURATION
83856416	Application		3/20/2014		PCT/US2014/031347	PCT	Data Source and Destination Timestamps
84031412	Application		10/31/2014		PCT/US2014/063333	PCT	PROVIDING STORAGE AREA NETWORK FILE SERVICES
84111761	Application		4/2/2015		PCT/US2015/024159	PCT	PAGE CACHE ON PERSISTENT MEMORY

PATENT
REEL: 038498 FRAME: 0267

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84113052	Application		1/27/2015		PCT/US2015/013087	PCT	VIRTUAL MACHINE PLACEMENT
84113968	Application		42034		PCT/US2015/013923	PCT	TRANSMISSION OVER SCSI PROTOCOL
84171552	Application		6/26/2015		PCT/US2015/037905	PCT	CARRIER FRAMES
90034172	Application		42244		PCT/US2015/047388	PCT	Recovering From an Origination Node Failure During an Asynchronous Replication
90035171	To Be Filed					PCT	Method to reduce a storage device power consumption and temperature by means of a storage controller throttling I/O workload
83268600	Published		9/30/2013		PCT/US2013/062635	PCT	STACKING NETWORK SWITCHES
83820080	Application		3/27/2014		PCT/US2014/032066	PCT	MODULAR INPUT/OUTPUT AGGREGATION ZONE
84036530	Application		11/3/2014		PCT/US2014/063702	PCT	DETERMINING RELIABILITY OF A COMPUTER CARD
84112763	Application		12/1/2014		PCT/US2014/067935	PCT	AUTO-NEGOTIATION OVER EXTENDED BACKPLANE
84170341	Application		4/30/2015		PCT/US2015/028625	PCT	DUAL-PORT NON-VOLATILE DUAL IN-LINE MEMORY MODULES
84260079	Application		7/31/2015		PCT/US2015/043288	PCT	LEAKAGE DETECTION FOR A LOGIC BOARD
84260099	Application		7/27/2015		PCT/US2015/042315	PCT	SOCKET TO SUPPORT BOARDS IN A SPACED RELATION
84262283	Application		7/31/2015		PCT/US2015/043131	PCT	A NETWORKING INFRASTRUCTURE CENTER
84264616	Application		8/14/2015		PCT/US2015/045424	PCT	OPTICAL SIGNALS
90031066	To Be Filed					PCT	A method of Zero-Downtime Failover to known-good snapshot when a switch underperforms
83588897	Published		12/4/2013		PCT/US2013/073130	PCT	POLICY RULE BASED ON A REQUESTED BEHAVIOR
83271591	Published		41535		PCT/IN2013/000565	PCT	Monitoring Network Performance Characteristics
83273947	Published		9/16/2013		PCT/US2013/059880	PCT	MULTI-VIRTUALIZATION SCHEME SELECTION
83733760	Application		3/24/2014		PCT/US2014/031577	PCT	CLIENT-BASED PORT FILTER TABLE
83735234	Published		1/29/2014		PCT/US2014/013504	PCT	NETWORK PROGRAMMING
83766532	Application		5/13/2014		PCT/US2014/037892	PCT	NETWORK ACCESS CONTROL AT CONTROLLER
83822553	Application		4/29/2014		PCT/IN2014/000287	PCT	Network Service Insertion
84033470	Application		1/19/2015		PCT/IN2015/000030	PCT	ENGINES TO PRUNE OVERLAY NETWORK TRAFFIC
84033599	Application		10/31/2014		PCT/US2014/063310	PCT	DISTRIBUTED SYSTEM PARTITION
84035405	Application		10/30/2014		PCT/US2014/063190	PCT	OWNER NODE FOR RING NETWORK
84172714	Application		3/27/2015		PCT/US2015/023174	PCT	ACCESSING A SHARED RESOURCE
84264115	Application		42202		PCT/US2015/041024	PCT	Content Addressable Memory
84264135	To Be Filed					PCT	A Flexible Hash Architecture for a lookup resource in network switches.
83269184	Published		11/8/2013		PCT/US2013/069202	PCT	COORDINATION OF CHANNEL SCANNING AMONG MULTIPLE RADIOS
83588828	Published		9/27/2013		PCT/US2013/062416	PCT	MANAGING MULTICAST TRANSMISSIONS
83777458	Published		1/27/2014		PCT/US2014/013142	PCT	RADIO BAND ASSIGNMENT
84033427	Application		2/13/2015		PCT/US2015/015793	PCT	NETWORK DEVICE REGISTRATION

PATENT
REEL: 038498 FRAME: 0268

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83211159	Published		5/16/2013		PCT/US2013/041350	PCT	DEDUPLICATED DATA STORAGE SYSTEM HAVING DISTRIBUTED MANIFEST
83928790	Application		7/2/2014		PCT/US2014/045204	PCT	MANAGING PORT CONNECTIONS
83928796	Application		9/5/2014		PCT/US2014/054174	PCT	DATA STORAGE OVER FIBRE CHANNEL
83961259	Application		5/29/2014		PCT/US2014/039903	PCT	BACKUP STORAGE
84027771	Application		8/29/2014		PCT/US2014/053507	PCT	DATA DEDUPLICATION
84029869	Application		8/28/2014		PCT/US2014/053158	PCT	MOVING DATA CHUNKS
84031535	Application		11/11/2014		PCT/US2014/064957	PCT	Balancing Thread Groups
84034655	Application		42034		PCT/US2015/013761	PCT	DATA ENCRYPTION
84172800	Application		5/15/2015		PCT/US2015/030937	PCT	DELETION PRIORITIZATION
83623395	Published		10/30/2013		PCT/US2013/067627	PCT	APPLICATION PROGRAMMABLE INTERFACE (API) DISCOVERY
83954332	Application		9/17/2014		PCT/US2014/056052	PCT	USER INTERFACE LAYOUT COMPARISON
84029972	Application		11/26/2014		PCT/US2014/067600	PCT	STATE VALUE INDEXING INTO AN ACTION DATABASE
83734733	Published		12/18/2013		PCT/US2013/076313	PCT	DATA BLOCK TRANSMISSION
83602943	Published		1/31/2014		PCT/US2014/014275	PCT	ENCRYPTED IN-PLACE OPERATING SYSTEM MIGRATION
83623484	Published		10/30/2013		PCT/US2013/067534	PCT	ASSIGNING RESOURCE PERMISSIONS
83960054	Application		7/31/2014		PCT/US2014/049152	PCT	REMEDIATING A SECURITY THREAT TO A NETWORK
84170178	Application		4/29/2015		PCT/US2015/028250	PCT	COMPLIANCE AND GOVERNANCE POLICY PROPAGATION
84279701	Application		7/22/2015		PCT/CN2015/084761	PCT	This is a new approach for a high secure and flexible all-in-one card solution for shops of retail industry. It uses NFC, Secure Element, cryptology technology and so on.
90037787	Application		8/31/2015		PCT/US2015/047691	PCT	COLLECTING DOMAIN NAME SYSTEM TRAFFIC
83668201	Published		10/22/2013		PCT/US2013/066089	PCT	INTERACTIVE OPTICAL CODES
83735675	Application		3/28/2014		PCT/IN2014/000199	PCT	Data File Hoarding
84264639	To Be Filed		7/8/2015			PCT	LOCATION OF OBJECT WITHIN NETWORK OF OBJECTS
90037066	To Be Filed					PCT	A method to create adaptive request management by altering the maximum read size in extremely concurrent big data environments for improved query cache hits.
83635363	Published		10/31/2013		PCT/CN2013/086289	PCT	PRE-POPULATING A FORM
83640421	Published		10/29/2013		PCT/US2013/067208	PCT	END USER TREND IDENTIFICATION TO IDENTIFY INFORMATION GAPS
83862078	Application		3/28/2014		PCT/US2014/032257	PCT	SYSTEMS AND METHODS FOR PROVIDING AN INFORMATION TECHNOLOGY INTERFACE
90039725	To Be Filed					PCT	"What-Where-When" paradigm for supporting better background job execution in modern multi-tenant applications.

PATENT
REEL: 038498 FRAME: 0269

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83271869	Published		6/7/2013		PCT/US2013/044691	PCT	PRIORITIZING LOG MESSAGES
83272304	Published		6/7/2013		PCT/US2013/044705	PCT	IDENTIFYING LOG MESSAGES
83618635	Application		2/11/2014		PCT/US2014/015694	PCT	CLIENT APPLICATION PROFILING
83776270	Published		2/12/2014		PCT/US2014/015978	PCT	MONITORING A COMPUTING ENVIRONMENT
83966543	Application		6/4/2014		PCT/US2014/040903	PCT	EVALUATING USER EXPERIENCE
84031429	Application		9/25/2014		PCT/US2014/057544	PCT	A REPORT COMPRISING A MASKED VALUE
84031452	Application		9/8/2014		PCT/US2014/054478	PCT	USER INTERFACE COMPONENTS LOAD TIME VISUALIZATION
84031492	Application		12/16/2014		PCT/US2014/070616	PCT	IDENTIFICATION OF A SET OF OBJECTS BASED ON A FOCAL OBJECT
84173238	Application		42200		PCT/US2015/040542	PCT	DETERMINING SEVERITY OF APPLICATION CRASHES
83820415	Application		5/27/2014		PCT/US2014/039513	PCT	RESPONSE BASED ON BROWSER ENGINE
84030533	Application		1/29/2015		PCT/US2015/013465	PCT	DEFECT REPORTING IN APPLICATION TESTING
84113075	Application		4/30/2015		PCT/US2015/028485	PCT	MAPPING NODES IN A NETWORK
84113235	Application		42033		PCT/US2015/013587	PCT	GPS Computation Cycling
84262744	Application		8/18/2015		PCT/US2015/045723	PCT	USER INTERFACE BEHAVIOR BASED RULES GENERATION
84262801	Application		8/14/2015		PCT/US2015/045378	PCT	DYNAMIC BUILD PIPELINE EXECUTION
84265094	Application		7/30/2015		PCT/CN2015/085581	PCT	Automatic evaluation of test implementation based on coverage and efficiency of assertations compared to definition of application under test
90027139	To Be Filed					PCT	Software management scoring system- A system that scores how good you manage your software development processes, predicts your score and help you to improve it during the process management.
90035331	Application		9/18/2015		PCT/US2015/050970	PCT	APPLICATION SESSION ANALYSIS AND RECOMMENDATION SYSTEM
83234153	Published		4/19/2013		PCT/US2013/037354	PCT	Unused Parameters of Application Under Test
83278298	Application		7/31/2013		PCT/US2013/052983	PCT	SIGNAL TOKENS INDICATIVE OF MALWARE
83833250	Application		3/24/2014		PCT/US2014/031569	PCT	MONITORING FOR AUTHENTICATION INFORMATION
83952454	Application		9/4/2014		PCT/US2014/053992	PCT	DETERMINE PROTECTIVE MEASURE FOR DATA THAT MEETS CRITERIA
83272324	Published		9/4/2013		PCT/US2013/058014	PCT	PROVIDING RESOURCES TO CUSTOMERS VIA NODE-RELATIONSHIP MODELS
83272347	Published		9/4/2013		PCT/US2013/058043	PCT	PROVIDING SERVICES AS RESOURCES FOR OTHER SERVICES
83272530	Published		10/30/2013		PCT/US2013/067574	PCT	FACILITATING AUTONOMOUS COMPUTING WITHIN A CLOUD SERVICE
83272570	Published		10/30/2013		PCT/US2013/067513	PCT	MONITORING A CLOUD SERVICE MODELED AS A TOPOLOGY

PATENT
REEL: 038498 FRAME: 0270

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83668138	Published		10/31/2013		PCT/US2013/067870	PCT	AGGREGATING, PRESENTING AND FULFILLING A NUMBER OF CATALOGS
83748573	Application		6/12/2014		PCT/US2014/042111	PCT	DETERMINING APPLICATION DEPLOYMENT RECOMMENDATIONS
83954910	Application		7/24/2014		PCT/US2014/048063	PCT	END POINT IDENTIFICATION
84152837	Application		42185		PCT/US2015/038545	PCT	CLOUD SERVICE RATING
84262993	Application		6/5/2015		PCT/US2015/034472	PCT	Managing Cost Related to Usage of Cloud Resources
83862722	Application		3/27/2014		PCT/EP2014/056239	PCT	SCHEDULING DOWNLOADS
84114449	Instructed					PCT	Seamless switching of HLR Traffic due to inadequate resources.
84114469	Application		1/29/2015		PCT/US2015/013467	PCT	REGISTRATION OVERRIDE
84114615	Application		1/30/2015		PCT/US2015/013848	PCT	COMMUNICATION USING VIRTUAL NUMBERS
90032045	To Be Filed					PCT	Social Media Portal (app) Based Caching
90068693	To Be Filed					PCT	DISTRIBUTED EVENT PROCESSING
83953539	Application		6/6/2014		PCT/US2014/041300	PCT	ACTION EXECUTION BASED ON MANAGEMENT CONTROLLER ACTION REQUEST
84114692	Application		1/22/2015		PCT/US2015/012547	PCT	FAST PROXIMITY DETECTION
84115004	Application		1/29/2015		PCT/US2015/013422	PCT	TEST GENERATION FOR BROWSER-BASED USER INTERFACE
84263056	To Be Filed					PCT	Compliance Checking a ConvergedSystem by layering on top of the objects of a management appliance
83777355	Application		1/29/2014		PCT/US2014/013534	PCT	DUMPING RESOURCES
84262303	Instructed					PCT	Concurrency Testing
90037996	To Be Filed					PCT	System and method for proximity assembled provisioning of OS volumes
83209702	Published		5/10/2013		PCT/US2013/040524	PCT	TUPLE RECOVERY
83267804	Published		41530		PCT/US2013/059588	PCT	Failure Recovery of a Task State in Batch-Based Stream Processing
83598071	Published		12/19/2013		PCT/US2013/076538	PCT	RESIDUAL DATA IDENTIFICATION
83598111	Published		12/5/2013		PCT/US2013/073249	PCT	REGULAR EXPRESSION MATCHING
83776625	Published		41668		PCT/US2014/013531	PCT	FORCE FEEDBACK
83776671	Published		1/31/2014		PCT/US2014/014222	PCT	PIXEL-BASED VISUALIZATION OF EVENT METRIC FLUCTUATION
83819934	Application		4/18/2014		PCT/US2014/034647	PCT	PROVIDING COMBINED DATA FROM A CACHE AND A STORAGE DEVICE
83825639	Application		4/30/2014		PCT/US2014/036154	PCT	Visual Exploration of High Dimensional Spaces by Selecting Dimensions using Attribute Dissimilar Measure and Expert Domain Knowledge

PATENT
REEL: 038498 FRAME: 0271

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83957260	Application		41845		PCT/US2014/048292	PCT	SOFTWARE-DEFINED SENSING
84005733	Application		7/28/2014		PCT/US2014/048501	PCT	Memory Access Control
84036616	Application		41985		PCT/CN2014/093670	PCT	SCALABLE WEB DATA EXTRACTION
84114841	Application		42068		PCT/US2015/019014	PCT	MULTI-LEVEL OBJECT RE-IDENTIFICATION
84115837	Application		1/30/2015		PCT/US2015/013897	PCT	UPDATES TO A PREDICTION MODEL USING STATISTICAL ANALYSIS GROUPS
84171446	Application		4/30/2015		PCT/US2015/028668	PCT	IDENTIFYING GROUPS
84171466	Application		4/29/2015		PCT/US2015/028235	PCT	INCREMENTALLY UPDATING A DATABASE STATISTIC
84171489	Application		2/24/2015		PCT/US2015/017296	PCT	USING FUZZY INFERENCE TO DETERMINE LIKELIHOOD THAT FINANCIAL ACCOUNT SCENARIO IS ASSOCIATED WITH ILLEGAL ACTIVITY
84261516	Application		6/26/2015		PCT/CN2015/082504	PCT	SOCIAL INFLUENCE DETERMINATION
84262867	Application		8/21/2015		PCT/US2015/046222	PCT	INTERACTIVE ANALYTICS ON TIME SERIES DATA
84262884	Application		6/23/2015		PCT/US2015/037206	PCT	RECOMMENDING ANALYTIC TASKS BASED ON SIMILARITY OF DATASETS
90036960	Acknowledged					PCT	Recommender Systems by Collaborative Filtering Using information Theory
90037106	To Be Filed					PCT	A method for identifying information type of data attributes and associated data treatment choices from a sample of the data
90037249	Acknowledged					PCT	Isolation Context Programming Model
83205145	Published		6/20/2013		PCT/US2013/046804	PCT	RESOURCE CLASSIFICATION USING RESOURCE REQUESTS
83832795	Application		4/25/2014		PCT/EP2014/058525	PCT	BridgeBuilder: Multiplex Link Prediction Across Multiplex Networks
83958720	Application		7/30/2014		PCT/US2014/048872	PCT	KEY SEARCH TOKEN FOR ENCRYPTED DATA
84111904	Application		11/28/2014		PCT/US2014/067818	PCT	VERIFYING NETWORK ELEMENTS
84173630	Application		6/5/2015		PCT/US2015/034393	PCT	REMOTE ATTESTATION OF A NETWORK ENDPOINT DEVICE
84264782	Application		7/31/2015		PCT/EP2015/067732	PCT	CATEGORY BASED EXECUTION SCHEDULING
84265652	Application		9/24/2015		PCT/EP2015/072044	PCT	MEMORY SYSTEM MANAGEMENT
84265675	Application		7/27/2015		PCT/EP2015/067172	PCT	SCHEDULING HETEROGENOUS PROCESSORS
90035088	Acknowledged					PCT	Hardware Support for Efficient Bulk Zeroing in NVM-based Systems
84260185	Application		42185		PCT/US2015/038555	PCT	PARTITIONING A WORKFLOW
83266061	Published		41452		PCT/US2013/048120	PCT	Memory Bus Error Signal
83602751	Published		41617		PCT/US2013/073871	PCT	MEMORY ERASURE INFORMATION IN CACHE LINES
83756960	Published		41670		PCT/US2014/014046	PCT	MEMORY CELL HAVING RESISTIVE AND CAPACITIVE STORAGE ELEMENTS
83757753	Published		1/31/2014		PCT/US2014/014185	PCT	UNIFYING MEMORY CONTROLLER
84030055	Application		12/12/2014		PCT/US2014/069973	PCT	DETERMINING RESTING TIMES FOR MEMORY BLOCKS

PATENT
REEL: 038498 FRAME: 0272

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84033181	Application		10/29/2014		PCT/US2014/062912	PCT	RESISTIVE MEMORY DEVICE
84111741	Application		1/30/2015		PCT/US2015/013921	PCT	DETERMINE FAILED COMPONENTS IN FAULT-TOLERANT MEMORY
84112783	Application		1/27/2015		PCT/US2015/013124	PCT	CORRECTING ERRORS OF A VARIABLE DATA PAYLOAD
84170278	Application		4/29/2015		PCT/US2015/028256	PCT	COMMUNICATION INTERFACE MEMORY DEVICE
84260202	Application		42265		PCT/US2015/051070	PCT	MEMORY PERSISTENCE FROM A VOLATILE MEMORY TO A NON-VOLATILE MEMORY
84262426	Application		5/29/2015		PCT/US2015/033297	PCT	MEMRISTANCE FEEDBACK TUNING
90037956	Application		42277		PCT/US2015/053085	PCT	REMAPPING OPERATIONS
90037976	To Be Filed					PCT	RAID Rebuild in a High Availability, Fault Tolerant Sytem with a Pluraility of RAID controllers and Memory-Storage Devices
83205228	Published		5/31/2013		PCT/US2013/043520	PCT	INFLUENCE SCORE OF A BRAND
84030828	Application		10/31/2014		PCT/US2014/063531	PCT	PROJECTIONS DETERMINATION FOR COLUMN-BASED DATABASES
83957930	Application		6/26/2014		PCT/US2014/044337	PCT	GENERATING SPECIFICATIONS FOR AN ORTHOSIS
84029992	Application		11/14/2014		PCT/US2014/065781	PCT	VIBRATION NOTIFICATIONS RECEIVED FROM VIBRATION SENSORS
83680561	Published		12/3/2013		PCT/US2013/072819	PCT	SECURITY ACTION OF NETWORK PACKET BASED ON SIGNATURE AND REPUTATION
83270011	Application		8/28/2013		PCT/US2013/056947	PCT	DISTRIBUTED PATTERN DISCOVERY
84113095	Application		1/30/2015		PCT/US2015/013885	PCT	COLLABRATIVE INVESTIGATION OF SECURITY INDICATORS
83602837	Published		9/26/2013		PCT/US2013/061838	PCT	Subnetworks of Peer to Peer Networks
83607374	Published		9/26/2013		PCT/US2013/061888	PCT	Peer Nodes in Peer to Peer Networks
83747634	Published		12/16/2013		PCT/US2013/075395	PCT	FIRMWARE AUTHENTICATION
84264825	Application		8/11/2015		PCT/US2015/044612	PCT	DISTRIBUTE EXECUTION OF USER-DEFINED FUNCTION
83272361	Published		41424		PCT/US2013/043457	PCT	VIRTUAL MOBILE PHONE INTERFACE SYSTEM AND METHOD THEREOF
84039753	Application		41887		PCT/US2014/054428	PCT	Vertical Service Model
84115817	Application		3/10/2015		PCT/US2015/019786	PCT	RESOURCE PROVISIONING FOR MULTIPLE USER DATA STORAGE AND SEPARATION
84170135	Application		4/14/2015		PCT/US2015/025768	PCT	RESOURCE BROKERING FOR MULTIPLE USER DATA STORAGE AND SEPARATION
84170158	Application		3/30/2015		PCT/US2015/023276	PCT	APPLICATION ANALYZER FOR CLOUD COMPUTING
84251735	To Be Filed					PCT	DATA TRANSFER REQUESTS
84263594	Application		7/31/2015		PCT/US2015/043232	PCT	Federated Marketplace Portal
90035191	Acknowledged					PCT	DYNAMIC CLASSIFICATION OF DIGITAL FILES
84170490	Application		4/14/2015		PCT/US2015/025805	PCT	PENETRATION DETECTION BOUNDARY HAVING A HEAT SINK

PATENT
REEL: 038498 FRAME: 0273

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83213240	Published		7/25/2013		PCT/US2013/052050	PCT	RESISTIVE MEMORY DEVICE HAVING FIELD ENHANCED FEATURES
83623504	Application		12/13/2013		PCT/US2013/074997	PCT	V-SHAPE RESISTIVE MEMORY ELEMENT
83763830	Published		1/30/2014		PCT/US2014/013957	PCT	NONLINEAR DIELECTRIC STACK CIRCUIT ELEMENT
83822699	Application		5/30/2014		PCT/US2014/040115	PCT	MEMORY CONTROLLERS
83953098	Application		7/30/2014		PCT/US2014/048800	PCT	CURRENT BEHAVIOR OF ELEMENTS
83957887	Application		7/28/2014		PCT/US2014/048448	PCT	MEMRISTOR CELL READ MARGIN ENHANCEMENT
84033121	Application		10/29/2014		PCT/US2014/062948	PCT	STORING A DISCRETE ANALOG SIGNAL
84111409	Application		1/30/2015		PCT/US2015/013724	PCT	COMPOSITE SELECTOR ELECTRODES
84111426	Application		3/30/2015		PCT/US2015/023270	PCT	MANUFACTURING MEMRISTORS
84111492	Application		1/9/2015		PCT/US2015/010828	PCT	SIDEWALL SPACERS
84111618	Application		42032		PCT/US2015/013327	PCT	MEMORY CELL WITH A MULTI-LAYERED SELECTOR
84114486	Application		1/26/2015		PCT/US2015/012898	PCT	RESISTIVE RANDOM ACCESS MEMORY (ReRAM) DEVICE
84265197	Application		42214		PCT/US2015/042729	PCT	NON-VOLATILE RESISTANCE MEMORY DEVICES INCLUDING A VOLATILE SELECTOR WITH COPPER AND SILICON DIOXIDE
90034152	Acknowledged					PCT	High Performance and Low Power Neural Network Using Hybrid Synaptic Architecture
90037043	Application		9/25/2015		PCT/US2015/052262	PCT	CROSSBAR ARRAYS FOR CALCULATING MATRIX MULTIPLICATION
83140511	Published		1/18/2013		PCT/CN2013/070640	PCT	PREVENTING A MEMORY ATTACK TO A WIRELESS ACCESS POINT
83140548	Published		1/24/2013		PCT/CN2013/070918	PCT	LIMITING ACCESS TO SERVICE PROVIDERS BASED ON THE NETWORK TRAFFIC LOAD OF A WIRELESS ACCESS POINT
83209765	Published		8/9/2013		PCT/US2013/054254	PCT	SWITCH ASSEMBLY
83267332	Published		9/13/2013		PCT/US2013/059632	PCT	SUBCARRIER POWER REALLOCATION
83821019	Application		4/30/2014		PCT/US2014/036006	PCT	Practical CSI-based rate adaptation and prediction for wireless networks
83824680	Application		4/24/2014		PCT/US2014/035262	PCT	PLACING VIRTUAL MACHINES ON PHYSICAL HARDWARE TO GUARANTEE BANDWIDTH
83956115	Application		9/29/2014		PCT/CN2014/087773	PCT	Adaptive Split and Compression
83957993	Application		6/13/2014		PCT/US2014/042313	PCT	Motion-aware MCS adaptation for wireless networks
84109036	Application		11/14/2014		PCT/US2014/065819	PCT	DETERMINING A LOCATION OF A DEVICE
83763747	Published		1/24/2014		PCT/US2014/013059	PCT	OPTICAL MODULATION EMPLOYING HIGH CONTRAST GRATING LENS
83763804	Published		1/24/2014		PCT/US2014/012872	PCT	RING LASER OPTICAL SYSTEM
83763810	Published		1/31/2014		PCT/US2014/014015	PCT	INTERPOSER
83777398	Published		41669		PCT/US2014/013769	PCT	OPTICAL MODULATION EMPLOYING FLUID MOVEMENT
83958531	Application		7/30/2014		PCT/US2014/048833	PCT	HYBRID MULTILAYER DEVICE

PATENT
REEL: 038498 FRAME: 0274

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84033639	Application		1/27/2015		PCT/US2015/013125	PCT	TUNABLE MICRORING RESONATOR SWITCHES
84111509	Application		5/8/2015		PCT/US2015/029813	PCT	OPTICAL LOGIC GATES
84111549	Application		2/27/2015		PCT/US2015/018194	PCT	HYPERSPECTRAL SCANNING
84111678	Application		1/28/2015		PCT/US2015/013306	PCT	LASER-WRITTEN OPTICAL ROUTING SYSTEMS AND METHOD
84220185	Application		5/27/2015		PCT/US2015/032680	PCT	BIAS-BASED MACH-ZEHNDER MODULATION (MZM) SYSTEMS
84262512	Application		9/4/2015		PCT/US2015/048625	PCT	TAPERED OPTICAL WAVEGUIDES
84262724	Application		9/22/2015		PCT/US2015/051502	PCT	OPTICAL NOTCH FILTERS
84262784	Application		8/6/2015		PCT/US2015/043937	PCT	OPTICAL PHASE MODULATORS
90037690	To Be Filed					PCT	Polarization Diversity receiver with light traveling in both directions
90068524	Instructed					PCT	ASYMMETRIC TRANSITION PRE-EMPHASIS FOR PUSH-PULL MZM DRIVE - UHU
83954870	Application		9/5/2014		PCT/US2014/054364	PCT	Dynamically Generating an Aggregation Routine
84115030	Application		3/3/2015		PCT/US2015/018555	PCT	COMMAND PARSING IN COMMAND-LINE-INTERFACE
90037435	To Be Filed					PCT	Modular and Expandable PCIe Serial Hot-Plug Controller provides ability to remove and replace large numbers of PCIe connected FRU's.
83822579	Application		4/30/2014		PCT/US2014/036034	PCT	Network Fabric Control
83956075	Application		6/30/2014		PCT/US2014/044811	PCT	FLOW TABLE COMPARISON
83958013	Application		6/10/2014		PCT/US2014/041750	PCT	Monitoring Network Traffic
84033138	Application		11/6/2014		PCT/US2014/064337	PCT	DETERMINE RESPONSIVENESS TO A MODELED CHANGE IN A SIMULATED ENVIRONMENT
84111804	Application		4/16/2015		PCT/US2015/026234	PCT	Controlling an unknown flow inflow to an SDN controller in a software defined network (SDN)
84172448	Application		8/14/2015		PCT/US2015/045283	PCT	IMPLEMENTING FORWARDING BEHAVIOR BASED ON COMMUNICATION ACTIVITY BETWEEN A CONTROLLER AND A NETWORK DEVICE
83819084	Application		4/28/2014		PCT/US2014/035754	PCT	COMMUNICATION ASSOCIATED WITH MULTIPLE NODES FOR DELIVERY OF POWER
84262532	Acknowledged					PCT	A novel method to control parallel switches to enable multiple line, and dynamically changing DC load in a HVDC distributed energy system.
90031046	To Be Filed					PCT	Conversion of male/female coupling to lug connections that comply with telecom customer DC Power purchasing requirements

PATENT
REEL: 038498 FRAME: 0275

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83955972	Application		41911		PCT/US2014/057949	PCT	FAN CONTROLLED AMBIENT AIR COOLING OF EQUIPMENT IN A CONTROLLED AIRFLOW ENVIRONMENT
84030811	Application		11/14/2014		PCT/US2014/065643	PCT	COOLING RACK
84294377	Application		9/4/2015		PCT/US2015/048495	PCT	VALVE FAILURE PREDICTIONS
84111446	Application		42090		PCT/US2015/023138	PCT	COMMUNICATION ASSOCIATION MODEL
84172943	Application		5/21/2015		PCT/US2015/032083	PCT	CONTRACT TOKEN INCLUDING SENSOR DATA
90036934	Acknowledged					PCT	Complex Action Automation: Spell Bar and Automated Reporting. Elimination of repetitive tasks by users working across multiple windows, multiple applications, and/or multiple devices.
83268726	Published		9/30/2013		PCT/US2013/062530	PCT	LEGACY SYSTEM
83268886	Published		8/28/2013		PCT/US2013/056944	PCT	MESSAGE DELIVERY VIA PREFERRED COMMUNICATIONS APPLICATIONS
83960944	Application		7/30/2014		PCT/US2014/048834	PCT	SECURITY RISK SCORING OF AN APPLICATION
84113344	Application		2/26/2015		PCT/US2015/017765	PCT	OBTAINING TRANSLATIONS UTILIZING TEST STEP AND SUBJECT APPLICATION DISPLAYS
83156592	Published		4/24/2013		PCT/US2013/037971	PCT	A Drift-Tolerant, Multilevel-Cell Phase Change Memory
83270910	Published		41547		PCT/US2013/062667	PCT	PROGRAMMING MEMORY CONTROLLERS TO ALLOW PERFORMANCE OF ACTIVE MEMORY OPERATIONS
83629306	Published		41576		PCT/US2013/067239	PCT	MAPPING VIRTUAL MEMORY PAGES TO PHYSICAL MEMORY PAGES
83764288	Published		1/31/2014		PCT/US2014/014253	PCT	PERFORMING PROCESSING TASKS USING AN AUXILIARY PROCESSING UNIT
83820246	Application		4/29/2014		PCT/US2014/035969	PCT	HARDWARE ASSISTED SOFTWARE VERSIONING OF CLUSTERED APPLICATIONS
84003377	Application		7/22/2014		PCT/US2014/047703	PCT	NODE-BASED COMPUTING DEVICES WITH VIRTUAL CIRCUITS
84030682	Application		10/31/2014		PCT/US2014/063311	PCT	ANALYSIS FOR MULTI-NODE COMPUTING SYSTEMS
84037111	Application		1/29/2015		PCT/US2015/013605	PCT	FOSTER TWIN DATA STRUCTURE
84113762	Application		42034		PCT/US2015/013764	PCT	Chunk Monitoring
84113779	Application		1/30/2015		PCT/US2015/013768	PCT	CHECKPOINT-BASED SCHEDULING IN CLUSTER
84113802	Application		3/6/2015		PCT/US2015/019180	PCT	DATA WRITE TO SUBSET OF MEMORY DEVICES
84262495	Application		9/17/2015		PCT/US2015/050732	PCT	MEMORY STORE ERROR CHECK
84262764	Application		9/24/2015		PCT/US2015/051904	PCT	FAILURE INDICATION IN SHARED MEMORY
90037747	Application		9/25/2015		PCT/US2015/052254	PCT	VARIABLE CACHE FOR NON-VOLATILE MEMORY
83209175	Published		4/2/2013		PCT/US2013/034995	PCT	Query integration across databases and file systems
83209842	Published		4/3/2013		PCT/US2013/035080	PCT	MODIFYING A FLOW OF OPERATIONS TO BE EXECUTED IN A PLURALITY OF EXECUTION ENVIRONMENTS

PATENT
REEL: 038498 FRAME: 0276

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0277

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83269255	Published		9/12/2013		PCT/CN2013/083415	PCT	Information Extraction
83271757	Published		7/31/2013		PCT/US2013/052848	PCT	CLUSTERS OF POLYNOMIALS FOR DATA POINTS
83623595	Published		10/31/2013		PCT/US2013/067773	PCT	STORING TIME SERIES DATA FOR A SEARCH QUERY
83734876	Published		12/20/2013		PCT/US2013/076779	PCT	IDENTIFYING A PATH IN A WORKLOAD THAT MAY BE ASSOCIATED WITH A DEVIATION
83747150	Application		3/31/2014		PCT/US2014/032336	PCT	PARALLELIZING SQL ON DISTRIBUTED FILE SYSTEMS
83776619	Published		1/30/2014		PCT/US2014/013773	PCT	OPTIMIZING WINDOW JOINS OVER DATA STREAMS
83954297	Application		12/11/2014		PCT/US2014/069745	PCT	INTERACTIVE DETECTION OF SYSTEM ANOMALIES
84028824	Application		9/30/2014		PCT/US2014/058483	PCT	Database and Data Stream Query
84113255	Application		1/28/2015		PCT/US2015/013303	PCT	DETECTING ANOMALOUS SENSOR DATA
84171483	Application		4/10/2015		PCT/CN2015/076307	PCT	HIDDEN DYNAMIC SYSTEMS
84171603	Application		7/24/2015		PCT/US2015/042024	PCT	Data Porch System-on-Chip for DMC
84259987	Application		5/29/2015		PCT/US2015/033319	PCT	CONTROLLING REMOTE MEMORY ACCESSES IN A MULTIPLE PROCESSING NODE GRAPH INFERENCE ENGINE
84262772	Application		8/28/2015		PCT/US2015/047565	PCT	GRAPH INFERENCE CALCULATOR
84262921	Application		6/17/2015		PCT/US2015/036186	PCT	POINTING ACTION
90016885	Application		9/4/2015		PCT/US2015/048562	PCT	GRAPH DATABASE MANAGEMENT
90037094	Acknowledged					PCT	Methods of Finding Meaningful Cohorts in High Dimensional Space Using Automated Weighting and Multi-Level Ranking
90037114	To Be Filed					PCT	Spiral Histogram Visualization & Animation with Provision for Multiple Key Performance Indicators
90037134	To Be Filed					PCT	Incremental Clustering of High Dimensional Data Streams via Hubness Analysis
90037140	To Be Filed					PCT	Secure Storage Container Allocation with a Semi-Honest Intermediary Node
90037286	To Be Filed					PCT	Concomitant rank order hash suppression
83270941	Published		7/30/2013		PCT/US2013/052646	PCT	DATA MANAGEMENT
83632154	Published		41578		PCT/US2013/067759	PCT	COPY-ON-WRITE UPDATE-TRIGGERED CONSISTENCY
83954386	Application		7/31/2014		PCT/US2014/049022	PCT	DATA STORAGE IN FOG COMPUTING
84113103	Application		3/20/2015		PCT/US2015/021632	PCT	DATASTREAM BLOCK ENCRYPTION
90037449	To Be Filed					PCT	Mitigating performance issues introduced by indirect addressing of objects in heap structures (in non-volatile memory).
90039593	Application		8/28/2015		PCT/US2015/047524	PCT	IDENTIFICATION OF A DNS PACKET AS MALICIOUS BASED ON A VALUE
83209782	Published		4/16/2013		PCT/US2013/036745	PCT	EVENT SUMMARIZATION
83953069	Application		6/26/2014		PCT/US2014/044452	PCT	DATASET BROWSING USING ADDITIVE FILTERS

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83953341	Application		6/30/2014		PCT/US2014/044814	PCT	IDENTIFYING FEASIBLE PRODUCT CONFIGURATIONS FOR CONSUMERS
83748736	Application		4/21/2014		PCT/US2014/034842	PCT	MAGNETIZATION MAP OF A STORAGE MEDIUM
83748750	Application		4/28/2014		PCT/US2014/035719	PCT	STORAGE MANAGEMENT
83953387	Application		7/10/2014		PCT/US2014/046082	PCT	Archive File
83819049	Application		9/23/2014		PCT/US2014/057070	PCT	SECURING DATA IN A FILE SYSTEM
83819069	Application		7/24/2014		PCT/US2014/048005	PCT	Journal Events In A File System And A Database
83825670	Application		8/15/2014		PCT/US2014/051187	PCT	THREE PHASE COMMIT FOR A DISTRIBUTED FILE SYSTEM
84107364	Application		1/15/2015		PCT/US2015/011540	PCT	DATA MANAGEMENT FOR TENANTS
84113335	Application		1/30/2015		PCT/US2015/013797	PCT	Dynamically Inheritable Attribute
84212645	Application		4/24/2015		PCT/US2015/027422	PCT	POLICY AND CONFIGURATION DATA FOR A USER DIRECTORY
84222025	Application		4/21/2015		PCT/US2015/026898	PCT	File Level Snapshots In A File System
90035162	To Be Filed					PCT	PIP-OBJ Content driven real time analytics data and index flow
83954363	Application		7/22/2014		PCT/US2014/047584	PCT	GRADING INFORMATION TECHNOLOGY INFRASTRUCTURES
84172811	Application		3/24/2015		PCT/US2015/022111	PCT	CONTEXT-BASED FEATURE MANAGEMENT
83200413	Published		6/28/2013		PCT/US2013/048422	PCT	LEVER UNIT
83206908	Published		41442		PCT/US2013/046141	PCT	GUIDE SEGMENT IDENTIFICATION
83216274	Published		4/3/2013		PCT/US2013/035163	PCT	Managing Firmware Updates
83268671	Published		6/25/2013		PCT/US2013/047483	PCT	UNINTERRUPTIBLE POWER SUPPLY WITH INVERTER, CHARGER, AND ACTIVE FILTER
83268697	Published		8/29/2013		PCT/US2013/057225	PCT	ERROR DISPLAY MODULE
83597959	Application		11/1/2013		PCT/US2013/067915	PCT	TOP LOADING CARTRIDGE
83738454	Application		1/30/2014		PCT/US2014/013806	PCT	MOUNTING DEVICE
83957340	Application		7/31/2014		PCT/US2014/049109	PCT	NEXT GENERATION FORM FACTOR CONNECTOR
84028944	Application		8/29/2014		PCT/US2014/053383	PCT	THERMAL MANAGEMENT DOOR ASSEMBLY
84049740	Application		9/24/2014		PCT/US2014/057165	PCT	HEAT SINK WITH A LOAD SPREADING BAR
84051503	Application		9/26/2014		PCT/US2014/057856	PCT	Receptacle for conenction a multi-lane or one-lane cable
84113670	Application		2/20/2015		PCT/US2015/016952	PCT	EXTERNALLY ACCESSIBLE REPLACEABLE POWER SOURCE
84114795	Application		1/20/2015		PCT/US2015/012009	PCT	Latch Assembly for a Computing Device
84143471	Application		2/18/2015		PCT/US2015/016283	PCT	PULL-TABS FOR DISENGAGING A CABLE ASSEMBLY FROM A RECEPTACLE
84155645	Application		2/27/2015		PCT/US2015/017970	PCT	FEATURES TO CONJOIN ONE-LANE CABLE ASSEMBLIES
84169880	Application		4/24/2015		PCT/US2015/027571	PCT	CABLE TRACK
84173106	Application		4/24/2015		PCT/US2015/027578	PCT	FIRST AND SECOND MEMBERS TO SECURE DEVICES
84263064	Application		8/27/2015		PCT/US2015/047220	PCT	NETWORK CABLE MANAGEMENT ARM
90031080	To Be Filed					PCT	FIPS Compliant Louver

PATENT
REEL: 038498 FRAME: 0278

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83272458	Published		7/22/2013		PCT/US2013/051515	PCT	Motherboard With a Hole
83757747	Published		1/30/2014		PCT/US2014/013797	PCT	PRINTED CIRCUIT BOARD WITH CO-AXIAL VIAS
84030570	Application		9/12/2014		PCT/US2014/055498	PCT	ISOLATION OF A FAULTY MEZZANINE CARD OF A SERVER
84170395	Application		4/29/2015		PCT/US2015/028322	PCT	CONVERGED INFRASTRUCTURE MANAGER
84261484	Application		42202		PCT/US2015/040986	PCT	OPERATING FREQUENCY DETERMINATION
83269215	Published		8/27/2013		PCT/US2013/056768	PCT	EXPANDER DATA ROUTING
83598042	Published		9/24/2013		PCT/US2013/061486	PCT	SAS CONFIGURATION MANAGEMENT
83618649	Application		12/3/2013		PCT/US2013/072813	PCT	ELECTRICAL CONNECTOR ASSEMBLY
83733731	Application		1/9/2014		PCT/US2014/010914	PCT	Segmented Status Display
83958256	Application		7/29/2014		PCT/US2014/048673	PCT	STORAGE TRANSACTIONS
84113876	Application		42090		PCT/US2015/022946	PCT	FILE MIGRATION TO PERSISTENT MEMORY
84114002	Application		42122		PCT/US2015/027999	PCT	STORAGE CACHE MANAGEMENT
84170146	Application		4/30/2015		PCT/US2015/028540	PCT	Data Replication
84262675	Application		8/31/2015		PCT/US2015/047803	PCT	Storage Area Network Management
84274016	Application		7/31/2015		PCT/US2015/043245	PCT	Disk Array Having Controller to Allocate Ports
83763758	Published		41668		PCT/US2014/013529	PCT	ELECTRO-OPTICAL SIGNAL TRANSMISSION
84030553	Application		10/23/2014		PCT/US2014/061934	PCT	ADMISSIONS CONTROL OF A DEVICE
84033092	Application		10/29/2014		PCT/US2014/062783	PCT	OPTICAL CONNECTOR ASSEMBLY APPARATUS
84111712	Application		4/9/2015		PCT/US2015/025040	PCT	TERMINATION VOLTAGE CIRCUITS
84111895	Application		1/31/2015		PCT/US2015/014012	PCT	OPTICAL MULTIPLEXER
84264604	Application		7/17/2015		PCT/US2015/040949	PCT	DATA TAMPER DETECTION
90035122	Application		9/28/2015		PCT/US2015/052652	PCT	PROTOCOL CONVERSION FOR SERVERS AND CHASSIS
83733768	Published		2/7/2014		PCT/US2014/015378	PCT	POWER SOURCING EQUIPMENT
83735271	Application		1/29/2014		PCT/US2014/013684	PCT	MANAGING A NUMBER OF ETHERNET LINKS
83957755	Application		41845		PCT/US2014/048247	PCT	Exception Predication
84171351	Application		42124		PCT/US2015/028399	PCT	FORWARDING PORT ASSIGNMENT FOR DATA PACKET
84172456	Application		4/17/2015		PCT/US2015/026412	PCT	MORPHED INSTRUCTION ACCORDING TO CONFIGURATION UPDATE
84264086	Application		9/30/2015		PCT/US2015/053082	PCT	NETWORK NODES IN A RING NETWORK
90039613	To Be Filed					PCT	Enhanced Switch Chassis Air Inlet Venting Adjacent to Existing Connector Modules
83623435	Published		10/16/2013		PCT/US2013/065217	PCT	REFLECTING MDNS PACKETS
90039510	Acknowledged					PCT	L2 authentication and accounting session retention during roaming on a distributed, autonomous WLAN network
83273417	Published		41473		PCT/US2013/050990	PCT	REMOTE STORAGE
83276228	Published		7/29/2013		PCT/US2013/052590	PCT	INTEGRITY OF FREQUENTLY USED DE-DUPLICATION OBJECTS
84033487	Application		10/22/2014		PCT/US2014/061801	PCT	DATA RESTORATION USING BLOCK DISK PRESENTATIONS
84170255	Application		4/29/2015		PCT/EP2015/059394	PCT	Computing Device

PATENT
REEL: 038498 FRAME: 0279

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84260133	Application		8/7/2015		PCT/US2015/044143	PCT	ENCRYPTED DATA CHUNKS
84031300	Application		11/18/2014		PCT/US2014/066128	PCT	NETWORK BACKUP
84114580	Application		1/28/2015		PCT/US2015/013189	PCT	ENTERPRISE SERVICE BUS SEQUENCER
84173057	Application		6/3/2015		PCT/US2015/034036	PCT	CUSTOMIZED EMAIL SUBJECT LINE
84265231	Instructed					PCT	One time security validation for virtual machines in someone else's cloud
90037887	To Be Filed					PCT	A system to provide adaptive security threat detection and remediation
83099400	Published		1/21/2013		PCT/US2013/022394	PCT	PALLETIZED LOAD REACTANT REGULATION HEATING
84232874	Application		4/30/2015		PCT/US2015/028632	PCT	SERVICE LEVEL BASED CATEGORIZATION OF VIRTUAL MACHINES
90038013	Application		9/25/2015		PCT/US2015/052176	PCT	SETUP FILE SYSTEM WITHOUT EDITING KERNEL CODE
84020434	Application		8/29/2014		PCT/US2014/053550	PCT	IMPROVEMENT MESSAGE BASED ON ELEMENT SCORE
90035142	Application		8/31/2015		PCT/US2015/047789	PCT	GENERATING A COMBINED ENTITY WORKFLOW
90037718	Acknowledged					PCT	Intelligent Interface Automatic Communication Recovery and Control (iIACRAC) represent method for interface automatic communication recovery and control implementing intelligent techniques like fuzzy logic.
83199460	Published		6/17/2013		PCT/IN2013/000373	PCT	MONITORING A COMPUTING NETWORK
83954257	Application		41905		PCT/US2014/056963	PCT	Event Log Analysis
84113315	Application		42059		PCT/US2015/017185	PCT	ELEMENT IDENTIFIER GENERATION
84113352	Application		42124		PCT/US2015/028587	PCT	AGGREGATION BASED EVENT IDENTIFICATION
84262838	Application		42198		PCT/US2015/040090	PCT	METRIC CORRELATION
83205159	Published		4/11/2013		PCT/US2013/036183	PCT	AUTOMATED CONTEXTUAL-BASED SOFTWARE LOCALIZATION
83598254	Published		1/30/2014		PCT/US2014/013835	PCT	EVALUATING USER INTERFACE EFFICIENCY
83640415	Published		10/30/2013		PCT/US2013/067517	PCT	TECHNOLOGY RECOMMENDATION FOR SOFTWARE ENVIRONMENT
83814306	Application		2/14/2014		PCT/US2014/016393	PCT	MODIFYING A HIERARCHAL STRUCTURE
83820944	Application		5/27/2014		PCT/US2014/039581	PCT	DISTRIBUTED COMPILATION OF STATICALLY TYPED LANGUAGES
84106276	Application		11/24/2014		PCT/US2014/067071	PCT	Detection of User Interface Layout Changes
84113043	Application		12/23/2014		PCT/US2014/072061	PCT	LOAD TESTING
84170421	Application		42109		PCT/US2015/025879	PCT	CODE COVERAGE INFORMATION
84172731	Application		4/29/2015		PCT/US2015/028148	PCT	TREND CORRELATIONS
84217863	Application		4/30/2015		PCT/CN2015/078055	PCT	APPLICATION TESTING
84262732	Application		7/28/2015		PCT/US2015/042534	PCT	Component Profile Display
90027147	To Be Filed					PCT	Binary change detection by disassembly and machine learning
90035351	Acknowledged					PCT	Automatic tool for comparing two web scripts

PATENT
REEL: 038498 FRAME: 0280

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90037827	To Be Filed					PCT	Tips: Efficient Tips to Change the Future
90037847	To Be Filed					PCT	Wrong password? New password!
83271611	Published		41444		PCT/US2013/046612	PCT	UNIFYING APPLICATION LOG MESSAGES USING RUNTIME INSTRUMENTATION
83833264	Application		4/22/2014		PCT/US2014/034888	PCT	IDENTIFYING A FUNCTIONAL FRAGMENT OF A DOCUMENT OBJECT MODEL TREE
83833327	Application		5/20/2014		PCT/US2014/038848	PCT	POINT-WISE PROTECTION OF APPLICATION USING RUNTIME AGENT
84032983	Application		11/26/2014		PCT/US2014/067658	PCT	DETERMINE VULNERABILITY USING RUNTIME AGENT AND NETWORK SNIFFER
84033567	Application		12/16/2014		PCT/US2014/070594	PCT	DETERMINING PERMISSIBLE ACTIVITY BASED ON PERMISSIBLE ACTIVITY RULES
84240216	Application		8/12/2015		PCT/US2015/044903	PCT	Application ecurity issue classifier policy based training and classification
84262320	Application		8/12/2015		PCT/US2015/044877	PCT	Training a machine learning classifier to evaluate application security issues
90037074	To Be Filed					PCT	System and Method to perform an automated multi-credential vulnerability assessment with different privileges
83272318	Published		7/31/2013		PCT/US2013/053067	PCT	CLOUD BASED SERVICE DESIGN INHERITANCE
83272375	Published		9/4/2013		PCT/US2013/058048	PCT	SELECTION OF RESOURCE PROVIDERS FOR MULTI-TENANCY PROVISION OF BUILDING BLOCKS
83273171	Published		10/30/2013		PCT/US2013/067397	PCT	MANAGEMENT OF THE LIFECYCLE OF A CLOUD SERVICE MODELED AS A TOPOLOGY
83663286	Published		10/23/2013		PCT/US2013/066417	PCT	Tracking a Status of a Process
83961788	Application		9/30/2014		PCT/US2014/058339	PCT	TOPOLOGY BASED MANAGEMENT WITH COMPLIANCE POLICIES
84051423	Application		9/19/2014		PCT/US2014/056600	PCT	Billing Consumption Of Cloud-Based Resources
84172771	Application		6/5/2015		PCT/US2015/034377	PCT	PROMOTION ARTIFACT RISK ASSESSMENT
90035371	To Be Filed					PCT	A solution to prevent the security vulnerability on release automation tool component or application deployment designs using application security solution tool before the designs are used to deploy application on hybrid cloud environment
83954317	Application		7/30/2014		PCT/US2014/048849	PCT	MODIFYING WEB PAGES BASED UPON IMPORTANCE RATINGS AND BANDWIDTH

PATENT
REEL: 038498 FRAME: 0281

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83416697	Application		6/21/2013		PCT/FR2013/000157	PCT	GRAPHICAL INTERFACE TO EDIT THRESHOLDS
83834080	Application		4/29/2014		PCT/US2014/035814	PCT	SERVICE PROVISIONING
83953464	Application		8/29/2014		PCT/CN2014/085541	PCT	VIRTUAL MACHINE SERVICE AVAILABILITY
83966534	Application		8/4/2014		PCT/US2014/049550	PCT	NETWORK INFRASTRUCTURE MANAGEMENT
84122592	Published		12/17/2014		PCT/US2014/070976	PCT	DISPLAYING A DASHBOARD BASED ON CONSTRAINTS OF A USER DEVICE
84194265	Application		3/27/2015		PCT/US2015/023029	PCT	RENDERING A USER INTERFACE
84263110	To Be Filed					PCT	WEB-APPLICATION-LAUNCH APPLICATION PROGRAMMING INTERFACES
84173037	Application		5/27/2015		PCT/US2015/032547	PCT	COMMUNICATION IN A FEDERATED COMPUTING ENVIRONMENT
84251703	Application		7/31/2015		PCT/US2015/043054	PCT	SERVER RESOURCE MANAGEMENT
83777329	Published		1/31/2014		PCT/US2014/014334	PCT	TEST AUTOMATION MODELING
83820964	Application		7/10/2014		PCT/US2014/046173	PCT	Relocating A Virtual Address In A Persistent Memory
84221547	Application		4/16/2015		PCT/US2015/026064	PCT	CLUSTER ARBITRATION
84303084	Application		7/9/2015		PCT/US2015/039771	PCT	BYTE ADDRESSABLE NON-VOLATILE RANDOM ACCESS MEMORY FOR STORING LOG RECORD
83153051	Published		7/10/2013		PCT/US2013/049951	PCT	STORAGE DEVICE WRITE PULSE CONTROL
83206135	Published		41394		PCT/US2013/038830	PCT	Memory Access Rate
83268963	Published		9/27/2013		PCT/US2013/062233	PCT	REFRESH ROW ADDRESS
83269152	Published		9/23/2013		PCT/US2013/061233	PCT	VALIDATE WRITTEN DATA
83757913	Published		1/30/2014		PCT/US2014/013849	PCT	MANAGING DATA USING A NUMBER OF NON-VOLATILE MEMORY ARRAYS
83757930	Published		1/31/2014		PCT/US2014/014124	PCT	ENCODING DATA IN A MEMORY ARRAY
83957861	Application		7/31/2014		PCT/US2014/049193	PCT	LIVE MIGRATION OF DATA
84031031	Application		11/25/2014		PCT/US2014/067247	PCT	COMPUTING RESOURCE WITH MEMORY RESOURCE MEMORY MANAGEMENT
84031237	Application		1/30/2015		PCT/US2015/013795	PCT	SYSTEMS AND METHODS FOR SHARING NON-VOLATILE MEMORY BETWEEN MULTIPLE ACCESS MODELS
84031280	Application		10/31/2014		PCT/US2014/063527	PCT	Management Controller
84031343	Application		12/10/2014		PCT/US2014/069458	PCT	A Multi-Tier Security Framework
84111417	Application		1/12/2015		PCT/US2015/010974	PCT	HANDLING MEMORY ERRORS IN MEMORY MODULES THAT INCLUDE VOLATILE AND NON-VOLATILE COMPONENTS
84111589	Application		3/6/2015		PCT/US2015/019201	PCT	CONTROLLER CONTROL PROGRAM
84111858	Application		1/28/2015		PCT/US2015/013319	PCT	GARBAGE COLLECTOR
84171254	Application		4/10/2015		PCT/US2015/025226	PCT	PARTIAL BACKUP DURING RUNTIME FOR MEMORY MODULES WITH VOLATILE MEMORY AND NON-VOLATILE MEMORY

PATENT
REEL: 038498 FRAME: 0282

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84260193	Application		8/18/2015		PCT/US2015/045683	PCT	POST PACKAGE REPAIR FOR MAPPING TO A MEMORY FAILURE PATTERN
84262503	Application		8/7/2015		PCT/US2015/044338	PCT	MAPPING RESISTANCE LEVEL STATES TO MULTI-BIT DATA VALUES
90035179	To Be Filed					PCT	Read Bypass Past Pending Writes for Fixed Timing Memory Interfaces
83205219	Published		6/3/2013		PCT/IN2013/000353	PCT	INFLUENCE SCORE OF A SOCIAL MEDIA DOMAIN
84030759	Application		11/3/2014		PCT/IN2014/000709	PCT	AUTOMATIC SCRIPT GENERATION
84030882	Application		2/20/2015		PCT/US2015/016811	PCT	PERSONALIZED PROFILE-MODIFIED SEARCH FOR DIALOG CONCEPTS
84259532	Application		7/31/2015		PCT/CN2015/085722	PCT	TRANSLATE DATA STRUCTURE TO VIDEO FRAME STRUCTURE
83820157	Application		5/28/2014		PCT/US2014/039753	PCT	MANAGING A FLUID CONDITION IN A PIPE
83204515	Published		4/29/2013		PCT/US2013/038597	PCT	SERVICE PRICE INDEX
84030776	Application		12/19/2014		PCT/US2014/071402	PCT	Model-Driven Architecture For User-Centered Design
84111400	Application		12/19/2014		PCT/US2014/071380	PCT	Specifying Models of an Architectural Type
84117640	Application		12/19/2014		PCT/US2014/071365	PCT	ELECTRONIC FORM TO COLLECT A CLIENT REQUIREMENT ASSOCIATED WITH NETWORK TRAFFIC MANAGEMENT
83213234	Published		5/15/2013		PCT/US2013/041069	PCT	NANOCHANNEL ARRAY OF NANOWIRES FOR RESISTIVE MEMORY DEVICES
83271024	Published		41486		PCT/US2013/052813	PCT	MEMRISTOR AND METHODS FOR MAKING THE SAME
83623409	Application		41578		PCT/US2013/067823	PCT	THREE DIMENSIONAL RESISTIVE MEMORY ARCHITECTURES
83762922	Published		41670		PCT/US2014/014027	PCT	DATA STORING IN MEMORY ARRAYS
83763781	Published		41670		PCT/US2014/014219	PCT	CONSTANT HAMMING WEIGHT CODING
83777409	Application		41663		PCT/US2014/013011	PCT	MEMRISTOR MEMORY
83835225	Application		6/26/2014		PCT/US2014/044265	PCT	PROTECTIVE ELEMENTS FOR NON-VOLATILE MEMORY CELLS IN CROSSBAR ARRAYS
83952883	Application		6/20/2014		PCT/US2014/043445	PCT	MEMRISTIVE MEMORY CELL RESISTANCE SWITCH MONITORING
84033066	Application		11/3/2014		PCT/US2014/063667	PCT	Device with Multiple Resistance Switches with Different Switching Characteristics
84111463	Application		3/26/2015		PCT/US2015/022666	PCT	CODE COMPARATORS
84111569	Application		42059		PCT/US2015/017329	PCT	DETERMINING A STATE OF MEMRISTORS IN A CROSSBAR ARRAY
84111606	Application		1/23/2015		PCT/US2015/012746	PCT	SENSING AN OUTPUT SIGNAL IN A CROSSBAR ARRAY
84114477	Application		1/29/2015		PCT/US2015/013502	PCT	TRANSPARENT MEMRISTIVE DEVICE
84262403	Application		7/9/2015		PCT/US2015/039711	PCT	MEMORY ARRAY WITH BIT-CELLS TO ACCOMMODATE DIFFERENT NUMBERS AND TYPES OF MEMORY ELEMENTS
84269728	Application		7/30/2015		PCT/US2015/042958	PCT	MEMRISTIC RECORDING PIXELS

PATENT
REEL: 038498 FRAME: 0283

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0284

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83140525	Published		1/14/2013		PCT/US2013/021468	PCT	WIRELESS TRANSMITTER TO OPTIMIZE THROUGHPUT BY CONTROLLING TIME-AVERAGE BLOCK SIZE OF RECEIVERS
83140539	Published		1/14/2013		PCT/US2013/021497	PCT	WIRELESSLY TRANSMITTING MULTI-CAST SIGNAL USING RATELESS CODES
83207864	Published		4/5/2013		PCT/CN2013/073768	PCT	KEYWORD SEARCH ON DATABASES
83501108	Published		8/12/2013		PCT/US2013/054589	PCT	APPLICATION-AWARE NETWORK MANAGEMENT
83627737	Published		10/30/2013		PCT/US2013/067532	PCT	SIGNAL SPACE BASED NAVIGATION
83763924	Published		1/20/2014		PCT/CN2014/070877	PCT	An Infrastructure-guided Solution to Balance the Load among WLAN Access Points Using Basic Service Set Transition Management
83822464	Application		6/30/2014		PCT/US2014/044916	PCT	CHANNEL SCAN BASED ON MOBILITY STATE
83822484	Application		4/28/2014		PCT/US2014/035621	PCT	NETWORK FLOW CLASSIFICATION
83822524	Application		4/30/2014		PCT/CN2014/076597	PCT	WIRELESS ACCESS POINT SELECTION BASED ON A CONNECTION PLAN
83957961	Application		6/13/2014		PCT/US2014/042332	PCT	DETERMINING THE LOCATION OF A CLIENT DEVICE
84220820	Application		6/4/2015		PCT/CN2015/080778	PCT	A Model Transfer Method on Enabling WLAN Prediction Capability without Training
83200499	Published		6/20/2013		PCT/US2013/046842	PCT	MODE-CONTROLLED LASER SYSTEM
83271047	Published		7/30/2013		PCT/US2013/052770	PCT	LIQUID CRYSTAL COUPLED LIGHT MODULATION
83623515	Published		10/29/2013		PCT/US2013/067342	PCT	HIGH CONTRAST GRATING OPTOELECTRONICS
83952906	Application		8/15/2014		PCT/US2014/051249	PCT	OPTICAL MODE MATCHING
84033527	Application		10/23/2014		PCT/US2014/061953	PCT	OPTICAL PORT-SHUFFLING MODULE
84033607	Application		10/31/2014		PCT/US2014/063337	PCT	CABLE STORAGE MODULE
84033630	Application		11/25/2014		PCT/US2014/067379	PCT	LIGHT REDIRECTING TEST FIXTURE
84111523	Application		3/19/2015		PCT/US2015/021412	PCT	TRANSCEIVER NODES COUPLED TO ARRAYED WAVEGUIDE GRATINGS
84262752	Application		9/3/2015		PCT/US2015/048365	PCT	Defect-free heterogeneous substrate
84312845	Application		7/31/2015		PCT/US2015/043078	PCT	OPTICAL RECEIVERS
90066005	Acknowledged					PCT	PRECISE SIGNAL PROPAGATION CONTROL FOR SEGMENTED MZM TRANSMITTERS -UHU
84170438	Application		8/5/2015		PCT/US2015/043786	PCT	SELECTING HARDWARE COMBINATIONS
84276904	Application		6/30/2015		PCT/US2015/038499	PCT	INTEROPERABILITY-AS-A-SERVICE IN A CLOUD ENVIRONMENT
83764316	Application		1/16/2014		PCT/US2014/011911	PCT	CONFIGURABLE WORKLOAD OPTIMIZATION
84264690	Application		8/12/2015		PCT/US2015/044752	PCT	INTELLIGENT LOGGING
83832806	Application		4/18/2014		PCT/US2014/034709	PCT	PRE-COGNITIVE SECURITY INFORMATION AND EVENT MANAGEMENT
83958757	Application		7/31/2014		PCT/US2014/049232	PCT	SECURE BIOS PASSWORD METHOD IN SERVER COMPUTER
84042850	Application		2/10/2015		PCT/US2015/015296	PCT	CHIPSET RECONFIGURATION BASED ON DEVICE DETECTION

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84171357	Application		4/17/2015		PCT/US2015/026428	PCT	FIRMWARE MAP DATA
84171434	Application		5/6/2015		PCT/US2015/029453	PCT	SECURELY AND RELIABLY TRANSFERRING STARTUP SCRIPT
84172997	Application		4/17/2015		PCT/US2015/026509	PCT	ADDING A NETWORK UNIT TO A MANAGEMENT GROUP
84263044	To Be Filed					PCT	Unifying Test Automation Framework able to easily adapt to changing tools, tests, and hardware configurations and consolidate disparate test methods and infrastructures
90033124	Application		9/17/2015		PCT/US2015/050657	PCT	OBSCURATION OF A CACHE SIGNAL
90035288	Acknowledged					PCT	Method to securely queue and dispatch server deployment operations through a REST interfaceon a system BMC
90037930	Application		9/18/2015		PCT/US2015/051035	PCT	FIRMWARE UPDATE PACKAGES
83593465	Published		41712		PCT/US2014/029046	PCT	COLUMN STORE DATABASE COMPRESSION
83961004	Application		7/28/2014		PCT/US2014/048341	PCT	SEARCHING RELATIONAL AND GRAPH DATABASES
90035199	Acknowledged					PCT	Efficient polygon distance computation using PM quadtree decomposition and distance-based exploration
90060781	Application		9/25/2015		PCT/US2015/052277	PCT	QUERIES BASED ON RANGES OF HASH VALUES
83822444	Application		4/7/2014		PCT/US2014/033136	PCT	CONDITIONALLY PURCHASING CLOUD SERVICES
84263090	Acknowledged					PCT	Dynamic Workload Management For High-Volume Business Transactions in the Cloud
84279695	Application		8/4/2015		PCT/CN2015/086047	PCT	LOAD TESTING BASED ON NETWORK VIRTUALIZATION USING A CONTAINER
84170481	Application		4/29/2015		PCT/US2015/028248	PCT	INHIBITING A PENETRATION ATTACK
84264670	Application		6/18/2015		PCT/US2015/036318	PCT	RANDOMIZED HEAP ALLOCATION
83210529	Published		7/1/2013		PCT/US2013/048901	PCT	LOOKUP OF A DATA STRUCTURE CONTAINING A MAPPING BETWEEN A VIRTUAL ADDRESS SPACE AND A PHYSICAL ADDRESS SPACE
83271860	Published		7/31/2013		PCT/US2013/053060	PCT	LOG ANALYSIS
83272544	Published		41486		PCT/US2013/052922	PCT	OPERATING A MEMORY UNIT
83764256	Published		2/27/2014		PCT/US2014/018886	PCT	COMMUNICATION BETWEEN INTEGRATED GRAPHICS PROCESSING UNITS
83821090	Application		41848		PCT/US2014/048500	PCT	Memory Access Control
83830499	Application		4/25/2014		PCT/US2014/035532	PCT	CONFIGURATION BASED ON A BLUEPRINT
83830519	Application		4/23/2014		PCT/US2014/035101	PCT	SELECTING A PLATFORM CONFIGURATION FOR A WORKLOAD
83953178	Application		7/22/2014		PCT/US2014/047707	PCT	NODE-BASED COMPUTE DEVICE WITH PROTOCOL-BASED PRIORITY
83957709	Application		41848		PCT/US2014/048403	PCT	MULTI-CORE PROCESSOR INCLUDING A MASTER CORE AND SLAVE CORES

PATENT
REEL: 038498 FRAME: 0285

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83958233	Application		9/30/2014		PCT/US2014/058381	PCT	PAGE MODIFICATION
84037102	Application		1/29/2015		PCT/US2015/013602	PCT	TRANSACTIONAL KEY-VALUE STORE
84113733	Application		42034		PCT/US2015/013748	PCT	MODIFYING CHARACTERISTICS OF A MEMORY SEGMENT
84113793	Application		1/30/2015		PCT/US2015/013882	PCT	MEMORY-DRIVEN OUT-OF-BAND MANAGEMENT
84113810	Application		4/30/2015		PCT/US2015/028576	PCT	RETRIEVE DATA BLOCK FROM DETERMINED DEVICES
84173584	Application		4/30/2015		PCT/US2015/028418	PCT	MAPPING APERTURES OF DIFFERENT SIZES
90030662	Acknowledged					PCT	A high capacity and high performance persistent memory system based on DRAM, high-performance non-volatile memory technology and high-capacity non-volatile memory technology
90034160	Application		9/10/2015		PCT/US2015/049304	PCT	REQUEST OF AN MCS LOCK BY GUESTS
90037764	To Be Filed					PCT	STASH: Flush-on-failure for The Machine's CPU Registers
84115038	Application		2/26/2015		PCT/US2015/017811	PCT	UPDATING FIRMWARE IMAGES
83820984	Application		5/30/2014		PCT/US2014/040285	PCT	DETERMINE EDGE SWITCH BASED ON NETWORK TRAFFIC
83822630	Application		3/28/2014		PCT/US2014/032155	PCT	RESCHEDULING A SERVICE ON A NODE
83852640	Application		4/3/2014		PCT/US2014/032875	PCT	MODIFYING A PRIORITY FOR AT LEAST ONE FLOW CLASS OF AN APPLICATION
83874446	Application		3/31/2014		PCT/US2014/032344	PCT	REDIRECTING CONNECTION REQUESTS IN A NETWORK
83954941	Application		6/30/2014		PCT/US2014/044784	PCT	INJECT PROBE TRANSMISSION TO DETERMINE NETWORK ADDRESS CONFLICT
84111875	Application		2/12/2015		PCT/US2015/015588	PCT	MONITORING DYNAMIC DEVICE CONFIGURATION PROTOCOL OFFERS TO DETERMINE ANOMALY
84111921	Application		4/1/2015		PCT/US2015/023918	PCT	PACKET HEADERS WITH DEVICE-EXTRINSIC INFORMATION
84111964	Application		1/30/2015		PCT/US2015/013703	PCT	SENDING INFORMATION IN A NETWORK CONTROLLED BY A CONTROLLER
84152854	Application		2/10/2015		PCT/US2015/015122	PCT	NETWORK POLICY CONFLICT DETECTION AND RESOLUTION
84172436	Application		6/26/2015		PCT/US2015/038048	PCT	SERVER LOAD BALANCING
84031360	Application		10/27/2014		PCT/US2014/062374	PCT	BACKUP POWER COMMUNICATION
84031383	Application		41943		PCT/US2014/063416	PCT	COMBINED BACKUP POWER
84042830	Application		1/12/2015		PCT/US2015/011057	PCT	SELECTIVELY ENABLING LOADS USING A BACKUP POWER SUPPLY
84042867	Application		41905		PCT/US2014/056943	PCT	DUAL IN-LINE MEMORY MODULE (DIMM) FORM FACTOR BACKUP POWER SUPPLY
84262543	Acknowledged					PCT	A novel idea to control bypass semiconductor switches in a distributed energy system (DES)
84263070	Application		9/21/2015		PCT/US2015/051258	PCT	SERVER NODE SHUTDOWN
83747133	Application		2/14/2014		PCT/US2014/016545	PCT	CONTROLLING IMPEDANCE OF BLANK CARTRIDGES
84033550	Application		2/17/2015		PCT/US2015/016141	PCT	FLUID MANIFOLD
84114981	Application		1/30/2015		PCT/US2015/013977	PCT	SCALABLE COOLANT DISTRIBUTION UNIT

PATENT
REEL: 038498 FRAME: 0286

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90037950	To Be Filed					PCT	Server primarily cooled by air system and augmented by water backup system during emergency or heavy use
83958070	Application		6/2/2014		PCT/US2014/040512	PCT	WAYPOINT NAVIGATOR
84111480	Application		1/30/2015		PCT/US2015/013738	PCT	ROOM CAPTURE AND PROJECTION
83268654	Published		8/30/2013		PCT/US2013/057494	PCT	COMPARING REAL-TIME MOVEMENTS TO PATTERN PROFILE BACKGROUND
83269381	Published		8/30/2013		PCT/US2013/057514	PCT	CONTEXTUAL SEARCHES FOR DOCUMENTS
83820323	Application		3/31/2014		PCT/US2014/032388	PCT	RULE BASED DELAYED MESSAGE DELIVERY
84029886	Application		1/29/2015		PCT/US2015/013565	PCT	APPLYING RULES TO A DEVICE FROM A SERVICE DETECTED BY THE DEVICE
84030865	Application		12/22/2014		PCT/US2014/071795	PCT	EXECUTION OF INTERACTION FLOWS
82579300	Granted	1749386	5/4/2005	40282	5746753.2	PL	Pattern Discovery In A Network Security System
82579358	Granted	2419986	4/3/2007	40690	2008143372	RU	Merging Multi-Line Log Entries
82579375	Granted	2425449	39380	40751	2009107162	RU	Tracking Changing State Data To Assist In Computer Network Security
82579394	Granted	2417417	10/25/2007	40660	2009107080	RU	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security
82934557	Application		1/30/2012		2012103312	RU	TEXT DETECTION IN IMAGES OF GRAPHICAL USER INTERFACES
82579550	Granted	2424568	12/28/2007	40744	2009128959	RU	Storing Log Data Efficiently While Supporting Querying To Assist in Computer Network Security
82201814	Granted	1708459	3/29/2005	39680	5300226.7	SE	Routing Element With Special Functions
82991033	Granted	1725065	38848	41052	6113818.6	SE	Controlling Access To Communication Services
82181063	Granted	532972	6/3/2005	40323	0501276-0	SE	Telecommunications System And Method For Forwarding Messages Based Upon Subscriber Identification Information
82066868	Granted	815677	1/17/1997	38427	97900685.5	SE	Multicarrier Communication System And Method For Peak Power Control
82133609	Granted	1188339	6/23/2000	38315	943160.2	SE	METHOD AND SYSTEM FOR PROVIDING TELECOMMUNICATION SERVICES ACROSS NETWORKS THAT USE DIFFERENT PROTOCOLS
82198601	Granted	1686813	1/31/2005	39645	5300075.8	SE	Signalling Point
82910733	Granted	2039121	7/10/2007	40898	7787337	SE	METHOD OF PROVIDING SERVICES IN A NETWORK, NETWORK ELEMENT
82180769	Granted	112909	8/11/2004	39294	200404407-9	SG	Circuit Tester Interface
82209065	Granted	125251	3/10/2005	39689	200600895-7	SG	Server System, Server Device And Method Therefor
82579395	Granted	150226	10/25/2007	40816	2009011180	SG	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security

PATENT
REEL: 038498 FRAME: 0287

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82193309	Granted	122056	10/31/2005	39538	200508486-8	SG	Copy Operations In Storage Networks
82201361	Granted	121963	10/12/2005	7/31/2008	200506484-5	SG	Recovery Operations In Storage Networks
82116893	Granted	65885	12/8/1997	5/31/2005	9902484-6	SG	PUBLIC KEY CRYPTOGRAPHIC APPARATUS AND METHOD
82233758	Granted	158389	5/21/2008	11/15/2010	201000203-8	SG	TAMPER-EVIDENT CONNECTOR
82579359	Granted	146862	4/3/2007	9/30/2009	200807443-7	SG	Merging Multi-Line Log Entries
82579307	Granted	127094	5/4/2005	39933	200607520-4	SG	Pattern Discovery In A Network Security System
82948048	Granted	85502	6/30/2000	1/31/2005	200107639-7	SG	System and Method for Capturing and Managing Information from Digital Source
81969821	Granted	I255678	12/11/2002	5/21/2006	91135858	TW	Optimized Conductor Routing For Multiple Components On A Printed Circuit Board
81978497	Granted	588240	11/22/2001	5/21/2004	90128966	TW	Self-Healing Memory
81987941	Granted	552513	10/15/2001	9/11/2003	90125426	TW	A Device And Method For Connecting A Plurality Of Peripherals On A Bus
82007399	Granted	I229719	10/31/2002	3/21/2005	91132290	TW	Rack Latch Assembly
82082714	Granted	I281333	8/26/2003	5/11/2007	92123436	TW	Systems And Methods For Remote Testing Of Printing Devices
82092683	Granted	I312058	4/13/2004	7/11/2009	93110223	TW	High Performance Cooling Device With Vapor Chamber
82102307	Granted	I221909	5/20/2003	10/11/2004	92113583	TW	System And Method Of Measuring Low Impedances
82105178	Granted	I308760	11/25/2003	4/11/2009	92133048	TW	Systems And Methods For Providing Error Correction Code Testing Functionality
82127459	Granted	312765	1/11/1997	8/11/1997	86100253	TW	BUS ERROR HANDLER FOR PERR# & SERR# ON DUAL PCI BUS SYSTEM
82179518	Granted	I417891	5/23/2006	12/1/2013	95118230	TW	Memory Mirroring Apparatus And Method
82180649	Granted	I383294	4/25/2005	1/21/2013	94113113	TW	Passing Identification Information
82180772	Granted	I324688	7/16/2004	5/11/2010	93121293	TW	Circuit Tester Interface
82182287	Granted	I295772	12/12/2005	4/11/2008	94143869	TW	System And Method For Data Analysis
82184516	Granted	I376596	10/13/2005	11/11/2012	94135684	TW	Systems And Methods Of Test Case Generation With Feedback
82185329	Granted	I394257	4/1/2005	4/21/2013	94110469	TW	Misalignment-tolerant Methods For Fabricating Multiplexing/demultiplexing Architectures
82189949	Granted	I378347	6/30/2005	12/1/2012	94122084	TW	Purging Without Write-back Of Cache Lines Containing Spent Data
82204073	Granted	I400862	4/25/2006	7/1/2013	95114691	TW	Cooling Fan With An Outer Rotor Motor
82209755	Granted	I441022	6/8/2006	6/11/2014	95120393	TW	Policy Based Cryptographic Application Programming Interface In Secure Memory
82233734	Granted	I438967	6/25/2008	5/21/2014	97123670	TW	TAMPER-EVIDENT CONNECTOR
82240826	Granted	I463293	4/23/2009	12/1/2014	98113451	TW	POWER SUPPLY ASSEMBLY FOR SERVER RACK AND METHOD FOR MOUNTING POWER SUPPLY FOR SERVER RACK
82242959	Granted	I467374	9/8/2008	1/1/2015	97134381	TW	Protected Portion Of Partition Memory For Computer Code

PATENT
REEL: 038498 FRAME: 0288

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82245509	Granted	I450269	7/1/2009	8/21/2014	98122217	TW	Geared Latch Apparatus
82248569	Granted	I489759	3/29/2010	6/21/2015	99109387	TW	Electric Power Conversion System Having An Adaptable Transformer Turns Ratio For Improved Efficiency
82249439	Allowed		2/22/2010		99105001	TW	DYNAMIC IMPEDANCE PHOTODETECTOR RECEIVER CIRCUIT
82249763	Granted	I454932	9/23/2009	10/1/2014	98132061	TW	Managing Latencies In A Multiprocessor Interconnect
82250012	Published		3/29/2010		99109376	TW	OPTICAL MEMORY EXPANSION
82250126	Granted	I496301	3/30/2010	8/11/2015	99109578	TW	PHOTONIC DEVICE AND METHOD OF MAKING THE SAME
82250456	Published		2/25/2010		99105459	TW	GRID HEAT SINK
82257812	Published		5/26/2010		99116816	TW	CAPACITIVE CROSSBAR ARRAYS
82257821	Granted	I497648	3/24/2010	8/21/2015	99108679	TW	THREE DIMENSIONAL MULTILAYER CIRCUIT
82258190	Granted	I497785	8/12/2010	8/21/2015	99126902	TW	TWO TERMINAL MEMCAPACITOR DEVICE
82258199	Published		5/26/2010		99116818	TW	HIERARCHICAL ON-CHIP MEMORY
82258205	Published		7/6/2010		99122146	TW	THERMALLY STABLE NANOSCALE SWITCHING DEVICE
82258253	Published		8/12/2010		99126898	TW	LOW-POWER NANOSCALE SWITCHING DEVICE WITH AN AMORPHOUS SWITCHING MATERIAL
82258262	Published		5/27/2010		99116992	TW	SWITCHABLE JUNCTION WITH INTRINSIC DIODES WITH DIFFERENT SWITCHING THRESHOLDS
82258271	Allowed		7/12/2010		99122820	TW	MEMRISTIVE DEVICE
82258313	Published		5/27/2010		99116995	TW	Memristive Adaptive Resonance Networks
82258319	Published		7/22/2010		99124135	TW	NON-VOLATILE DATA-STORAGE LATCH
82258373	Published		7/27/2010		99124716	TW	MEMRISTORS WITH ASYMMETRIC ELECTRODES
82258823	Granted	I473012	10/14/2010	2/11/2015	99135050	TW	Multiprocessing Computing With Distributed Embedded Switching
82259501	Published		8/13/2010		99127099	TW	MULTILAYER CIRCUIT
82259576	Published		10/13/2010		99134873	TW	PARALLELIZED CHECK POINTING USING Mats AND THROUGH SILICON Vias (tsvs)
82260878	Published		8/10/2010		99126612	TW	MEMRISTORS BASED ON MIXED-METAL-VALENCE COMPOUNDS
82274810	Granted	I430613	1/10/2007	3/11/2014	96100939	TW	Bi-planar Network Architecture
82274852	Granted	I452870	9/10/2007	41893	96133721	TW	Network Traffic Redirection in Bi-Planar Networks
82275302	Granted	351882	8/7/1996	36192	85109575	TW	Method and Apparatus For Wavelet Based Data Compression Having Adaptive Bit Rate Control For Compression Of Digital Audio Or Other Sensor
82579360	Granted	I312624	3/30/2007	7/21/2009	96111414	TW	Merging Multi-Line Log Entries
82579423	Granted	I498757	5/28/2010	9/1/2015	99117385	TW	Specifying a Parser Using a Properties File
82579429	Granted	I498752	9/13/2010	42248	99130885	TW	Extracting Information From Unstructured Data And Mapping The Information To A Structured Schema Using The Naïve Bayesian Probability Model
82579435	Granted	I480746	11/9/2010	42105	99138570	TW	Enabling Full-Text Searching Using A Structured Data Store

PATENT
REEL: 038498 FRAME: 0289

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0290

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82579552	Granted	I434190	12/28/2007	41740	96150901	TW	Storing Log Data Efficiently While Supporting Querying To Assist In Computer Network Security
82580974	Granted	I430103	12/9/2010	41709	99143002	TW	Fair Token Arbitration Systems And Methods
82581001	Granted	I429975	12/15/2010	41740	99143970	TW	OPTICAL INTERCONNECT
82629493	Granted	I433314	1/27/2011	41730	100103073	TW	CONTROLLED SWITCHING MEMRISTOR
82635856	Granted	I483498	1/31/2011	42125	100103685	TW	MULTIMODE VERTICAL-CAVITY SURFACE-EMITTING LASER ARRAYS
82635885	Granted	I444681	1/31/2011	41831	100103671	TW	GRATING-BASED OPTICAL FIBER-TO-WAVEGUIDE INTERCONNECTS
82635896	Granted	I477810	1/31/2011	3/21/2015	100103688	TW	OPTICAL DEVICES BASED ON NON-PERIODIC SUB-WAVELENGTH GRATINGS
82654425	Granted	I447453	2/25/2011	41852	100106450	TW	OPTICAL STAR COUPLER
82660162	Granted	I486641	3/14/2011	42156	100108519	TW	CONTROLLING PHASE RESPONSE IN A SUB-WAVELENGTH GRATING LENS
82660167	Granted	I477838	3/16/2011	42084	100108904	TW	DEVICE AND METHOD FOR CONVERTING SIGNAL AND METHOD OF MANUFACTURING SAID DEVICE
82660181	Granted	I497659	3/14/2011	8/21/2015	100108529	TW	CIRCUIT MODULE
82662242	Granted	I480885	3/11/2011	4/11/2015	100108333	TW	INTERCONNECTION ARCHITECTURE FOR MEMORY STRUCTURES
82715613	Allowed		4/18/2011		100113369	TW	SWITCHING IN A NETWORK DEVICE
82727174	Granted	I441476	4/29/2011	6/11/2014	100115092	TW	Method For Routing Data Packets In A Fat Tree Network
82788345	Published		7/29/2011		100127017	TW	COMPUTER SYSTEM AND METHOD FOR SHARING COMPUTER MEMORY
82861417	Granted	I429152	10/25/2011	3/1/2014	100138678	TW	VERTICAL-CAVITY SURFACE-EMITTING LASER SYSTEM AND METHOD FOR FABRICATING THE SAME
82914193	Granted	I467254	1/11/2012	1/1/2015	101101088	TW	COMPOSITE PROCESSORS
82914216	Granted	I480606	1/11/2012	4/11/2015	101101087	TW	WAVEFRONT SYNTHESIZER SYSTEMS
82997522	Published		5/9/2012		101116488	TW	SHIFTABLE MEMORY
83050532	Allowed		7/13/2012		101125299	TW	MEMRISTORS HAVING MIXED OXIDE PHASES
83051101	Published		7/19/2012		101126023	TW	MEMRISTOR STRUCTURE WITH A DOPANT SOURCE
83052830	Granted	I498894	7/20/2012	9/1/2015	101126305	TW	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83057100	Published		7/26/2012		101127017	TW	Method and System for Reducing Write-Buffer Capacities within Memristor-Based Data-Storage Devices
83057118	Granted	I489480	7/26/2012	6/21/2015	101127021	TW	Efficient Data-Storage Devices that Include Memory Elements Characterized by Potentially Large Switching Latencies
83109709	Published		10/11/2012		101137432	TW	SELECT DEVICE FOR CROSS POINT MEMORY STRUCTURES
83119528	Granted	I497852	10/23/2012	8/21/2015	101139063	TW	DIRECT MODULATED LASER
83123489	Granted	I467368	10/24/2012	1/1/2015	101139278	TW	DRIVE CARRIER LIGHT SOURCE CONTROL

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0291

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83123495	Granted	I493347	10/24/2012	7/21/2015	101139277	TW	DEVICE AUTHENTICATION
83123512	Granted	I454918	10/24/2012	10/1/2014	101139268	TW	DISTRIBUTED MANAGEMENT
83123524	Granted	I481917	11/5/2012	42115	101140977	TW	OPTICAL BLIND-MATE CONNECTOR
83127883	Granted	I493664	10/29/2012	7/21/2015	101139947	TW	DEVICES INCLUDING A DIAMOND LAYER
83127984	Allowed		10/31/2012		101140336	TW	KEYING SOLUTION, DRIVE CARRIER AND DRIVE SYSTEM
83140063	Granted	I487223	12/19/2012	6/1/2015	101148278	TW	HIGH DENSITY LASER OPTICS
83153018	Published		1/9/2013		102100702	TW	SINGLE AND DOUBLE CHIP SPARE
83167068	Published		1/28/2013		102103085	TW	MONOLITHICALLY INTEGRATED, SELF-ALIGNING, OPTICAL-FIBER FERRULE
83196851	Granted	I493457	2/22/2013	42206	102106151	TW	Firmware Package to Modify Active Firmware
83224806	Allowed		4/23/2013		102114416	TW	DYNAMIC MEMORY ALLOCATION
83234040	Granted	I498624	4/26/2013	42248	102114985	TW	Hybrid MOS Optical Modulator
83260546	Published		5/17/2013		102117569	TW	DEVICES INCLUDING INDEPENDENTLY CONTROLLABLE ABSORPTION REGION AND MULTIPLICATION REGION ELECTRIC FIELDS
83262442	Allowed		5/20/2013		102117744	TW	LOCAL ERROR DETECTION AND GLOBAL ERROR CORRECTION
83278348	Published		6/21/2013		102122177	TW	NETWORK TRAFFIC PROCESSING SYSTEM
83410823	Published		6/26/2013		102122711	TW	SYSTEM AND METHOD FOR OPERATING SYSTEM AGNOSTICHARDWARE VALIDATION
83416822	Published		6/24/2013		102122379	TW	TRANSLATED SESSION INFORMATION TO PROVISION A NETWORK PATH
83417392	Published		7/11/2013		102124890	TW	PERFORMING REFRESH OF A MEMORY DEVICE IN RESPONSE TO ACCESS OF DATA
83417781	Published		6/27/2013		102122921	TW	BATTERY TO PROVIDE VOLTAGE TO POWER MODULES
83423712	Published		7/24/2013		102126472	TW	COOLING ASSEMBLY
83425461	Published		7/24/2013		102126480	TW	NOTIFICATION OF ADDRESS RANGE INCLUDING NON-CORRECTABLE ERROR
83501119	Published		8/12/2013		102128842	TW	TRANS-IMPEDANCE AMPLIFIERS (TIA) THERMALLY ISOLATED FROM OPTICAL MODULES
83553704	Published		8/22/2013		102130038	TW	USE OF PRIMARY AND SECONDARY CONNECTION TABLES
83597969	Published		9/4/2013		102131830	TW	ROBUST HARDWARE FAULT MANAGEMENT SYSTEM, METHOD AND FRAMEWORK FOR ENTERPRISE DEVICES
83695193	Published		9/30/2013		102135331	TW	DYNAMICALLY SELECTING BETWEEN MEMORY ERROR DETECTION AND MEMORY ERROR CORRECTION
83695862	Published		10/3/2013		102136016	TW	MODULAR RACK SYSTEM
83700251	Published		10/16/2013		102137300	TW	Selective Error Correcting Code and Memory Access Granularity Switching
83729205	Granted	I497253	11/14/2013	42237	102141431	TW	POWER FACTOR CORRECTOR POWER SHARING
83734397	Published		12/4/2013		102144398	TW	LIQUID COOLING

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83748601	Published		12/9/2013		102145162	TW	NVRAM PATH SELECTION
83748606	Published		12/6/2013		102144861	TW	APPLICATION SERVER TO NVRAM PATH
83748644	Allowed		12/9/2013		102145163	TW	ASSIGNING PROCESSORS TO MEMORY MAPPED CONFIGURATION
83748660	Published		12/9/2013		102145165	TW	RAM REFRESH RATE
83764192	Published		11/29/2013		102143835	TW	MEMORY CONTROLLERS TO FORM SYMBOLS BASED ON BURSTS
83768993	Published		12/18/2013		102146933	TW	NON-VOLATILE MULTI-LEVEL-CELL MEMORY WITH DECOUPLED BITS FOR HIGHER PERFORMANCE AND ENERGY EFFICIENCY
83782149	Allowed		1/22/2014		103102300	TW	NON-VOLATILE MEMORY WRITE MECHANISM
83789052	Published		1/24/2014		103102680	TW	MEMORY MODULE CONTROLLER SUPPORTING EXTENDED WRITES
83810423	Allowed		2/19/2014		103105494	TW	Implementing Coherency with Reflective Memory
83811360	Published		2/18/2014		103105258	TW	Cartridge Interdependence Switch
83811374	Published		2/21/2014		103105883	TW	External Memory Controller
83813068	Published		2/19/2014		103105499	TW	STATE-RETAINING LOGIC CELL
83813097	Published		2/24/2014		103106073	TW	Memory Access Rate
83832410	Published		3/13/2014		103109090	TW	TOP LOADING CARTRIDGE
83832453	Published		3/13/2014		103109091	TW	TOP LOADING CARTRIDGE
83835258	Published		3/10/2014		103108108	TW	MICROCONTROLLER AT A CARTRIDGE OF A CHASSIS
83853206	Granted	I497318	3/19/2014	42237	103110306	TW	IDENTIFYING MEMORY OF A BLADE DEVICE FOR USE BY AN OPERATING SYSTEM OF A PARTITION INCLUDING THE BLADE DEVICE
83853211	Published		3/20/2014		103110499	TW	ERROR COORDINATION MESSAGE FOR A BLADE DEVICE HAVING A LOGICAL PROCESSOR IN ANOTHER SYSTEM FIRMWARE DOMAIN
83856486	Published		3/19/2014		103110268	TW	Managing Firmware Updates
83873612	Published		4/8/2014		103112831	TW	Detection of a Security Event
83931680	Published		5/7/2014		103116246	TW	RESPONSE CONTROL FOR MEMORY MODULES THAT INCLUDE OR INTERFACE WITH NON-COMPLIANT MEMORY TECHNOLOGIES
83932845	Published		5/2/2014		103115833	TW	WRITE FLOW CONTROL FOR MEMORY MODULES THAT INCLUDE OR INTERFACE WITH NON-COMPLIANT MEMORY TECHNOLOGIES
83939853	Published		4/29/2014		103115329	TW	NON-VOLATILE MEMORY TO STORE RESETTABLE DATA
83944839	Published		5/15/2014		103117133	TW	CONFIRM PROPER SEATING OF A DUAL INLINE MEMORY MODULE
83947509	Published		5/15/2014		103117134	TW	MODULES TO CONTAIN INTERFACE CARDS
83952295	Published		5/26/2014		103118257	TW	FIRST DATA IN RESPONSE TO SECOND READ REQUEST

PATENT
REEL: 038498 FRAME: 0292

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83972192	Published		6/18/2014		103121026	TW	CONFIGURING A COMMUNICATION INTERCONNECT FOR ELECTRONIC DEVICES
83972198	Published		6/23/2014		103121586	TW	Voltage Control for Crosspoint Memory Structures
83973140	Published		6/17/2014		103120804	TW	GUIDE SEGMENT IDENTIFICATION
83974036	Published		6/16/2014		103120677	TW	DETERMINE MALFUNCTION STATE OF POWER SUPPLY MODULE
83976057	Application		6/20/2014		103121333	TW	FAN MODULE
83982943	Published		7/7/2014		103123321	TW	BASEBOARD MANAGEMENT CONTROLLER PROVIDING PEER SYSTEM IDENTIFICATION
83982950	Published		7/8/2014		103123468	TW	DATA MANAGEMENT ON MEMORY MODULES
83982964	Published		7/8/2014		103123461	TW	MEMORY SPARING ON MEMORY MODULES
83984274	Published		7/11/2014		103123968	TW	STACKING NETWORK SWITCHES
83984295	Published		7/9/2014		103123627	TW	OPTICAL BLIND-MATE CONNECTOR AND ADAPTER
84002907	Published		7/22/2014		103125139	TW	HEAT SINK
84004472	Application		7/28/2014		103125655	TW	RELEASE LATCH
84017551	Published		8/25/2014		103129188	TW	SLOT BASED MANAGEMENT CONTROLLER ADDRESSBACKGROUND
84022761	Published		8/25/2014		103129190	TW	NON-BINARY RANK MULTIPLICATION OF MEMORY MODULE
84022775	Published		8/26/2014		103129329	TW	MEMORY ERASURE INFORMATION IN CACHE LINES
84022806	Application		8/22/2014		103129033	TW	TRANSMISSION OF COMMAND STRINGS AND STATUS STRINGS VIA MEMORY BUS
84049768	Published		9/17/2014		103132042	TW	FORWARDED LOG LINES
84049885	Published		9/18/2014		103132197	TW	SERVER DOWNTIME METERING
84073475	Published		1/21/2011		103136522	TW	WAVEFRONT SYNTHESIZER SYSTEMS
84098630	Application		11/3/2014		103138136	TW	TOP LOADING CARTRIDGE
84104649	Application		11/25/2014		103140700	TW	SYSTEM WIDE MANAGEABILITY
84107704	Application		12/3/2014		103141940	TW	FIRMWARE AUTHENTICATION
84116451	Application		12/9/2014		103142762	TW	CONNECTOR WITH A RETAINER ASSEMBLY
84118423	Application		12/15/2014		103143693	TW	MEMORY DATA VERSIONING
84118427	Application		12/18/2014		103144303	TW	MANAGING DATA USING A NUMBER OF NON-VOLATILE MEMORY ARRAYS
84118435	Application		12/15/2014		103143695	TW	REDUCING READ LATENCY OF MEMORY MODULES
84118443	Application		12/18/2014		103144301	TW	RENDERING DATA INVALID IN A MEMORY ARRAY
84120874	Application		12/23/2014		103144962	TW	SIGNAL INTERFACE COMPONENT FOR A PRINTED CIRCUIT BOARD
84120883	Application		12/24/2014		103145232	TW	ACCESS CONTROLLED MEMORY REGION
84120917	Application		12/23/2014		103144963	TW	RESISTIVE RATIO-BASED MEMORY CELL
84124374	Application		1/9/2015		104100738	TW	MANAGING A DISTRIBUTION OF A PAYLOAD FOR A FLIGHT
84126770	Application		1/5/2015		104100036	TW	MANIFOLDS HAVING SLIDABLE DRIPLESS CONNECTORS

PATENT
REEL: 038498 FRAME: 0293

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84144544	Application		1/21/2015		104101929	TW	Voltage Regulation for Battery Strings
84145274	Application		1/21/2015		104101930	TW	BEHAVIOR MODIFICATION OFA POWER SUPPLY IN RESPONSE TO A DETECTED CONDITION
84155478	Application		2/12/2015		104104776	TW	COMPONENT MULTICAST PROTOCOL
84190744	Application		3/11/2015		104107716	TW	CONNECTION CLASSIFICATION
84193019	Application		3/13/2015		104108065	TW	LOAD SELECTION FOR RECEIVING POWER FROM A BATTERY MODULE
84193048	Application		3/18/2015		104108610	TW	PACKET LOGGING
84193056	Application		3/13/2015		104108063	TW	LIQUID COOLANT SUPPLY
84193869	Application		3/16/2015		104108278	TW	DISC DRIVE MODULE
84193881	Application		3/13/2015		104108066	TW	COMMUNICATION ASSOCIATED WITH MULTIPLE NODES FOR DELIVERY OF POWER
84221827	Application		4/17/2015		104112421	TW	SUPPORTING INPUT/OUTPUT (I/O) CONNECTIVITY FOR A PRINTED CIRCUIT ASSEMBLY (PCA) IN A HOT AISLE CABLING OR A COLD AISLE CABLING ARRANGEMENT
84223965	Application		4/24/2015		104113184	TW	POWER SUPPLY CHASSIS INCLUDING A RELEASE LEVER
84238526	Application		5/8/2015		104114745	TW	DUAL IN-LINE MEMORY MODULE CONNECTOR
84247494	Application		5/15/2015		104115574	TW	POINT-WISE PROTECTION OF APPLICATION USING RUNTIME AGENT AND DYNAMIC SECURITY ANALYSIS
84251562	Application		6/25/2015		104120562	TW	System And Method For Designing A Printed Circuit Board
84312524	Application		9/3/2015		104129165	TW	ISOLATION OF A FAULTY MEZZANINE CARD OF A SERVER
84312981	Application		7/22/2015		104123672	TW	NEXT GENERATION FORM FACTOR CONNECTOR
84312987	Application		7/22/2015		104123679	TW	MULTI-BAY APPARATUS
90032794	Application		8/20/2015		104127116	TW	THERMAL MANAGEMENT DOOR ASSEMBLY
90032802	Application		8/20/2015		104127118	TW	BACKUP POWER AND LOAD DISCOVERY
90032857	Application		8/20/2015		104127117	TW	FOLDABLE MEMORY CARTRIDGE
90048554	Application		9/21/2015			TW	Management Controller
90048563	Acknowledged					TW	CPU WITH EXTERNAL FAULT RESPONSE HANDLING
90053549	Acknowledged					TW	SUPERVISORY MEMORY MANAGEMENT UNIT
90053775	Acknowledged					TW	HEAT SINK WITH A LOAD SPREADING BAR
90054399	Acknowledged					TW	IMMERSION COOLED TOP-LOADING COMPUTING CARTRIDGES
90054408	Acknowledged					TW	DUAL IN-LINE MEMORY MODULE (DIMM) FORM FACTOR BACKUP POWER SUPPLY
90054414	Application		9/18/2015			TW	MODULAR COOLING
90055167	Instructed					TW	BACKUP POWER SUPPLY CELL IN MEMORY DEVICE
90057809	Acknowledged					TW	RECEPTACLE FOR CONNECTING A MULTI-LANE OR ONE-LANE CABLE
90064267	Acknowledged					TW	SERVER NODE SHUTDOWN
90064352	Acknowledged					TW	ADMISSIONS CONTROL OF A DEVICE

PATENT
REEL: 038498 FRAME: 0294

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0295

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82248557	Published		3/29/2010		99109386	TW	Energy-efficient Standby Mode In A Switching Power Supply
84049844	Application		9/17/2014		103132046	TW	SELECTIVELY-ENABLED BACK-UP POWER
84107694	Application		12/2/2014		103141764	TW	POWERING LOADS WITH A POWER SUPPLY AND AN UNINTERRUPTIBLE POWER SUPPLY
84265049	Application		6/26/2015		104120794	TW	REMOVABLE TEST AND DIAGNOSTICS CIRCUIT
84254661	Application		5/22/2015		104116411	TW	MULTIPLE TANK COOLING SYSTEM
82031486	Granted	I235916	9/27/2000	38544	89119981	TW	Multiple Issue Algorithm With Oversubscription Avoidance Features To Get High Bandwidth Through Cache Pipeline
82250930	Published		9/6/2010		99130026	TW	Memory Subsystem Having A First Portion To Store Data With Error Correction Code Information And A Second Portion To Store Data Without Error Correction Code Information
83417388	Published		41466		102124889	TW	REFRESHING A GROUP OF MEMORY CELLS IN RESPONSE TO PRESENCE OF POTENTIAL DISTURBANCE
83810228	Published		41690		103105658	TW	MEMORY DEVICE HAVING ERROR CORRECTION LOGIC
83931539	Published		41760		103115708	TW	STORAGE DEVICE WRITE PULSE CONTROL
83962339	Published		41814		103121738	TW	MEMORY COMPONENT CAPABLE TO COMMUNICATE AT MULTIPLE DATA WIDTHS
83972203	Published		41808		103121027	TW	OFF-MEMORY-MODULE ECC-SUPPLEMENTAL MEMORY SYSTEM
84120913	Application		12/24/2014		103145251	TW	MEMORY CELL HAVING RESISTIVE AND CAPACITIVE STORAGE ELEMENTS
84120933	Application		41997		103145227	TW	REMAPPING MEMORY LOCATIONS IN A MEMORY ARRAY
82259921	Published		40317		99115934	TW	Pivoting Mounts For Media Drives
83691170	Published		41544		102135114	TW	PLENUMS FOR REMOVABLE MODULES
83874204	Published		41725		103111453	TW	CONVERTERS TO PROVIDE LIGHT LOAD OUTPUT
83976007	Published		6/20/2014		103121329	TW	UNINTERRUPTIBLE POWER SUPPLY WITH INVERTER, CHARGER, AND ACTIVE FILTER
84157501	Application		2/5/2015		104104008	TW	DISK DRIVE MODULE
84223984	Application		4/24/2015		104113182	TW	THERMAL MANAGEMENT ASSEMBLY
90057805	Acknowledged					TW	Receptacle for conenction a multi-lane or one-lane cable
82024991	Granted	465052	5/10/2000	37216	89108942	TW	IC Die Power Connection Using Canted Coil Spring
82184195	Granted	I333400	8/17/2004	40493	93124653	TW	Printed Circuit Board Substrate And Method For Constructing Same
84118414	Application		12/17/2014		103144047	TW	RACK CONTROL MODULE
83123520	Published		10/24/2012		101139270	TW	CONNECTOR
83874178	Published		3/27/2014		103111455	TW	DATA FLUSH OF GROUP TABLE
84120867	Application		12/23/2014		103144958	TW	MANAGING A MULTI-LANE SERIAL LINK
90040261	Application		9/3/2015		104129161	TW	DETERMINE PROTECTIVE MEASURE FOR DATA THAT MEETS CRITERIA

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84259550	Application		42157		104117755	TW	ACTION EXECUTION BASED ON MANAGEMENT CONTROLLER ACTION REQUEST
90064274	Instructed					TW	RESOURCE FEDERATION
82195367	Granted	I396971	3/27/2006	5/21/2013	95110529	TW	Memory Mapped Page Priorities
81967121	Granted	I280830	12/13/2002	39203	91136159	TW	Reconfigurable Multilayer Printed Circuit Board
82031114	Granted	479192	9/4/2000	37326	89118037	TW	Carry Look-ahead For Bi-endian Adder
84192420	Application		3/13/2015		104108087	TW	SEMANTIC RESTRICTION
82258301	Published		6/29/2010		99121215	TW	INDIVIDUALLY ADDRESSABLE NANO-SCALE MECHANICAL ACTUATORS
82635910	Granted	I467232	1/31/2011	42005	100103683	TW	NON-PERIODIC GRATINGS FOR SHAPING REFLECTED AND TRANSMITTED LIGHT IRRADIANCE PROFILES AND SYSTEM COMPRISING THE SAME
82674261	Granted	I459211	3/18/2011	41944	100109320	TW	COMPUTER SYSTEM AND METHOD FOR SHARING COMPUTER MEMORY
82861308	Granted	I467258	40823	42005	100136479	TW	ELECTRONIC SYSTEM AND METHOD FOR IMPLEMENTING THE SAME
83167015	Published		1/28/2013		102103081	TW	HYBRID ELECTRO-OPTICAL PACKAGE FOR AN OPTO-ELECTRONIC ENGINE
83410146	Allowed		6/19/2013		102121776	TW	Optical Shuffling
84142662	Application		1/16/2015		104101496	TW	CONFIGURABLE WORKLOAD OPTIMIZATION
84184863	Application		3/6/2015		104107245	TW	NETWORK SECURITY FOR ENCRYPTED CHANNELBASED ON REPUTATION
83782133	Published		1/14/2014		103101260	TW	Dynamic Firmware Updating
83853162	Published		3/17/2014		103109939	TW	MAKING MEMORY OF COMPUTE AND EXPANSION BLADE DEVICES AVAILABLE FOR USE BY AN OPERATING SYSTEM
84145278	Application		1/29/2015		104102978	TW	DEVICE PROVIDED SCRIPT TO CONVERT COMMAND
84223970	Application		4/28/2015		104113509	TW	FLOOD DISABLE ON NETWORK SWITCH
82739313	Allowed		5/18/2011		100117354	TW	Accessing A Local Storage Device Using An Auxiliary Processor
83235004	Published		5/2/2013		102115688	TW	HIGH PERFORMANCE PERSISTENT MEMORY
82250300	Allowed		12/22/2009		98144189	TW	Computer Including Hot-pluggable Disk Storage Drives That Are Mounted In An In-line Arrangement
83835240	Published		3/10/2014		103108107	TW	Disabling Counterfeit Cartridges
84287948	Application		6/22/2015		104119954	TW	BOLSTER PLATE
81972857	Granted	I236218	4/16/2001	38544	90109023	TW	Method And Apparatus For De-Skewing Clock Edges For Systems With Distributed Clocks
82240622	Granted	I446755	5/7/2009	7/21/2014	98115119	TW	A Method For Interfacing A Fibre Channel Network With An Ethernet Based Network
82240937	Granted	I435538	8/25/2008	4/21/2014	97132359	TW	Ratio Granularity Clock Divider Circuit And Method
83732827	Published		11/21/2013		102142411	TW	FAULT TOLERANCE IN A MULTI-CORE CIRCUIT

PATENT
REEL: 038498 FRAME: 0296

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83982928	Published		7/7/2014		103123324	TW	SNAPSHOT MESSAGE
83117975	Published		10/22/2012		101138893	TW	DRIVE CARRIER TOUCH SENSING
83720616	Granted	I498620	11/5/2013	42248	102140128	TW	OPTICAL CONNECTOR HAVING A CLEANING ELEMENT
82274963	Granted	I395435	2/16/2009	41395	98104871	TW	Open Network Connections
83154772	Granted	I496000	12/21/2012	42227	101149072	TW	PROPER INSTALLATION DETERMINATION BASED ON RFID
84087625	Application		10/29/2014		103137392	TW	METHOD AND SYSTEM FOR FACILITATING MULTI-CURRENCY CARD PAYMENT TRANSACTIONS
83945516	Published		5/9/2014		103116503	TW	MOBILE AUGMENTED REALITY FOR MANAGING ENCLOSED AREAS
90040275	Application		9/18/2015		104130973	TW	DETERMINE SECURE ACTIVITY OF APPLICATION UNDER TEST
82188989	Granted	I396136	1/3/2006	41405	95100160	TW	A Method And Apparatus For Using Code Written In A Language That Is Not Native To The Computer System To Invoke A Procedure Written In A Programming Language That Is Native To The Computer System
83720636	Published		11/5/2013		102140129	TW	Mapping Mechanism for Large Shared Address Spaces
83810245	Published		2/17/2014		103105119	TW	Non-Volatile Memory Based Synchronous Logic
83810428	Allowed		2/19/2014		103105495	TW	Shared Memory System
84118368	Application		12/16/2014		103143831	TW	RE-INITIALIZING MEMORY ARRAYS
84118431	Application		12/16/2014		103143834	TW	IDENTIFYING MEMORY REGIONS THAT CONTAIN REMAPPED MEMORY LOCATIONS
84120887	Application		12/24/2014		103145230	TW	DRAM ROW SPARING
90048559	Application		9/11/2015		104130099	TW	COMMITTING ALTERED METADATA TO A NON-VOLATILE STORAGE DEVICE
90068725	Instructed					TW	RESISTIVE MEMORY DEVICE
84189474	Application		3/13/2015		104108086	TW	RESOURCE RESTRICTION
82258352	Published		5/26/2010		99116812	TW	MEMCAPACITOR
82259225	Published		7/26/2010		99124521	TW	Reconfigurable Multilayer Circuit
82680229	Granted	I484627	3/28/2011	5/11/2015	100110578	TW	CONNECTION AND ADDRESSING OF MULTI-PLANE CROSSPOINT DEVICES
82962959	Granted	I484234	3/14/2012	5/11/2015	101108614	TW	SUB-WAVELENGTH GRATING-BASED OPTICAL ELEMENTS, WAVEGUIDE COUPLER AND OPTOELECTRONIC DEVICE
83109760	Granted	I497134	9/20/2012	42237	101134485	TW	GRATING COUPLERS WITH DEEP-GROOVE NON-UNIFORM GRATINGS
83167072	Published		1/28/2013		102103087	TW	OPTICAL ARCHITECTURES, OPTICAL DISTRIBUTION MATRICES, AND METHODS OF MANUFACTURING OPTICAL STRUCTURES
82579396	Granted	I417737	10/25/2007	41609	96140086	TW	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security

PATENT
REEL: 038498 FRAME: 0297

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83982178	Granted	413988	2/3/1999	12/1/2000	88101616	TW	CRYPTOGRAPHIC SYSTEM
82738978	Granted	I457830	5/13/2011	41933	100116828	TW	Virtual Machine Code Injection
83277079	Published		6/7/2013		102120305	TW	AUGMENTING MEMORY CAPACITY FOR KEY VALUE CACHE
83421358	Published		6/28/2013		102123260	TW	Multi-Level Cell Memory
83769017	Published		12/18/2013		102146927	TW	ADAPTIVE GRANULARITY ROW BUFFER CACHE
84291366	Application		7/2/2015		104121526	TW	NODE-BASED COMPUTE DEVICE WITH PROTOCOL-BASED PRIORITY
82248989	Allowed		3/30/2010		99109580	TW	Method And System For Load Sharing In A Multiple Power Supply System
84193052	Application		3/13/2015		104108064	TW	PROVIDING BACKUP POWER
81992147	Granted	559692	5/23/2002	37926	91110933	TW	Method And System For Controlling A Cooling Fan Within A Computer System
82204040	Granted	I409026	4/19/2006	41528	95113917	TW	Cooling Fan With External Circuit Board
83857092	Published		3/18/2014		103110076	TW	ZONEABLE POWER REGULATION
90054404	Application		9/17/2015		104130786	TW	MODULAR UTILITIES
90055237	Application		9/23/2015			TW	SERVER DEVICE WITH CAPACITIVE CIRCUIT
83692386	Allowed		10/1/2013		102135557	TW	ELECTRICAL CONNECTORS FOR POWER SUPPLIES
83832483	Published		3/13/2014		103109095	TW	TOP LOADING CARTRIDGE
83975826	Published		6/20/2014		103121330	TW	INTERRUPTION OF OUTPUT POWER AND AUXILIARY POWER
84004542	Published		7/28/2014		103125656	TW	RAIL FOR MOUNTING A RACK-MOUNTABLE COMPONENT
84261493	Application		6/9/2015		104118582	TW	SUPPORT MEMBER
84310710	Application		7/14/2015		104122723	TW	RETENTION ASSEMBLY
90032798	Application		8/20/2015		104127115	TW	FAN MODULE ASSEMBLY
90054418	Acknowledged					TW	Hard Drive Carrier
82220759	Granted	I441473	9/27/2007	41801	96135936	TW	Systems And Methods For Synchronizing An Input Signal
83123505	Published		10/24/2012		101139272	TW	ENVIRONMENTAL DATA RECORD
83874183	Published		3/27/2014		103111472	TW	ADDRESS RANGE TRANSFER FROM FIRST NODE TO SECOND NODE
83984336	Allowed		7/9/2014		103123625	TW	ATTACHING CONNECTORS
84120878	Application		12/24/2014		103145229	TW	SENDING A DATA FLOW
83221567	Granted	I496486	3/29/2013	42227	102111413	TW	DEFINING A PERIMETER TO MONITOR A WIRELESS DEVICE FOR A VIOLATION OF THE PERIMETER
90040266	Application		9/18/2015		104130972	TW	INFRASTRUCTURE RULE GENERATION
82128176	Granted	98533	6/5/1997	36089	86107763	TW	CONNECTING EXPANSION CARDS
83417396	Published		7/11/2013		102125077	TW	REPAIRING A MEMORY DEVICE
83958843	Published		5/28/2014		103118611	TW	WRITABLE DEVICE BASED ON ALTERNATING CURRENT
83972185	Published		6/25/2014		103121923	TW	Recovering Stranded Data
83974206	Published		6/25/2014		103121925	TW	Refresh Rate Adjust
84118419	Application		12/16/2014		103143827	TW	MIGRATING DATA BETWEEN MEMORIES

PATENT
REEL: 038498 FRAME: 0298

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0299

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84118439	Application		12/18/2014		103144305	TW	ACCESSING A RESISTIVE STORAGE ELEMENT-BASED MEMORY CELL ARRAY
84120938	Application		12/24/2014		103145228	TW	ENCODING DATA IN A MEMORY ARRAY
84175502	Application		42081		104108607	TW	VALIDATION OF A REPAIR TO A SELECTED ROW OF DATA
84221831	Application		4/21/2015		104112685	TW	MEMORY CONTROLLER
82579562	Granted	I406152	9/7/2009	41507	98130163	TW	Storing Log Data Efficiently While Supporting Querying
83782138	Published		1/14/2014		103101259	TW	Managing Volatile File Copies
83782144	Published		1/17/2014		103101790	TW	UPDATING NON-APPENDABLE RECORD
83832523	Published		3/10/2014		103108129	TW	DETERMINE VOLTAGE SUPPLIED TO A CORE
83854481	Allowed		3/20/2014		103110497	TW	UPDATE OF PROGRAMMABLE FOR COMPUTING NODES
90054395	Acknowledged					TW	OPERATING SYSTEM AGNOSTIC VALIDATION OF FIRMWARE IMAGES
82201532	Granted	I413122	3/22/2006	10/21/2013	95109849	TW	Multiplexer Interface To A Nanoscale-crossbar
82214708	Granted	I364093	10/15/2007	41040	96138453	TW	CROSSBAR-MEMORY SYSTEMS AND METHODS FOR WRITING TO AND READING FROM CROSSBAR MEMORY JUNCTIONS OF CROSSBAR-MEMORY SYSTEMS
82258220	Published		7/9/2010		99122678	TW	MEMRISTIVE JUNCTION WITH INTRINSIC RECTIFIER
82580996	Granted	I447452	12/16/2010	41852	99144194	TW	CIRCUIT SWITCHED OPTICAL INTERCONNECTION FABRIC
82635892	Granted	I489714	1/31/2011	42176	100103681	TW	VERTICAL-CAVITY SURFACE-EMITTING LASERS WITH NON-PERIODIC GRATINGS
82654418	Granted	I440907	3/1/2011	41801	100106646	TW	TELECENTRIC OPTICAL ASSEMBLY
82654435	Granted	I451143	5/18/2011	41883	100117350	TW	Optical Interconnect Fabrics And Optical Switches
82713353	Granted	I452473	7/29/2011	41893	100127015	TW	COMPUTER SYSTEM AND METHOD FOR SHARING COMPUTER MEMORY
83051692	Granted	I475773	7/27/2012	42064	101127183	TW	VERTICAL-CAVITY SURFACE-EMITTING LASERS
83140047	Published		12/19/2012		101148280	TW	OPTICAL CONNECTORS
81997322	Granted	I266333	11/26/2002	11/11/2006	91134353	TW	Method For Writing Data Bits To A Memory Array
82190666	Granted	I421766	3/30/2006	41640	95111182	TW	Providing Virtual Device Access Via Firmware
82259900	Published		5/19/2010		99115931	TW	Drive Carrier With Pivoting Handle
83692397	Published		10/1/2013		102135690	TW	HEAT REMOVAL ASSEMBLY
83778720	Published		12/25/2013		102148146	TW	CONTROLLING ERROR PROPAGATION DUE TO FAULT IN COMPUTING NODE OF A DISTRIBUTED COMPUTING SYSTEM
84065446	Application		41911		103133857	TW	CONNECTOR DEVICE TO REMOVABLY CONNECT AND LOCK TO A FRAME
84157637	Application		2/12/2015		104104695	TW	HANDLE MECHANISM
82181609	Granted	I308690	12/12/2005	4/11/2009	94143867	TW	SYSTEM TO QUALIFY DATA CAPTURE AND ON-CHIP LOGIC ANALYZER
82188350	Granted	I393257	4/1/2005	41375	94110481	TW	Misalignment-Tolerant Multiplexing/Demultiplexing Architectures

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83123516	Allowed		10/24/2012		101139276	TW	DRIVE CARRIER AND DRIVE SYSTEM
82105259	Granted	I242715	11/25/2003	11/1/2005	92133051	TW	System And Method For Effectuating The Transfer Of Data Blocks Including A Header Block Across A Clock Boundary
83984330	Published		7/11/2014		103123966	TW	INTERPRETING SIGNALS RECEIVED FROM REDUNDANT BUSES
84118410	Application		12/16/2014		103143829	TW	ELECTRO-OPTICAL SIGNAL TRANSMISSION
82034648	Granted	448368	9/29/1999	8/1/2001	88116730	TW	Adaptive PCI Slot
83811355	Published		2/14/2014		103104928	TW	Split Mode Addressing of Persistent Memory
83813144	Published		2/24/2014		103106078	TW	Coalescing Memory Access Requests
83980583	Published		7/2/2014		103122824	TW	COMPLETION PACKET RETURN
84120929	Application		12/24/2014		103145226	TW	UNIFYING MEMORY CONTROLLER
82258214	Published		7/27/2010		99124718	TW	ELECTROFORMING-FREE NANOSCALE SWITCHING DEVICE
82861410	Published		10/20/2011		100138068	TW	METAL-INSULATOR TRANSITION SWITCHING DEVICES
83051185	Published		7/26/2012		101126933	TW	NITRIDE-BASED MEMRISTORS
82760563	Allowed		6/21/2011		100121614	TW	Tent Isolation In A Multi-tent Cloud System
83798743	Published		2/5/2014		103103770	TW	CONTROLLER COUPLED TO VISUAL INDICATOR
83854475	Published		3/18/2014		103110135	TW	Extensible Firmware Abstraction
84115871	Application		12/8/2014		103142572	TW	PACKET INSPECTION TO DETERMINE DESTINATION NODE
83769002	Published		12/19/2013		102147165	TW	SELECTING CIRCUITS OF A MULTI-LEVEL INTEGRATED CIRCUIT
84234391	Application		5/6/2015		104114451	TW	SUBSTRATE SPRAYER
83779198	Published		1/6/2014		103100341	TW	THREE-PHASE PARALLEL POWER CONVERTER LOAD ADJUSTMENT
84158928	Application		2/13/2015		104104975	TW	CONTROLLING IMPEDANCE OF BLANK CARTRIDGES
84312865	Application		7/22/2015		104123673	TW	AIR AND FLUID COOLING OF A DATA CENTER
81944219	Granted	5944819	2/18/1993	36403	08/018972	US	Method And System To Optimize Software Execution By A Computer Using Hardware Attributes Of The Computer
81948977	Granted	6151635	6/29/1993	36851	08/084668	US	Router Connections Through Switching Networks Using Virtual Circuits
81949595	Granted	5716018	12/17/1996	35836	08/768262	US	Tape Guide For Digital Data Tape Mini-Cartridge
81952979	Granted	5778155	10/10/1995	35983	08/541843	US	METHOD AND APPARATUS FOR SELECTING AMONG COMPETING FACTS TO ACHIEVE THE DESIRED CALCULATION
81954512	Granted	5673384	10/6/1995	35703	08/540381	US	Dual Disk Lock Arbitration Between Equal Sized Partition Of A Cluster
81956963	Granted	5757377	5/20/1996	35941	08/650197	US	Expediting Blending And Interpolation Via Multiplication
81957092	Granted	5878431	10/4/1996	36221	08/725442	US	Method And Apparatus For Providing Topology Based Enterprise Management Services
81957761	Granted	5600137	10/20/1995	35465	08/546046	US	Probe Apparatus Having Reduced Misalignment Of Conductive Needles

PATENT
REEL: 038498 FRAME: 0300

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81957770	Granted	6219825	1/10/1995	36998	08/370963	US	PROFILE BASED OPTIMIZATION OF SHARED LIBRARIES
81958388	Granted	5844553	3/29/1996	36130	08/625615	US	MECHANISM TO CONTROL AND USE WINDOW EVENTS AMONG APPLICATIONS IN CONCURRENT COMPUTING
81961460	Granted	5978933	1/11/1996	36466	08/584830	US	Generic Fault Tolerant Platform
81961466	Granted	5737311	1/11/1996	35892	08/587864	US	Failure Detection Method In A Communication Channel With Several Routes
81965687	Granted	7013376	12/20/2000	38790	09/746328	US	Method And System For Data Block Sparing In A Solid-state Storage Device
81965828	Granted	6684244	1/7/2000	38013	09/479205	US	Aggregated Policy Deployment And Status Propagation In Network Management Systems
81965831	Granted	7032243	7/2/2001	38825	09/897262	US	System And Method For A Group-Based Network Access Control For Computer
81966323	Granted	6789186	2/18/2000	38237	09/507038	US	Method And Apparatus To Reduce Penalty Of Microcode Lookup
81966338	Granted	6622241	2/18/2000	9/16/2003	09/507499	US	METHOD AND APPARATUS FOR REDUCING BRANCH PREDICTION TABLE POLLUTION
81966449	Granted	6880153	11/21/2000	4/12/2005	09/718059	US	METHOD AND APPARATUS FOR VARYING THE LEVEL OF CORRECTNESS CHECKS EXECUTED WHEN PEFORMING CORRECTNESS CHECKS OPPORTUNISTICALLY USING SPARE INSTRUCTION SLOTS
81966632	Granted	6620710	9/18/2000	9/16/2003	09/664916	US	FORMING A SINGLE CRYSTAL SEMICONDUCTOR FILM ON A NON-CRYSTALLINE SURFACE
81966650	Granted	6885031	8/9/2003	4/26/2005	10/638858	US	INTEGRATED CIRCUIT INCLUDING SINGLE CRYSTAL SEMICONDUCTOR LAYER ON NON-CRYSTALLINE LAYER
81966689	Granted	6490544	2/4/2000	12/3/2002	09/498203	US	SYSTEM FOR TESTING A MULTI-TASKING COMPUTING DEVICE
81966692	Granted	6961758	6/29/2001	11/1/2005	09/896582	US	PERSONALIZED INTERNET CONTENT SERVER SYSTEM
81966890	Granted	6665671	4/4/2001	12/16/2003	09/826273	US	System And Method For Optimization Of Shared Data
81966899	Granted	7284264	12/8/2000	10/16/2007	09/732621	US	Discovery Of An Advertising Service In E-speak
81966959	Granted	6807602	10/30/2000	10/19/2004	09/699877	US	DATA STORAGE SYSTEM AND METHOD UTILIZING CHECKSUMS AND PROTECTION KEYS
81967139	Granted	6735774	10/23/2000	5/11/2004	09/694746	US	Method And Apparatus For System Call Management
81967148	Granted	6920485	10/4/2001	7/19/2005	09/971989	US	Packet Processing In Shared Memory Multi-Computer Systems
81967262	Granted	6721848	12/8/2000	4/13/2004	09/733123	US	Method And Mechanism To Use A Cache To Translate From A Virtual Bus To A Physical Bus
81967265	Granted	7032074	4/1/2004	4/18/2006	10/814154	US	Method And Mechanism To Use A Cache To Translate From A Virtual Bus To A Physical Bus
81967448	Granted	6356470	4/29/2000	3/12/2002	09/563003	US	Dual input, hot swappable dual redundant,enhanced N+1 AC to DC power system

PATENT
REEL: 038498 FRAME: 0301

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81967451	Granted	6430068	8/28/2001	8/6/2002	09/940973	US	Dual Input, Hot Swappable Dual Redundant, Enhanced N+1 AC To DC Power System
81967454	Granted	6654265	6/14/2002	11/25/2003	10/171915	US	Dual Input, Hot Swappable Dual Redundant, Enhanced N+1 AC To DC Power System
81967499	Granted	6950961	2/13/2001	9/27/2005	09/783159	US	Highly Available, Monotonic Increasing Sequence Number Generation
81967625	Granted	6687872	3/14/2001	2/3/2004	09/808910	US	Methods And Systems Of Using Result Buffers In Parity Operations
81967634	Granted	7111227	12/4/2003	9/19/2006	10/728274	US	Methods And Systems Of Using Result Buffers In Parity Operations
81967835	Granted	7269726	1/14/2000	9/11/2007	09/483186	US	Lightweight Public Key Infrastructure Employing Unsigned Certificates
81967871	Granted	6226217	2/18/2000	5/1/2001	09/507207	US	Register Structure With A Dual-Ended Write Mechanism
81967877	Granted	6192001	2/21/2000	2/20/2001	09/510287	US	Integrated weak write test mode (WWWTM)
81968138	Granted	6678817	2/22/2000	1/13/2004	09/510010	US	METHOD AND APPARATUS FOR FETCHING INSTRUCTIONS FROM THE MEMORY SUBSYSTEM OF A MIXED ARCHITECTURE PROCESSOR INTO A HARDWARE EMULATION ENGINE
81968312	Granted	6553512	2/16/2000	4/22/2003	09/505978	US	Method And Apparatus For Resolving CPU Deadlocks
81968330	Granted	6452789	4/29/2000	9/17/2002	09/562593	US	Packaging Architecture For 32 Processor Server
81968648	Granted	6684343	4/29/2000	1/27/2004	09/561812	US	MANAGING OPERATIONS OF A COMPUTER SYSTEM HAVING A PLURALITY OF PARTITIONS
81968870	Granted	6874116	5/22/2003	3/29/2005	10/443103	US	Masking Error Detection/Correction Latency In Multilevel Cache Transfers
81968897	Granted	6895420	2/16/2000	5/17/2005	09/505382	US	APPARATUS AND METHOD FOR SHARING DATA FET FOR A FOUR-WAY MULTIPLEXER
81969203	Granted	6172894	2/16/2000	1/9/2001	09/505082	US	Semiconductor Memory Cell Having More Than Two Stable States
81969818	Granted	6875930	4/18/2002	4/5/2005	10/125287	US	Optimized Conductor Routing For Multiple Components On A Printed Circuit Board
81969824	Granted	7124180	4/27/2000	10/17/2006	09/560032	US	Internet Usage Data Recording System And Method Employing A Configurable Rule Engine For The Processing And Correlation Of Network Data
81969827	Granted	6813645	5/24/2000	11/2/2004	09/578826	US	INTERNET USAGE DATA RECORDING SYSTEM AND METHOD EMPLOYING A CONFIGURABLE RULE ENGINE WITH IP ADDRESS RANGE MATCHING FOR THE PROCESSING OF NETWORK DATA
81969830	Granted	7024468	4/27/2000	4/4/2006	09/560509	US	Internet Usage Data Recording System And Method With Configurable Data Collector System

PATENT
REEL: 038498 FRAME: 0302

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81969833	Granted	7293083	4/27/2000	11/6/2007	09/559693	US	Internet Usage Data Recording System And Method Employing Distributed Data Processing And Data Storage
81969899	Granted	7103626	5/24/2000	9/5/2006	09/980757	US	Partitioning In Distributed Computer System
81970013	Granted	7263719	11/29/2000	8/28/2007	09/726072	US	System And Method For Implementing Network Security Policies On A Common Network Infrastructure
81970082	Granted	6792550	1/31/2001	9/14/2004	09/775404	US	METHOD AND APPARATUS FOR PROVIDING CONTINUED OPERATION OF A MULTIPROCESSOR COMPUTER SYSTEM AFTER DETECTING IMPAIRMENT OF A PROCESSOR COOLING DEVICE
81970646	Granted	7047531	7/11/2002	5/16/2006	10/194669	US	Method And Apparatus For Automated Network Polling
81970751	Granted	6785076	7/17/2000	8/31/2004	09/620281	US	Alternate Tape Repositioning Method During Data Recovery
81970820	Granted	6763409	1/31/2001	7/13/2004	09/775233	US	Switch-On-The-Fly GBIC Disk Channel Adapter And Disk Channel System
81970832	Granted	6654908	4/29/2000	11/25/2003	09/563019	US	METHOD FOR AND SYSTEM PRODUCING SHARED USAGE OF INTERCOMMUNICATION FABRIC ERROR LOGGING REGISTERS IN A MULTIPROCESSOR ENVIRONMENT
81970892	Granted	6473845	9/28/2000	10/29/2002	09/675021	US	SYSTEM AND METHOD FOR DYNAMICALLY UPDATING MEMORY ADDRESS MAPPINGS
81970898	Granted	6751857	4/2/2001	6/22/2004	09/824506	US	Conductive Contamination Reliability Solution For Assembling Substrates
81971072	Granted	6745274	4/25/2000	6/1/2004	09/558088	US	APPARATUS AND METHOD FOR SYNCHRONIZING MULTIPLE ACCESSES TO COMMON RESOURCES
81971123	Granted	6594745	1/31/2001	7/15/2003	09/775013	US	MIRRORING AGENT ACCESSIBLE TO REMOTE HOST COMPUTERS, AND ACCESSING REMOTE DATA-STORAGE DEVICES, VIA A COMMUNCATIONS MEDIUM
81971138	Granted	6760870	4/29/2000	7/6/2004	09/563007	US	Algorithm For Resynchronizing A Bit-sliced Crossbar
81971144	Granted	6744834	4/28/2000	6/1/2004	09/561142	US	Method And Apparatus For Initializing A Synchronizer For Same Frequency, Phase Unknown Data Across Multiple Bit-Sliced Interfaces
81971192	Granted	6625559	5/1/2000	9/23/2003	09/562043	US	System And Method For Maintaining Lock Of A Phase Locked Loop Feedback During Clock Halt
81971246	Granted	6651180	4/28/2000	11/18/2003	09/560551	US	A METHOD AND APPARATUS FOR GENERATING TIMEOUTS TO A SYSTEM BASED COUNTING INTERVALS SUPPLIED BY A SHARED COUNTING DEVICE
81971252	Granted	6912679	4/29/2000	6/28/2005	09/562588	US	System And Method For Electrical Data Link Testing
81971255	Granted	7346812	4/27/2000	3/18/2008	09/561179	US	APPARATUS AND METHOD FOR IMPLENTING PROGRAMMABLE LEVELS OF ERROR SEVERITY
81971258	Granted	6647469	5/1/2000	11/11/2003	09/562191	US	Using Read Current Transactions For Improved Performance In Directory-Based Coherent I/O Systems

PATENT
REEL: 038498 FRAME: 0303

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81971312	Granted	6560673	1/31/2001	5/6/2003	09/775213	US	NEW FIBRE CHANNEL UPGRADE PATH
81971318	Granted	6724846	4/28/2000	4/20/2004	09/561143	US	Simple, High Performance, Bit-Sliced Mesochronous Synchronizer For A Source Synchronous Link
81971459	Granted	6928525	4/28/2000	8/9/2005	09/560907	US	Per Cache Line Semaphore For Cache Access Arbitration
81971750	Granted	8140659	5/8/2001	3/20/2012	09/850794	US	CALCULATING AN ESTIMATED TIME TO COMPLETE A REQUEST
81971762	Granted	6671658	12/23/2000	12/30/2003	09/745949	US	Method For Service Level Estimation In An Operating Computer System
81971771	Granted	7984147	12/29/2000	7/19/2011	09/751009	US	Apparatus And Method For Identifying A Requested Level Of Service For A Transaction
81971828	Granted	6704687	1/31/2001	3/9/2004	09/773120	US	Historical Results Based Method For Automatically Improving Computer System Performance
81971834	Granted	6628994	8/31/2000	9/30/2003	09/651916	US	Method To Obtain Improved Performance By Automatic Adjustment Of Computer System Parameters
81971957	Granted	6658543	9/19/2002	12/2/2003	10/247098	US	System And Method To Protect Vital Memory Space From Non-Malicious Writes In A Multi Domain System
81972005	Granted	6671792	4/28/2000	12/30/2003	09/560909	US	Share Masks And Alias For Directory Coherency
81972008	Granted	6785778	5/13/2003	8/31/2004	10/437863	US	Share Masks And Alias For Directory Coherency
81972056	Granted	6718454	4/29/2000	4/6/2004	09/563060	US	Parallel Rolling Prefetch Machine For I/O Cache Applications And Method Of Operations Thereof
81972203	Granted	6629213	5/1/2000	9/30/2003	09/561689	US	APPARATUS AND METHOD USING SUB-CACHELINE TRANSACTIONS TO IMPROVE SYSTEM PERFORMANCE
81972206	Granted	6631428	5/1/2000	10/7/2003	09/562489	US	APPARATUS AND METHOD FOR COMPLETING TRANSACTIONS IN ALL FLOW CONTROL CLASSES
81972209	Granted	6799287	5/1/2000	9/28/2004	09/562133	US	Method And Apparatus For Verifying Error Correcting Codes
81972242	Granted	7325164	9/25/2003	1/29/2008	10/670620	US	SYSTEM AND METHOD FOR MULTIPLE CYCLE CAPTURE OF CHIP STATE
81973451	Granted	7640153	6/4/2001	12/29/2009	09/874170	US	NETWORKED CLIENT-SERVER ARCHITECTURE FOR TRANSPARENTLY TRANSFORMING AND EXECUTING APPLICATIONS
81973568	Granted	6772363	3/12/2001	8/3/2004	09/804954	US	Fast Failover Database Tier In A Multi-Tier Transaction Processing System
81973643	Granted	6757774	3/17/2001	6/29/2004	09/811194	US	HIGH-AVAILABILITY, HIGHLY-REDUNDANT STORAGE SYSTEM ENCLOSURE
81974126	Granted	6851074	4/30/2001	2/1/2005	09/845469	US	System And Method For Recovering From Memory Failures In Computer Systems
81974177	Granted	7421515	1/17/2002	9/2/2008	10/051397	US	Method And System For Communications Network
81974183	Granted	7743126	6/28/2001	6/22/2010	09/895235	US	Migrating Recovery Modules In A Distributed Computing Environment

PATENT
REEL: 038498 FRAME: 0304

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81974330	Granted	6684177	5/10/2001	1/27/2004	09/854212	US	COMPUTER IMPLEMENTED SCALABLE, INCREMENTAL AND PARALLEL CLUSTERING BASED ON WEIGHTED DIVIDE AND CONQUER
81974582	Granted	6862691	9/19/2001	3/1/2005	09/957268	US	Redundant Component System And Method For Facilitating Endsystem Functionality
81974615	Granted	7016971	5/24/2000	3/21/2006	09/980760	US	A CONGESTION MANAGEMENT IN A DISTRIBUTED COMPUTER SYSTEM MULTIPLYING CURRENT VARIABLE INJECTION RATE WITH A CONSTANT TO SET NEW VARIABLE INJECTION RATE AT SOURCE NODE
81974741	Granted	6877162	7/31/2000	4/5/2005	09/628919	US	Method And System For Extendable Class-Based Shared Data-Types
81974759	Granted	6278627	2/15/2000	8/21/2001	09/504138	US	Multiple Input Bit-Line Detection With Phase Stealing Latch In A Memory Design
81974762	Granted	7757066	12/29/2000	7/13/2010	09/751372	US	System And Method For Executing Variable Latency Load Operations In A Data Processor
81975068	Granted	6715014	5/25/2000	3/30/2004	09/578964	US	MODULE ARRAY
81976067	Granted	6600616	4/25/2001	7/29/2003	09/843129	US	Method For Reduction Of Off-track Errors Or Write Failures In Data Storage Tape Systems
81976325	Granted	6889335	4/7/2001	5/3/2005	09/828041	US	Memory Controller Receiver Circuitry With Tri-State Noise Immunity
81976379	Granted	6647449	10/5/2000	11/11/2003	09/680551	US	System, Method And Circuit For Performing Round Robin Arbitration
81976682	Granted	6310499	7/17/2000	10/30/2001	09/617373	US	Methods And Apparatus For Adjusting The Deadtime Between Non-Overlapping Clock Signals
81977060	Granted	6650961	8/7/2001	11/18/2003	09/924201	US	Disk Cartridge Data Storage Methods And Apparatus
81977066	Granted	7136720	9/4/2003	11/14/2006	10/656040	US	Disk Cartridge Data Storage Methods And Apparatus
81977141	Granted	6944807	3/25/2002	9/13/2005	10/107291	US	METHOD AND APPARATUS FOR ACHIEVING HIGHER PRODUCT YIELDS BY USING FRACTIONAL PORTIONS OF IMBEDDED MEMORY ARRAYS
81977177	Granted	6450438	4/25/2001	9/17/2002	09/843209	US	Apparatus And Methods For Forming A Tape Pack
81977306	Granted	7076647	6/7/2001	7/11/2006	09/875289	US	Dynamic Kernel Tunables
81977366	Granted	7003559	10/23/2000	2/21/2006	09/694843	US	System And Method For Determining Probable Network Paths Between Nodes In A Network Topology
81977435	Granted	7055074	4/25/2001	5/30/2006	09/842333	US	Device To Inhibit Duplicate Cache Repairs
81977510	Granted	6851024	8/17/2000	2/1/2005	09/641383	US	Exclusive Caching In Computer Systems
81977516	Granted	8554604	8/30/2001	10/8/2013	09/944969	US	Method And Apparatus For Modeling A Business Process
81977549	Granted	7530086	12/12/2000	5/5/2009	09/734996	US	Media Program Timing And Identity Delivery Method And System
81977879	Granted	6684218	11/21/2000	1/27/2004	09/718951	US	Standard Specific URL

PATENT
REEL: 038498 FRAME: 0305

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81977951	Granted	6392446	6/1/2001	5/21/2002	09/872296	US	Device And Method For Reducing A Time Constant Of A Data Bus During A Voltage Transition
81978071	Granted	8621480	12/16/2004	12/31/2013	11/012686	US	Load Balancer With Starvation Avoidance
81978491	Granted	6418068	1/19/2001	7/9/2002	09/766354	US	Self-Healing Memory
81978512	Granted	6721720	2/22/2001	4/13/2004	09/790921	US	METHODS AND STRUCTURE FOR CHARACTERIZATION OF BAYESIAN BELIEF NETWORKS
81978683	Granted	6662281	1/31/2001	12/9/2003	09/774974	US	REDUNDANT BACKUP DEVICE
81978701	Granted	6483710	5/22/2001	11/19/2002	09/862359	US	Method And Apparatus To Facilitate Removal And Installation Of Removable Components
81978743	Granted	6757764	4/18/2001	6/29/2004	09/836986	US	METHOD AND APPARATUS FOR TRANSFERRING INFORMATION USING A CONSTANT FREQUENCY
81978752	Granted	6724409	11/16/2000	4/20/2004	09/714330	US	TREE-BASED GRAPHICAL USER INTERFACE FOR CREATING AND EDITING MACHINE CONTROL SEQUENCES
81978758	Granted	6741907	3/23/2001	5/25/2004	09/815890	US	Inventory Control Apparatus And Method For A Data Storage System
81978797	Granted	7104618	12/16/2005	9/12/2006	11/305708	US	Reconfigurable Data Cartridge Import/export Drawer
81978809	Granted	6643091	3/5/2001	11/4/2003	09/799232	US	AUTOMATED DATA CARTRIDGE IMPORT /EXPORT DRAWER
81978872	Granted	6618348	12/5/2000	9/9/2003	09/729870	US	Rear-Facing Autochanger Bar Code Reader
81978890	Granted	6523749	3/6/2001	2/25/2003	09/800248	US	Apparatus And Method For Retrieving Data Cartridge Information External To A Media Storage System
81978923	Granted	6870797	1/4/2001	3/22/2005	09/754955	US	MEDIA STORAGE SYSTEM USING A TRANSPONDER FOR TRANSMITTING DATA SIGNAL
81978941	Granted	6758400	11/20/2000	7/6/2004	09/716878	US	BAR CODE READING SYSTEM
81978998	Granted	7058860	6/29/2001	6/6/2006	09/896495	US	SYSTEM AND METHOD OF AUTOMATIC PARAMETER COLLECTION AND PROBLEM SOLUTION GENERATION FOR COMPUTER STORAGE DEVICES
81979247	Granted	6466498	1/10/2001	10/15/2002	09/758875	US	Discontinuity-based Memory Cell Sensing
81979373	Granted	6813635	10/13/2000	11/2/2004	09/687779	US	System And Method For Distributing Load Among Redundant Independent Stateful World Wide Web Server Sites
81979427	Granted	6604370	8/31/2001	8/12/2003	09/943942	US	Variably Configured Sprayjet Cooling System
81979436	Granted	6612120	5/31/2002	9/2/2003	10/159735	US	Spray Cooling With Local Control Of Nozzles
81979442	Granted	6684206	5/18/2001	1/27/2004	09/861452	US	OLAP-Based Web Access Analysis Method And System
81979445	Granted	7171406	10/29/2003	1/30/2007	10/695681	US	Olap-based Web Access Analysis Method And System
81979451	Granted	7483940	4/11/2005	1/27/2009	11/102999	US	Dynamic Agent With Embedded Web Server And Mark-up Language Support For E-commerce Automation
81980060	Granted	6817014	4/11/2001	11/9/2004	09/833249	US	ANALYSIS OF EXECUTABLE PROGRAM CODE USING COMPILER-GENERATED FUNCTION ENTRY POINTS AND ENDPOINTS WITH OTHER SOURCES OF FUNCTION ENTRY POINTS AND ENDPOINTS

PATENT
REEL: 038498 FRAME: 0306

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81980063	Granted	6918110	4/11/2001	7/12/2005	09/833248	US	DYNAMIC INSTRUMENTATION OF AN EXECUTABLE PROGAM BY MEANS OF CAUSING A BREAKPOINT AT THE ENTRY POINT OF A FUNCTION AND PROVIDING INSTRUMENTATION CODE
81980066	Granted	6621310	10/24/2000	9/16/2003	09/696105	US	Reducing Power Consumption Variability Of Precharge-Pulldown Busses
81980117	Granted	6721736	11/15/2000	4/13/2004	09/713768	US	METHODS, COMPUTER SYSTEM, AND COMPUTER PROGRAM PRODUCT FOR CONFIGURING A META SEARCH ENGINE
81980135	Granted	6898733	10/31/2001	5/24/2005	09/999794	US	Process Activity And Error Monitoring System And Method
81980177	Granted	6763477	7/31/2000	7/13/2004	09/629494	US	A METHOD AND APPARATUS FOR TRANSMITTING AND RECEIVING DATA USING A SELF CLOCKING LINK PROTOCOL
81980243	Granted	6509788	3/16/2001	1/21/2003	09/811255	US	System And Method Utilizing On-chip Voltage Controlled Frequency Modulation To Manage Power Consumption
81980627	Granted	6625702	4/7/2001	9/23/2003	09/827766	US	Memory Controller With Support For Memory Modules Comprised Of Non-Homogeneous Data Width RAM Devices
81980636	Granted	6539527	3/19/2001	3/25/2003	09/812661	US	System And Method Of Determining The Noise Sensitivity Of An Integrated Circuit
81980687	Granted	7577581	10/31/2000	8/18/2009	09/703459	US	Method For Targeting Promotions To Individual Associated With A Vehicle
81980864	Granted	6795855	4/5/2001	9/21/2004	09/827150	US	Non-Root Users Execution Of Root Commands
81980867	Granted	6886100	5/15/2001	4/26/2005	09/855937	US	Disabling Tool Execution Via Roles
81980882	Granted	6915520	4/6/2001	7/5/2005	09/828439	US	Java C++ Proxy Objects
81982871	Granted	6633834	8/29/2001	10/14/2003	09/940614	US	Baselining Of Data Collector Data
81982880	Granted	7685278	12/18/2001	3/23/2010	10/026061	US	Adapting Bayesian Network Parameters On-line In A Dynamic Environment
81982994	Granted	7120678	2/27/2001	10/10/2006	09/794376	US	Method And Apparatus For Configurable Data Collection On A Computer Network
81982997	Granted	6868083	1/19/2001	3/15/2005	09/784226	US	Method And System For Packet Communication Employing Path Diversity
81983168	Granted	6886172	4/5/2001	4/26/2005	09/827033	US	METHOD FOR MAPPING PROCEDURAL C++ CODE TO JAVA OBJECT-ORIENTED CLASSES
81983378	Granted	8005926	6/29/2005	8/23/2011	11/169971	US	Tiered Web Site With Web-tier Admission Control Based On Utilization Data Generated On Application Tier
81983570	Granted	6718392	10/24/2000	4/6/2004	09/695634	US	Queue Pair Partitioning In Distributed Computer System
81983804	Granted	6868481	10/31/2000	3/15/2005	09/704176	US	Cache Coherence Protocol For A Multiple Bus Multiprocessor System
81983810	Granted	7373457	2/1/2005	5/13/2008	11/049306	US	Cache Coherence Protocol For A Multiple Bus Multiprocessor System

PATENT
REEL: 038498 FRAME: 0307

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0308

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81984005	Granted	6954928	8/8/2001	10/11/2005	09/924773	US	Method For Selecting A Set Of Patches To Update A System Of Programs
81984299	Granted	6667882	5/15/2002	12/23/2003	10/144785	US	Cooling Assembly For A Heat Producing Assembly
81984374	Granted	7251780	6/1/2005	7/31/2007	11/141409	US	DYNAMIC WEB CONTENT UNFOLDING IN WIRELESS INFORMATION GATEWAYS
81984692	Granted	6595014	8/31/2001	7/22/2003	09/943797	US	Spray Cooling System With Cooling Regime Detection
81984695	Granted	6633491	8/17/2001	10/14/2003	09/932372	US	Support For Varying Sizes Of Memory Cards For Shock And Vibration
81985124	Granted	7734739	4/20/2001	6/8/2010	09/838239	US	Method And System For Consolidating Network Topology In Duplicate IP Networks
81986303	Granted	6981231	2/22/2002	12/27/2005	10/079508	US	System And Method To Reduce Leakage Power In An Electronic Device
81986420	Granted	6950812	9/17/2001	9/27/2005	09/954755	US	Determining Accuracy Of A Classifier
81986423	Granted	6912555	1/18/2002	6/28/2005	10/053987	US	METHOD FOR CONTENT MINING OF SEMI-STRUCTURED DOCUMENTS
81986426	Granted	7003725	7/13/2001	2/21/2006	09/905610	US	METHOD AND SYSTEM FOR NORMALIZING DIRTY TEXT IN A DOCUMENT
81986432	Granted	7424461	6/28/2001	9/9/2008	09/896036	US	Multi-module Genetic Programming With Multiple Genetic Data Representations
81986435	Granted	6804570	2/4/2002	10/12/2004	10/067595	US	Predicting Manufacturing Process Failures
81986480	Published		5/9/2001		09/852611	US	An On-line Shopping Conversion Simulation Module
81986483	Granted	6701333	7/17/2001	3/2/2004	09/908388	US	METHOD OF EFFICIENT MIGRATION FROM ONE CATEGORIZATION HIERARCHY TO ANOTHER HIERARCHY
81986486	Granted	6772374	4/30/2001	8/3/2004	09/846007	US	CONTINUOUS LANGUAGE-BASED PREDICTION AND TROUBLESHOOTING TOOL
81986504	Granted	6853835	8/13/2001	2/8/2005	09/928615	US	Asymmetric Wireless Communication System Using Two Different Radio Technologies
81986606	Granted	7013462	5/10/2001	3/14/2006	09/854209	US	METHOD TO MAP AN INVENTORY MANAGEMENT SYSTEM TO A CONFIGURATION MANAGEMENT SYSTEM
81986609	Granted	6513145	7/31/2001	1/28/2003	09/920416	US	METHOD FOR ESTIMATING THE POWER CONSUMED IN A MICROPROCESSOR
81986627	Granted	7003441	7/31/2001	2/21/2006	09/920382	US	METHOD FOR DERIVING THE BENCHMARK PROGRAM FOR ESTIMATING THE MAXIMUM POWER CONSUMED IN A MICROPROCESSOR
81986687	Granted	6918012	8/28/2001	7/12/2005	09/942328	US	STREAMLINED CACHE COHERENCY PROTOCOL SYSTEM AND METHOD FOR A MULTIPLE PROCESSOR SINGLE CHIP DEVICE
81986741	Granted	6708515	8/31/2001	3/23/2004	09/945046	US	Passive Spray Coolant Pump
81986747	Granted	6687126	4/30/2001	2/3/2004	09/845433	US	Cooling Plate Arrangement For Electronic Components
81986750	Granted	6600220	5/14/2001	7/29/2003	09/854544	US	POWER DISTRIBUTION IN MULTI-CHIP MODULES

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81986753	Granted	6886117	11/20/2001	4/26/2005	09/988631	US	Field Repairable Embedded Memory In System-On-A-Chip
81986756	Granted	6910155	6/25/2001	6/21/2005	09/892291	US	System And Method For Chip Testing
81986792	Granted	6862022	7/20/2001	3/1/2005	09/910645	US	Method And System For Automatically Selecting A Vertical Refresh Rate For A Video Display Monitor
81987041	Granted	6883029	2/14/2001	4/19/2005	09/783414	US	SEPARATE READ AND WRITE SERVERS WITH READ ACCESS DURING WRITES
81987047	Granted	6625604	3/9/2001	9/23/2003	09/803583	US	Namespace Service In A Distributed File System Using A Database Management System
81987053	Granted	6842754	4/17/2001	38363	09/836828	US	Lease Enforcement In A Distributed File System
81987938	Granted	6701402	3/30/2001	3/2/2004	09/820727	US	SELECTIVELY OPERATING A HOST'S DEVICE CONTROLLER IN A FIRST MODE OR A SECOND MODE
81988415	Granted	8117107	6/29/2001	2/14/2012	09/895690	US	Method For Auction Based Simulation To Extract Demand Curve
81988421	Granted	6963832	10/9/2001	11/8/2005	09/974645	US	Meaning Token Dictionary For Automatic Speech Recognition
81988553	Granted	6981104	7/12/2002	12/27/2005	10/195090	US	Method For Conducting Checkpointing Within A Writeback Cache
81989051	Granted	6883091	5/30/2001	4/19/2005	09/871329	US	Reducing Boot Times Via Intrusion Monitoring
81989060	Granted	6859887	5/31/2001	2/22/2005	09/872454	US	Method To Invoke Wide-Area Objects In Distributed Computer Systems
81989063	Granted	6928580	7/9/2001	8/9/2005	09/901972	US	Distributed Data Center System Protocol For Continuity Of Service In The Event Of Disaster Failures
81989123	Granted	6609083	6/1/2001	8/19/2003	09/870673	US	Adaptive Performance Data Measurement And Collections
81989291	Granted	6710958	10/26/2001	3/23/2004	10/054626	US	Optimized Sparing Table And Method
81989309	Granted	6381406	3/2/2001	4/30/2002	09/798402	US	Adaptive Synchronous DC Fan Speed Controller
81989438	Granted	6763338	4/5/2002	7/13/2004	10/116835	US	MACHINE DECISIONS BASED ON PREFERENTIAL VOTING TECHNIQUES
81989675	Granted	7054934	10/26/2001	5/30/2006	10/046519	US	Tailorable Optimization Using Model Descriptions Of Services And Servers In A Computing Environment
81989678	Granted	7039705	10/26/2001	5/2/2006	10/044882	US	Representing Capacities And Demands In A Layered Computing Environment Using Normalized Values
81989681	Granted	7035930	10/26/2001	4/25/2006	10/046516	US	METHOD AND FRAMEWORK FOR GENERATING AN OPTIMIZED DEPLOYMENT OF SOFTWARE APPLICATIONS IN A DISTRIBUTED COMPUTING ENVIRONMENT USING LAYERED MODEL DESCRIPTIONS OF SERVICES AND SERVERS
81989786	Granted	8560512	7/18/2002	10/15/2013	10/199664	US	Finding Matching Locations, Trajectories Or Attributes While Maintaining Privacy Of Non-matching Information
81989792	Granted	6584401	11/27/2001	6/24/2003	09/995349	US	Automatic Gathering And Analysis Of Data On Commute Paths

PATENT
REEL: 038498 FRAME: 0309

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81990611	Granted	6675260	10/31/2001	1/6/2004	09/997385	US	Virtual Electronic Data Library Supporting Mixed Drive Types Using Virtual Libraries Within A Single Library
81990794	Granted	6810114	7/10/2001	10/26/2004	09/902036	US	System For Updating A Voicemail Network
81990812	Granted	6990612	7/18/2002	1/24/2006	10/198868	US	System And Method For Preventing Software Errors
81990860	Granted	6667885	7/20/2001	12/23/2003	09/909512	US	Attachment Of A Single Heat Dissipation Device To Multiple Components With Vibration Isolation
81991103	Granted	6976073	11/29/2001	12/13/2005	09/995774	US	Transparent Remote Data Storage Device And Method
81991115	Granted	6907519	3/19/2002	6/14/2005	10/100874	US	Systems And Methods For Integrating Emulated And Native Code
81991226	Granted	7313503	2/19/2002	12/25/2007	10/076635	US	DESIGNING LAYOUT FOR INTERNET DATACENTER COOLING
81991301	Granted	6990593	7/31/2001	1/24/2006	09/919134	US	METHOD FOR DIVERTING POWER RESERVES AND SHIFTING ACTIVITES ACCORDING TO ACTIVITY PRIORITIES IN A SERVER CLUSTER IN THE EVENT OF A POWER INTERRUPTION
81991304	Granted	7478394	6/4/2001	1/13/2009	09/873875	US	Context-corrupting Context Switching
81991499	Granted	6832303	1/3/2002	12/14/2004	10/033778	US	Method And System For Managing An Allocation Of A Portion Of A Memory
81991601	Granted	6947237	10/9/2001	9/20/2005	09/974602	US	Worm Magnetic Tape With Cartridge Memory System And Method
81991664	Granted	6742166	7/20/2001	5/25/2004	09/909541	US	System And Method For Evaluating Functional Coverage Linked To A Verification Test Plan
81991667	Granted	D458924	7/2/2001	6/18/2002	29/144444	US	Disk Drive Carrier
81991751	Granted	6944659	3/1/2001	9/13/2005	09/795101	US	METHOD AND APPARATUS FOR GATHERING AND TRANSMITTING INFORMATION FOR EVENTS RELATING TO A NETWORKED APPLIANCE
81992420	Granted	6772161	12/19/2001	8/3/2004	10/024937	US	Object-Level Migration In A Partition-Based Distributed File System
81992423	Granted	6775672	12/19/2001	8/10/2004	10/024940	US	Updating References To A Migrated Object In A Partition-Based Distributed File System
81992426	Granted	6775673	12/19/2001	8/10/2004	10/024941	US	Logical Volume-Level Migration In A Partition-Based Distributed File System
81992498	Granted	6665166	3/15/2001	12/16/2003	09/809409	US	Systems With Enhanced Electrostatic Discharge Protection
81992846	Granted	7099866	11/16/2001	8/29/2006	09/987912	US	Method Of Generating And Presenting Kernel Data
81992981	Granted	6654867	5/22/2001	11/25/2003	09/864036	US	METHOD AND SYSTEM TO PRE-FETCH COMPRESSED MEMORY BLOCKS SUING POINTERS
81992984	Granted	6658549	5/22/2001	12/2/2003	09/863988	US	METHOD AND SYSTEM ALLOWING A SINGLE ENTITY TO MANAGE MEMORY COMPRISING COMPRESSED AND UNCOMPRESSED DATA

PATENT
REEL: 038498 FRAME: 0310

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81992987	Granted	7634599	6/29/2001	12/15/2009	09/895345	US	Method For Improving Inline Compression Bandwidth For High Speed Buses
81992993	Granted	6829691	6/28/2002	12/7/2004	10/187337	US	System For Compressing/Decompressing Data
81993035	Granted	6832927	10/3/2001	12/21/2004	09/970194	US	Low Profile PCI Hot Plug Actuator Assembly
81993287	Granted	6826162	9/28/2001	11/30/2004	09/967692	US	Locating And Mapping Wireless Network Devices Via Wireless Gateways
81993302	Granted	7689710	6/12/2001	3/30/2010	09/880632	US	METHOD AND SYSTEM FOR A FRONT-END MODULAR TRANSMISSION CONTROL PROTOCOL (TCP) HANDOFF DESIGN IN A STREAMS BASED TRANSMISSION CONTROL PROTOCOL/INTERNET PROTOCOL (TCP/IP) IMPLEMENTATION
81993359	Granted	7685348	8/7/2001	3/23/2010	09/924163	US	Dedicated Server Management Card With Hot Swap Functionality
81993368	Granted	6636422	12/11/2001	10/21/2003	10/014905	US	Data Storage Systems With Enhanced Cooling
81993548	Granted	6651521	5/1/2001	11/25/2003	09/846620	US	Method For Sampling And Testing Data Centers For Metallic Particulates
81993551	Granted	6923075	9/8/2003	8/2/2005	10/658510	US	METHODS FOR SAMPLING AND TESTING DATA CENTERS FOR METALLIC PARTICULATES
81993620	Granted	6661203	11/12/2001	12/9/2003	10/011140	US	BATTERY CHARGING AND DISCHARGING SYSTEM
81993740	Granted	7594233	6/28/2002	9/22/2009	10/183443	US	Processing Thread Launching Using Volunteer Information
81993806	Granted	6732241	9/7/2001	5/4/2004	09/948362	US	Technique For Migrating Data Between Storage Devices For Reduced Power Consumption
81993905	Granted	7395323	8/7/2001	7/1/2008	09/924029	US	System And Method For Providing Network Address Information In A Server System
81993908	Granted	6968470	8/7/2001	11/22/2005	09/924024	US	System And Method For Power Management In A Server System
81993929	Granted	7612990	3/10/2003	11/3/2009	10/384834	US	LCD PANEL FOR A SERVER SYSTEM
81993932	Granted	7317620	10/3/2003	1/8/2008	10/678826	US	LCD PANEL FOR A SERVER SYSTEM
81994103	Granted	6614133	10/31/2001	9/2/2003	10/001582	US	POWER SYSTEM WITH PLURAL PARALLEL POWER SUPPLIES WITH AT LEAST ONE POWER SUPPLY IN STANDBY MADE FOR ENEGERY EFFICIENCY
81994115	Granted	6693858	3/21/2001	2/17/2004	09/814236	US	Data Cartridge Detector
81994244	Granted	7171396	4/4/2002	1/30/2007	10/116338	US	METHOD AND PROGRAM PRODUCT FOR SPECIFYING THE DIFFERENT DATA ACCESS ROUTE FOR THE FIRST DATA SET INCLUDES STORING AN INDICATION OF THE DIFFERENT ACCESS FOR THE FIRST DATA SET PROVIDING ALTERNATIVE DATA ACCESS ROUTES TO A DATA STORAGE
81994424	Granted	6851110	6/7/2001	2/1/2005	09/876655	US	Optimizing An Executable Computer Program Having Address-Bridging Code Segments

PATENT
REEL: 038498 FRAME: 0311

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81994430	Granted	6795964	6/18/2001	9/21/2004	09/883710	US	EDGE PROFILING FOR EXECUTABLE PROGRAM CODE HAVING BRANCHES THROUGH STUB CODE SEGMENTS
81994538	Granted	6931632	11/8/2001	8/16/2005	10/005302	US	Instrumentation Of Code Having Predicated Branch-Call And Shadow Instructions
81994541	Granted	6934943	10/18/2001	8/23/2005	10/004015	US	Optimization Of Control Transfers To Dynamically Loaded Modules
81994784	Granted	7046587	8/23/2001	5/16/2006	09/938155	US	Systems And Methods For Providing Automatic Access To Data Media In A Data Storage System
81994904	Granted	6778351	5/18/2001	8/17/2004	09/861455	US	System And Method Of Redundant Cabling In A Media Storage System
81994925	Granted	6733223	8/23/2001	5/11/2004	09/938053	US	Systems And Methods For Providing A Removable Media Handling System In A Data Storage System
81994997	Granted	7111282	6/12/2001	9/19/2006	09/880327	US	INSTRUMENTING A SOFTWARE PROGRAM AND COLLECTING DATA FROM THE INSTRUMENTED SOFTWARE PROGRAM BY TYPE
81995120	Granted	6907505	7/31/2002	6/14/2005	10/209822	US	Immediately Available, Statically Allocated, Full-logical-unit Copy With A Transient, Snapshot-copy-like Intermediate Stage
81995162	Granted	6901303	7/31/2001	5/31/2005	09/919659	US	METHOD AND APPARATUS FOR CONTROLLING FANS AND POWER SUPPLIES TO PROVIDE ACCELERATED RUN-IN TESTING
81995168	Granted	7100160	10/19/2001	8/29/2006	09/981906	US	Method And System For Implementing Host-dependent SCSI Behavior In A Heterogeneous Host Environment
81995729	Granted	7370308	10/27/2005	5/6/2008	11/261951	US	Integrated Circuit Analysis Method And Program Product
81995780	Granted	7962950	6/29/2001	6/14/2011	09/896019	US	System And Method For File System Mandatory Access Control
81995903	Granted	7058858	10/26/2001	6/6/2006	10/005555	US	Systems And Methods For Providing Automated Diagnostic Services For A Cluster Computer System
81995969	Granted	7062558	11/13/2001	6/13/2006	09/991340	US	Method And System For Enabling Resource Sharing In A Communication Network Having A Plurality Of Application Environments
81995972	Granted	7310672	11/13/2001	12/18/2007	09/991339	US	METHOD AND SYSTEM FOR EXPLOITING SERVICE LEVEL OBJECTIVES TO ENABLE RESOURCE SHARING IN A COMMUNICATION NETWORK HAVING A PLURALITY OF APPLICATION ENVIRONMENTS
81996038	Granted	7502839	9/28/2001	3/10/2009	09/968437	US	MODULE-BUILDING METHOD FOR DESIGNING INTERCONNECT FABRICS
81996044	Granted	7096209	5/10/2001	8/22/2006	09/854084	US	Generalized Segmentation Method For Estimation/optimization Problem

PATENT
REEL: 038498 FRAME: 0312

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81996053	Granted	8799052	5/10/2001	8/5/2014	09/853961	US	Method And System For Deterministic Sampling With A Specific Distribution
81996110	Granted	D482690	3/21/2001	11/25/2003	29/138918	US	Retaining Mechanism (amended)
81996284	Granted	7310673	12/21/2001	12/18/2007	10/032105	US	NETWORK RESOURCE ASSIGNMENT SYSTEM AND METHOD
81996422	Granted	6889349	8/22/2001	5/3/2005	09/934891	US	Digital Event Sampling Circuit And Method
81996425	Granted	6907534	6/29/2001	6/14/2005	09/894142	US	MINIMIZING POWER CONSUMPTION IN PIPELINED CIRCUIT BY SHUTTING DOWN PIPELINED CIRCUIT IN RESPONSE TO PREDETERMINED PERIOD OF TIME HAVING EXPIRED
81996431	Granted	6851064	8/22/2001	2/1/2005	09/934615	US	Fine-Grained Thermal Control In Memory Subsystems
81996482	Granted	6851910	7/24/2002	2/8/2005	10/202731	US	Cartridge-handling Apparatus
81996680	Granted	7197762	10/31/2001	3/27/2007	10/003747	US	Method, Computer Readable Medium, And Node For A Three-layered Intrusion Prevention System For Detecting Network Exploits
81996842	Granted	6836871	10/29/2002	12/28/2004	10/282478	US	PROCESS AND SYSTEM FOR DEVELOPING DYNAMIC CIRCUIT GUILDELINES
81996848	Granted	6862694	10/5/2001	3/1/2005	09/972094	US	System And Method For Setting And Executing Breakpoints
81996854	Granted	6616252	7/30/2001	9/9/2003	09/918669	US	Permanently Attached Rackmount Handles And Spacing Brackets
81996902	Granted	7072960	6/10/2002	7/4/2006	10/164554	US	GENERATING AUTOMATED MAPPINGS OF SERVICE DEMANDS TO SERVER CAPACITES IN A DISTRIBUTED COMPUTER SYSTEM
81996914	Granted	7349965	9/13/2002	3/25/2008	10/243342	US	Automated Advertising And Matching Of Data Center Resource Capabilities
81996917	Granted	7200589	10/3/2002	4/3/2007	10/264587	US	Format-independent Advertising Of Data Center Resource Capabilities
81996920	Granted	8255407	11/14/2002	8/28/2012	10/294221	US	Matching Of Data Center Resource Capabilities And Resource Needs By Match-overlapping
81996992	Granted	6816920	3/20/2002	11/9/2004	10/100908	US	Method And System For Managing Information For A Computer System
81997118	Granted	6662865	4/30/2001	12/16/2003	09/843761	US	Multi-Load Thermal Regulating System Having Electronic Valve Control
81997238	Granted	7349340	6/18/2003	3/25/2008	10/464593	US	System And Method Of Monitoring E-service Quality Of Service At A Transaction Level
81997526	Granted	7403911	7/10/2001	7/22/2008	09/902880	US	METHOD AND SYSTEM FOR SETTING AN OPTIMAL PREFERENCE POLICY FOR AN AUCTION
81997529	Granted	7249088	7/11/2001	7/24/2007	09/904311	US	JOINT ESTIMATION OF BIDDERS' RISK ATTITUDES AND PRIVATE INFORMATION
81997538	Published		3/8/2010		12/719716	US	Determining A Demand Function For An Item

PATENT
REEL: 038498 FRAME: 0313

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81997589	Granted	7225174	2/19/2002	5/29/2007	10/078971	US	Investment Analysis Tool And Service For Making Investment Decisions
81997592	Granted	6809937	11/16/2001	10/26/2004	09/990819	US	Method And Apparatus For Shock And Vibration Isolation Of A Circuit Component
81997667	Granted	6804233	11/14/2000	10/12/2004	09/712090	US	Method And System For Link Level Server/Switch Trunking
81997682	Granted	7313694	10/5/2001	12/25/2007	09/972385	US	Secure File Access Control Via Directory Encryption
81997724	Granted	7243368	3/29/2002	7/10/2007	10/113255	US	Access Control System And Method For A Networked Computer System
81997727	Granted	7509405	1/30/2002	3/24/2009	10/060633	US	Method And Apparatus For Inferring Topology Of A Network
81998180	Granted	7020145	9/24/2001	3/28/2006	09/963338	US	Network Topology Manager
81998216	Granted	6904968	9/14/2001	6/14/2005	09/951730	US	Method And Apparatus For Individually Cooling Components Of Electronic Systems
81998219	Granted	6876549	10/31/2003	4/5/2005	10/696999	US	Method And Apparatus For Individually Cooling Components Of Electronic Systems
81998222	Granted	7086459	10/31/2003	8/8/2006	10/697940	US	Method And Apparatus For Individually Cooling Components Of Electronic Systems
81998225	Granted	7013968	10/31/2003	3/21/2006	10/697971	US	Method And Apparatus For Individually Cooling Components Of Electronic Systems
81998237	Granted	7907139	10/17/2001	3/15/2011	09/982481	US	METHOD FOR PLACEMENT OF DATA FOR VISUALIZATION OF MULTIDIMENSIONAL DATA SETS USING MULTIPLE PIXEL BAR CHARTS
81998279	Granted	7002801	10/16/2003	2/21/2006	10/687382	US	Method Of Cooling Semiconductor Die Using Microchannel Thermosyphon
81998288	Granted	6828828	8/3/2001	12/7/2004	09/921471	US	Dynamic Control Of Switching Reference Voltage
81998297	Granted	6574104	10/5/2001	6/3/2003	09/970707	US	Smart Cooling Of Data Centers
81998420	Granted	6658358	5/2/2002	37957	10/138875	US	Method And System For Computing Forces On Data Objects For Physics-Based Visualization
81998489	Granted	6826675	10/9/2001	11/30/2004	09/973156	US	Stack Utilization Management System And Method For A Single-Stack Arrangement
81998492	Granted	6904513	7/2/2004	6/7/2005	10/884666	US	Stack Utilization Management System And Method For A Single-Stack Arrangement
81999404	Granted	6892378	9/17/2001	5/10/2005	09/953276	US	Method To Detect Unbounded Growth Of Linked Lists In A Running Application
81999524	Granted	6710264	11/16/2001	3/23/2004	09/994004	US	METHOD AND APPARATUS FOR SUPPORTING A CIRCUIT COMPONENT HAVING SOLDER COLUMN INTERCONNECTS USING EXTERNAL SUPPORT
81999530	Granted	7434309	8/29/2003	10/14/2008	10/652598	US	METHOD AND APPARATUS FOR SUPPORTING A CIRCUIT COMPONENT HAVING SOLDER COLUMN INTERCONNECTS USING AN EXTERNAL SUPPORT

PATENT
REEL: 038498 FRAME: 0314

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81999533	Granted	8141068	6/18/2002	3/20/2012	10/175267	US	Compiler With Flexible Scheduling
81999665	Granted	6966010	8/31/2001	11/15/2005	09/942911	US	Application Container That Allows Concurrent Execution On Multiple Nodes In A Cluster
81999782	Granted	7403985	11/1/2001	7/22/2008	09/985081	US	Method And System For Analyzing Electronic Service Execution
81999923	Granted	6978259	10/23/2001	12/20/2005	10/046463	US	Automated System Adaptation Technique Particularly For Data Storage Systems
81999926	Granted	7353184	3/7/2002	4/1/2008	10/091424	US	Customer-side Market Segmentation
82000025	Granted	7506060	12/11/2001	3/17/2009	10/015015	US	TECHNIQUE FOR REDUCING NETWORK BANDWIDTH FOR DELIVERY FO DYNAMIC AND MIXED CONTENT
82000211	Granted	7415710	7/7/2003	8/19/2008	10/614396	US	Method And System For Maintaining A Module Type Definition Table
82000466	Granted	6944732	5/8/2002	9/13/2005	10/141319	US	MEHTHOD AND APPARATUS FOR SUPPORTING SNAPSHOTS WITH DIRECT I/O IN A STORAGE AREA NETWORK
82000553	Granted	6508750	8/9/2001	1/21/2003	09/925901	US	Grooved Tape Guide
82000721	Granted	6640283	1/16/2002	10/28/2003	10/050736	US	Apparatus For Cache Compression Engine For Data Compression Of On-Chip Caches To Increase Effective Cache Size
82000802	Granted	6804741	1/16/2002	10/12/2004	10/050722	US	Coherent Memory Mapping Tables For Host I/O Bridge
82000838	Granted	7398374	2/27/2002	7/8/2008	10/083872	US	MULTI-CLUSTER PROCESSOR FOR PROCESSING INSTRUCTIONS OF ONE OR MORE INSTRUCTION THREADS
82000850	Granted	6941489	2/27/2002	9/6/2005	10/084533	US	Checkpointing Of Register File
82000862	Granted	6832300	3/20/2002	12/14/2004	10/103204	US	Methods And Apparatus For Control Of Asynchronous Cache
82000919	Granted	6820167	5/16/2002	11/16/2004	10/147193	US	Configurable Crossbar And Related Methods
82000964	Granted	6871264	3/6/2002	3/22/2005	10/092645	US	System And Method For Dynamic Processor Core And Cache Partitioning On Large-Scale Multithreaded, Multiprocessor Integrated Circuits
82001030	Granted	7058702	1/4/2002	6/6/2006	10/038205	US	Efficient Validation Of Network Configuration Change Commands
82001033	Granted	6842836	11/7/2001	1/11/2005	10/005575	US	Streaming Media Cache Filling
82001039	Granted	6810516	10/30/2001	10/26/2004	09/984361	US	Mechanism Allowing Separation Of Graphical Display Of Object Status From Underlying Data
82001042	Granted	6951012	10/2/2001	9/27/2005	09/968552	US	API To Increase Debug Log Performance
82001048	Granted	6938259	10/2/2001	8/30/2005	09/968553	US	API To Enforce Internationalization
82001051	Granted	6795832	10/9/2001	9/21/2004	09/971581	US	Rule Based Compatibility Module
82001216	Granted	7290117	12/20/2001	10/30/2007	10/032109	US	Memory Having Increased Data-transfer Speed And Related Systems And Methods

PATENT
REEL: 038498 FRAME: 0315

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82001297	Granted	6895533	3/21/2002	5/17/2005	10/104524	US	METHOD AND SYSTEM FOR ASSESSING AVAILABILITY OF COMPLEX ELECTRONIC SYSTEMS, INCLUDING COMPUTER SYSTEMS
82001405	Granted	6774458	7/23/2002	8/10/2004	10/202105	US	Vertical Interconnection Structure And Methods
82001408	Granted	6893951	5/18/2004	5/17/2005	10/848759	US	Vertical Interconnection Structure And Methods
82001486	Granted	6903941	10/24/2002	6/7/2005	10/279586	US	Printed Circuit Board Assembly Employing A Press Fit Electrical Connector
82001612	Granted	7437734	8/12/2003	10/14/2008	10/640625	US	Propagating Web Transaction Context Into Common Object Model (COM) Business Logic Components
82001777	Granted	7191322	10/12/2001	3/13/2007	09/977126	US	Method And Apparatus For Tuning Multiple Instances Of Kernel Modules
82001861	Granted	6855647	4/2/2003	2/15/2005	10/405294	US	Custom Electrodes For Molecular Memory And Logic Devices
82001903	Granted	7836503	10/31/2001	11/16/2010	10/003820	US	Node, Method And Computer Readable Medium For Optimizing Performance Of Signature Rule Matching In A Network
82002023	Granted	6857047	6/10/2002	2/15/2005	10/167358	US	Memory Compression For Computer Systems
82002098	Granted	6873543	5/30/2003	3/29/2005	10/448574	US	Memory Device
82002155	Granted	7200747	10/31/2001	4/3/2007	09/984926	US	System For Ensuring Data Privacy And User Differentiation In A Distributed File System
82002167	Granted	7203317	10/31/2001	4/10/2007	09/984927	US	System For Enabling Lazy-revocation Through Recursive Key Generation
82002176	Granted	6848841	9/9/2002	2/1/2005	10/237475	US	Optical Component Connector
82002293	Granted	6810465	10/31/2001	10/26/2004	10/004193	US	Limiting The Number Of Dirty Entries In A Computer Cache
82002296	Granted	7096320	10/31/2001	8/22/2006	10/004195	US	Computer Performance Improvement By Adjusting A Time Used For Preemptive Eviction Of Cache Entries
82002353	Granted	7272712	11/28/2006	9/18/2007	11/605102	US	Data Structure And Method For Managing Modules Associated With A Kernel
82002422	Granted	7774225	9/12/2001	8/10/2010	09/953663	US	Graphical User Interface For Capacity-driven Production Planning Tool
82002467	Granted	6772633	12/11/2002	8/10/2004	10/316711	US	Acoustics-Based Diagnostics
82002905	Granted	6909577	6/7/2002	6/21/2005	10/165820	US	Low-overhead Storage Magazine
82002914	Granted	6883109	7/30/2001	4/19/2005	09/918030	US	METHOD FOR ACCESSING SCAN CHAINS AND UPDATING EEPROM-RESIDENT FPGA CODE THROUGH A SYSTEM MANGEMENT PROCESSOR AND JTAG BUS
82003022	Granted	6924979	7/30/2001	8/2/2005	09/919189	US	Mounting Apparatus For Coupling Control Circuitry To An Air Moving Device
82003292	Granted	8041796	5/2/2002	10/18/2011	10/136483	US	Process Duration Control
82003523	Granted	7372714	7/26/2006	5/13/2008	11/494397	US	Methods And Memory Structures Using Tunnel-junction Device As Control Element

PATENT
REEL: 038498 FRAME: 0316

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82003964	Granted	6781858	8/29/2003	8/24/2004	10/650895	US	Cubic Memory Array
82004231	Granted	D475021	7/23/2001	5/27/2003	29/145447	US	Electrical Contact
82004360	Granted	6718277	4/17/2002	4/6/2004	10/123403	US	Atmospheric Control Within A Building
82004525	Granted	7340749	12/3/2002	3/4/2008	10/308524	US	Method And Apparatus To Detect Presence Of Or A Size Of A Data Cartridge
82004543	Granted	7133145	2/5/2003	11/7/2006	10/358838	US	Method And Assembly For Carriage Locking
82004594	Granted	6895491	9/26/2002	5/17/2005	10/260645	US	Memory Addressing For A Virtual Machine Implementation On A Computer Processor Supporting Virtual Hash-Page-Table Searching
82004849	Granted	7428695	10/22/2001	9/23/2008	09/986221	US	System For Automatic Generation Of Arbitrarily Indexed Hyperlinked Text
82004861	Granted	6615993	4/3/2002	9/9/2003	10/116419	US	Slide Interlock Assembly For A Rack
82005032	Granted	8015054	3/5/2003	9/6/2011	10/382449	US	Method And System For Generating Recommendations
82005527	Granted	7305547	6/28/2002	12/4/2007	10/186901	US	Method For Upgrading A Host/agent Security System That Includes Digital Certificate Management And An Upgradable Backward Compatible Host/agent Security System Digital Certificate Infrastructure
82005539	Granted	6702124	12/6/2001	3/9/2004	10/003107	US	Flat Spring Clip For Tool-Less Slide Installation
82005542	Granted	6659577	12/6/2001	12/9/2003	10/003278	US	Dual Flat Springs For Tool-less Slide Installation
82005545	Granted	6830300	9/3/2003	12/14/2004	10/653761	US	Dual Flat Springs For Tool-Less Slide Installation
82005548	Granted	7992950	10/19/2004	8/9/2011	10/968510	US	Method For Installing A Slide Assembly For A Computer Server Using Dual Flat Springs (as Amended For -3 CON)
82005767	Granted	6842369	5/7/2002	1/11/2005	10/141609	US	INTERMESH MEMORY DEVICE
82006031	Granted	D471205	7/31/2001	3/4/2003	29/145973	US	Portion Of A Computer Display With A Computer ICON Graphic (As Amended)
82006034	Granted	D468750	7/31/2001	1/14/2003	29/145972	US	Portion Of A Computer Display With A Computer Icon Graphic (As Amended)
82006037	Granted	6600661	4/8/2002	7/29/2003	10/118418	US	Method And Apparatus For Supporting A Circuit Component
82006229	Granted	6882536	4/25/2002	4/19/2005	10/131476	US	WRAP- AROUND COOLING ARRANGEMENT FOR PRINTED CIRCUIT BOARD
82006274	Granted	7233983	1/17/2002	6/19/2007	10/052682	US	Reliability For Interconnect Fabrics
82006472	Granted	7333498	5/15/2002	2/19/2008	10/147004	US	Method And Apparatus For Separating Data Packets In A Memory Buffer
82006544	Granted	8495211	9/26/2002	7/23/2013	10/255818	US	Network Service System And Mechanism For Searching Service Registries
82006580	Granted	7165141	2/27/2004	1/16/2007	10/787161	US	Daisy-chained Device-mirroring Architecture
82006583	Granted	8200921	3/12/2004	6/12/2012	10/798962	US	Data Synchronization For Two Data Mirrors With Sidefiles (as Amended)
82006601	Granted	6789083	9/17/2001	9/7/2004	09/954093	US	Methods And System For Browsing Large Text Files

PATENT
REEL: 038498 FRAME: 0317

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0318

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82006835	Granted	7080245	5/23/2002	7/18/2006	10/155345	US	Method And System Of Switching Between Two Or More Images Of Firmware On A Host Device
82006910	Granted	7256435	6/2/2003	8/14/2007	10/453329	US	Multilevel Imprint Lithography
82006970	Granted	6832270	3/8/2002	12/14/2004	10/092603	US	Virtualization Of Computer System Interconnects
82006982	Granted	7047475	2/4/2003	5/16/2006	10/357975	US	CRC Encoding Scheme For Conveying Status Information
82007021	Granted	6677778	5/23/2002	1/13/2004	10/154329	US	Device And Method To Cause A False Data Value To Be Correctly Seen As The Proper Data Value
82007039	Granted	6845474	9/10/2001	1/18/2005	09/948757	US	Problem Detector And Method
82007042	Granted	6625018	6/26/2002	9/23/2003	10/183151	US	Fluid-Flow Balancer, Electronic System And Related Methods
82007168	Granted	6615992	3/11/2002	9/9/2003	10/094860	US	Adjustable Rackmount Assembly
82007204	Granted	7296069	5/8/2002	11/13/2007	10/140214	US	Method And System For Network Fault Monitoring With Linux
82007219	Granted	7373399	5/9/2002	5/13/2008	10/140933	US	System And Method For An Enterprise-to-enterprise Compare Within A Utility Data Center (UDC)
82007222	Granted	7933983	12/17/2002	4/26/2011	10/320461	US	Method And System For Performing Load Balancing Across Control Planes In A Data Center
82007393	Granted	7451073	6/25/2002	11/11/2008	10/178967	US	System And Method For Increasing Performance In Multi-cpu Simulation
82007396	Granted	6648149	2/28/2002	11/18/2003	10/085746	US	Rack Latch Assembly
82008077	Granted	5875121	8/6/1996	2/23/1999	08/692732	US	Register Selection System And Method
82008143	Granted	5721697	5/17/1996	2/24/1998	08/649349	US	Performing Tree Additions Via Multiplication
82008215	Granted	5761505	11/17/1995	6/2/1998	08/559977	US	System And Method For Automatically And Reliably Managing Global Resources In A Computer Network
82008218	Granted	5930503	12/29/1995	7/27/1999	08/580673	US	System And Method For On Demand Registration Of Tasks
82008602	Granted	D460968	7/24/1998	7/30/2002	29/091208	US	Control Module For A Computer Peripheral (as Amended)
82009409	Granted	5798952	2/29/1996	8/25/1998	08/608798	US	Leading Bit Anticipator
82009415	Granted	5691652	2/20/1996	11/25/1997	08/603977	US	Completion Detection As A Means For Improving Alpha Soft-Error Resistance
82009703	Granted	5723894	7/3/1996	3/3/1998	08/675768	US	Structure For Providing An Electrical Connection Between Circuit Members
82010459	Granted	5870387	12/31/1996	2/9/1999	08/775676	US	METHOD AND APPARATUS FOR INITIALIZING A RING
82011452	Granted	5761409	10/31/1995	6/2/1998	08/558574	US	Passive Bus Monitor Detects Data Corruption For Block-Oriented Data Storage
82011665	Granted	5751941	4/4/1996	5/12/1998	08/627629	US	Object Oriented Framework For Testing Software
82011887	Granted	5815707	10/19/1995	9/29/1998	08/545561	US	Dynamic Function Replacement For STREAMS Framework
82012136	Granted	6109343	2/3/2000	8/29/2000	09/497556	US	Low EMI Emissions Heat Sink Device
82012139	Granted	6167949	2/3/2000	1/2/2001	09/497555	US	Low EMI Emissions Heat Sink Device
82012340	Granted	6098112	1/31/1996	8/1/2000	08/593313	US	STREAMS Function Registering

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82012907	Granted	5758131	9/11/1996	5/26/1998	08/712001	US	Bus Adapter For Synchronizing Communications Between Two Circuits Running At Different Clock Rates
82013462	Granted	5948055	8/29/1996	9/7/1999	08/705358	US	Distributed Internet Monitoring System And Method
82013465	Granted	5706323	3/1/1996	1/6/1998	08/609305	US	DYNAMIC 1-OF-2N LOGIC ENCODING
82013471	Granted	5740181	6/12/1996	4/14/1998	08/662403	US	Method And Apparatus For At Speed Observability Of Pipelined Circuits
82013474	Granted	5719803	5/31/1996	2/17/1998	08/658925	US	High Speed Addition Using Ling's Equations And Dynamic CMOS Logic
82013510	Granted	5677863	4/4/1996	10/14/1997	08/627615	US	Method Of Performing Operand Increment In A Booth Recoded Multiply Array
82013519	Granted	5854928	10/10/1996	12/29/1998	08/726760	US	USE OF RUN-TIME CODE GENERATION TO CREATE SPECULATION RECOVERY CODE IN A COMPUTER SYSTEM
82013594	Granted	5946716	5/30/1996	8/31/1999	08/656938	US	Sectored Virtual Memory Management System And Translation Look-aside Buffer (TLB) For The Same
82014092	Granted	5692026	5/31/1996	11/25/1997	08/657732	US	Apparatus For Reducing Capacitive Loading Of Clock And Shift Signals By Shift Register-Based Devices
82014095	Granted	5805851	6/13/1996	9/8/1998	08/662577	US	SYSTEM FOR DETERMINING DATA DEPENDENCIES AMONG INTRA-BUNDLE INSTRUCTIONS QUEUED AND PRIOR INSTRUCTIONS IN THE QUEUE
82014098	Granted	5784587	6/13/1996	7/21/1998	08/663337	US	Method And System For Recovering From Cache Misses
82014449	Granted	6260048	10/27/1998	7/10/2001	09/181136	US	Resolution Of Incidents Which Occur During The Use Of A Product
82014524	Granted	5907711	1/22/1996	5/25/1999	08/589213	US	Method And Apparatus For Transforming Multiplications Into Product Table Lookup References
82014581	Granted	5838944	7/31/1996	11/17/1998	08/693825	US	SYSTEM FOR STORING PROCESSOR REGISTER DATA AFTER A MISPREDICTED BRANCH
82014584	Granted	5740391	3/1/1996	4/14/1998	08/609207	US	PREVENTING PREMATURE EARLY EXCEPTION SIGNALING WITH SPECIAL INSTRUCTION ENCODING
82014599	Granted	5781923	5/28/1996	7/14/1998	08/654469	US	ADDING A FIELD TO THE CACHE TAG IN A COMPUTER SYSTEM TO INDICATE BYTE ORDERING
82015019	Granted	5764990	3/18/1996	6/9/1998	08/618276	US	Compact Encoding For Storing Integer Multiplication Sequences
82015094	Granted	5758178	3/1/1996	5/26/1998	08/609338	US	Miss Tracking System And Method
82015133	Granted	5799167	5/15/1996	8/25/1998	08/648600	US	Instruction Nullification System And Method For A Processor That Executes Instructions Out Of Order
82015136	Granted	5796975	5/24/1996	8/18/1998	08/653573	US	Operand Dependency Tracking System And Method For A Processor That Executes Instructions Out Of Order
82015145	Granted	5828866	7/8/1996	10/27/1998	08/676762	US	REAL-TIME SYNCHRONIZATION OF CONCURRENT VIEWS AMONG A PLURAITY OF EXISTING APPLICATIONS
82015208	Granted	5747889	7/31/1996	5/5/1998	08/688912	US	REDUNDANT POWER SUPPLY AND STORAGE SYSTEM

PATENT
REEL: 038498 FRAME: 0319

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82015274	Granted	5946190	8/29/1997	8/31/1999	08/920515	US	Ducted High Aspect Ratio Heatsink Assembly
82015412	Granted	5654703	6/17/1996	8/5/1997	08/664901	US	Parallel Data Compression And Decompression
82015463	Granted	5828324	6/17/1996	10/27/1998	08/664902	US	Match And Match Address Signal Generation In A Content Addressable Memory Encoder
82015511	Granted	5930062	10/3/1996	7/27/1999	08/725795	US	Actively Stabilized Magnetoresistive Head
82015955	Granted	5901318	5/6/1996	5/4/1999	08/643670	US	Method And System For Optimizing Code
82016006	Granted	5818850	12/20/1996	10/6/1998	08/773714	US	Speed Coverage Tool And Method
82016144	Granted	5835777	3/20/1996	11/10/1998	08/619876	US	Method Of Automatically Generating A Software Installation Package
82016393	Granted	5745419	7/30/1996	4/28/1998	08/690631	US	Method And Apparatus For Measuring The Offset Voltages Of SRAM Sense Amplifiers
82016396	Granted	5896332	12/24/1997	4/20/1999	08/998420	US	Method And Apparatus For Measuring The Offset Voltages Of SRAM Sense Amplifiers
82016639	Granted	5802333	1/22/1997	9/1/1998	08/785940	US	Network Inter-Product Stacking Mechanism In Which Stacked Products Appear To The Network As A Single Device
82017005	Granted	5864692	12/16/1996	1/26/1999	08/767449	US	Method And Apparatus For Protecting Memory-mapped Devices From Side Effects Of Speculative Instructions
82017140	Granted	5790626	9/10/1996	8/4/1998	08/711775	US	Bi-Directional Linear Feedback Shift Register
82017143	Granted	5734833	3/12/1996	3/31/1998	08/614987	US	A SHARED COMMUNICATIONS CHANNEL WITH ENHANCED RESERVATION AND COLLISIO N RESOLUTION PROTOCOLS ALLOWS ANY SUBSET OF STATIONS TO TRANSMIT DATA AFTER COLLISION OCCURED IN CONTENTION SLOT
82017158	Granted	5806061	5/20/1997	9/8/1998	08/859556	US	Method For Cost-based Optimization Over Multimedia Repositories
82017338	Granted	5802565	8/29/1996	9/1/1998	08/705443	US	Speed Optimal Bit Ordering In A Cache Memory
82017341	Granted	5854943	8/7/1996	12/29/1998	08/689173	US	Speed Efficient Cache Output Selector Circuitry Based On Tag Compare And Data Organization
82017344	Granted	5765194	5/1/1996	6/9/1998	08/641655	US	TIMING CONSISTENT DYNAMIC COMPARE WITH FORCE MISS CIRCUIT
82017401	Granted	5854934	8/23/1996	12/29/1998	08/702359	US	Optimizing Compiler Having Data Cache Prefetch Spreading
82017818	Granted	5999738	11/6/1997	12/7/1999	08/964050	US	Flexible Scheduling Of Non-Speculative Instructions
82017905	Granted	5860097	9/23/1996	1/12/1999	08/717786	US	Associative Cache Memory With Improved Hit Time
82018217	Granted	6189046	3/27/1997	2/13/2001	08/828027	US	Mechanism And Method For Merging Cached Location Information In A Distributed Object Environment
82018280	Granted	6070198	10/16/1996	5/30/2000	08/732176	US	ENCRYPTION WITH A STREAMS-BASED PROTOCOL STACK
82018520	Granted	6742014	9/27/2002	5/25/2004	10/259015	US	Conditional Carry Encoding For Carry Select Adder
82019633	Granted	5880671	10/31/1996	3/9/1999	08/742193	US	Flexible Circuitry And Method For Detecting Signal Patterns On A Bus

PATENT
REEL: 038498 FRAME: 0320

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82019636	Granted	5887003	9/10/1996	3/23/1999	08/709798	US	Apparatus And Method For Comparing A Group Of Binary Fields With An Expected Pattern To Generate Match Results
82019696	Granted	6308206	9/17/1997	10/23/2001	08/932733	US	Internet Enabled Computer System Management
82019705	Granted	6779029	8/21/2001	8/17/2004	09/934398	US	Internet Enabled Computer System Management
82019708	Granted	8301587	7/1/2004	10/30/2012	10/882721	US	Internet Enabled Computer System Management
82019882	Granted	5845071	9/27/1996	12/1/1998	08/720368	US	Error Containment Cluster Of Nodes
82019891	Granted	6122708	8/15/1997	9/19/2000	08/911709	US	Data Cache For Use With Streaming Data
82020026	Granted	6612023	9/6/1996	9/2/2003	08/709354	US	Method For Registering A Component Lead With A U-Shaped Metalized Pad
82020029	Granted	6867504	7/7/2003	3/15/2005	10/615533	US	Method And Apparatus For Printed Circuit Board Pads With Registering Feature For Component Leads
82020083	Granted	5961655	12/5/1996	10/5/1999	08/759583	US	Opportunistic Use Of Pre-Corrected Data To Improve Processor Performance
82020086	Granted	5870573	10/18/1996	2/9/1999	08/733483	US	Transistor Switch Used To Isolate Bus Devices And/Or Translate Bus Voltage Levels
82020944	Granted	5857105	2/5/1997	1/5/1999	08/796095	US	Compiler For Reducing Number Of Indirect Calls In An Executable Code
82020956	Granted	6151326	10/24/1996	11/21/2000	08/738960	US	Method And Apparatus For Automatic Device Segmentation And Port-To-Segment Distribution
82021577	Granted	5857104	11/26/1996	1/5/1999	08/757038	US	Synthetic Dynamic Branch Prediction
82021946	Granted	5805520	4/25/1997	9/8/1998	08/842973	US	Integrated Circuit Address Reconfigurability
82022135	Granted	5898827	9/27/1996	4/27/1999	08/720331	US	Routing Methods For A Multinode SCI Computer System
82022147	Granted	5708400	10/30/1996	1/13/1998	08/739532	US	AC Coupled Termination Of A Printed Circuit Board Power Plane In Its Characteristic Impedance
82022465	Granted	5937195	11/27/1996	8/10/1999	08/756600	US	Global Control Flow Treatment Of Predicated Code
82022579	Granted	5953237	11/25/1996	9/14/1999	08/753453	US	Power Balancing To Reduce Step Load
82022582	Granted	5870545	4/4/1997	2/9/1999	08/825853	US	System And Method For Performing Flexible Workflow Process Compensation In A Distributed Workflow Management System
82022591	Granted	5826239	12/17/1996	10/20/1998	08/768261	US	Distributed Workflow Resource Management System And Method
82022645	Granted	6151705	10/30/1997	11/21/2000	08/960848	US	Efficient Use Of The Base Register Auto-Increment Feature Of Memory Access Instructions
82022834	Granted	5894142	12/11/1996	4/13/1999	08/763501	US	Routing For Integrated Circuits
82022900	Granted	5917484	2/24/1997	6/29/1999	08/804760	US	Multilingual System Locale Configuration
82023023	Granted	6108745	10/31/1997	8/22/2000	08/962490	US	Fast And Compact Address Bit Routing Scheme That Supports Various DRAM Bank Sizes And Multiple Interleaving Schemes

PATENT
REEL: 038498 FRAME: 0321

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82023689	Granted	6073223	7/21/1997	6/6/2000	08/897444	US	MEMORY CONTROLLER AND METHOD FOR INTERMITTENTLY ACTIVATING AND IDLING A CLOCK SIGNAL FOR A SYNCHRONOUS MEMORY
82023839	Granted	5924103	3/12/1997	7/13/1999	08/815229	US	Works-in-progress In An Information Management System
82024079	Granted	5951695	7/25/1997	9/14/1999	08/900945	US	Fast Database Failover
82024082	Granted	6091698	7/17/1997	7/18/2000	08/896004	US	OVERWRITING PHASE CHANGE MEDIA BY VARYING DATA PATTERNS
82024262	Granted	5903891	2/25/1997	5/11/1999	08/804990	US	HIERARCHIAL INFORMATION PROCESSES THAT SHARE INTERMEDIATE DATA AND FORMULATE CONTRACT DATA
82024265	Granted	5878206	3/25/1997	3/2/1999	08/823704	US	Commit Scope Control In Hierarchical Information Processes
82024379	Granted	6032148	9/15/1997	2/29/2000	08/929043	US	Multilevel Storage System With Hybrid Data Compression
82024382	Granted	6070187	3/26/1998	5/30/2000	09/048934	US	METHOD AND APPARATUS FOR CONFIGURING A NETWORK NODE TO BE ITS OWN GATEWAY
82024877	Granted	6188633	4/28/1998	2/13/2001	09/067702	US	MULTI-PORT COMPUTER REGISTER FILE HAVING SHARED WORD LINES FOR READ AND WRITE PORTS AND STORAGE ELEMENTS THAT POWER DOWN OR ENTER A HIGH-IMPEDANCE STATE DURING WRITE OPERATIONS
82024997	Granted	6115545	7/9/1997	9/5/2000	08/891624	US	Automatic Internet Protocol (IP) Address Allocation And Assignment
82025075	Granted	5832254	9/15/1997	11/3/1998	08/929416	US	Scalable Resynchronization Of Remote Counters
82025195	Granted	6871810	7/14/1999	3/29/2005	09/353173	US	Packing Of A Magnetic Tape To Improve Pack Stability Prior To Removal From A Tape Drive
82025378	Granted	6055604	8/26/1997	4/25/2000	08/920120	US	FORCED TRANSACTION LOG POSTING USING A LEAST BUSY STORAGE MEDIA WITHOUT MAINTAINING REDUNDANCY OF THE TRANSACTION LOG
82025393	Granted	5960451	9/16/1997	9/28/1999	08/932812	US	System And Method For Reporting Available Capacity In A Data Storage System With Variable Consumption Characteristics
82025498	Granted	6216140	9/17/1997	4/10/2001	08/931980	US	METHODOLOGY FOR THE EFFICIENT MANAGEMENT OF HIERARCHICALLY ORGANIZED INFORMATION
82025630	Granted	6847367	7/23/1998	1/25/2005	09/121745	US	Display For Port Area Of Electronic Equipment
82025834	Granted	6175509	5/14/1997	1/16/2001	08/856312	US	SPACE EFFICIENT LOCAL REGULATOR FOR A MICROPROCESSOR
82025873	Granted	5982711	6/5/1997	11/9/1999	08/869649	US	A Device For Reading Data From Or Writing Data To Magnetic Storage Media And A Method Of Positioning A Tape Head Relative To The Magnetic Storage Media
82025951	Granted	5803389	8/27/1997	9/8/1998	08/919691	US	Take-up Reel For Magnetic Tape Data Systems
82026062	Granted	5838550	8/28/1997	11/17/1998	08/919461	US	Grounding Clip For Shielded Modular Connector

PATENT
REEL: 038498 FRAME: 0322

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82027016	Granted	6222698	5/22/1998	4/24/2001	09/083854	US	Magnetic Tape Dimensional Instability Compensation By Varying Recording Head Azimuth Angle
82027388	Granted	6029225	12/16/1997	2/22/2000	08/991196	US	Cache Bank Conflict Avoidance And Cache Collision Avoidance
82027637	Granted	6084178	2/27/1998	7/4/2000	09/032359	US	Perimeter Clamp For Mounting And Aligning A Semiconductor Component As Part Of A Field Replaceable Unit (FRU)
82027640	Granted	6164543	4/13/1999	12/26/2000	09/290428	US	Method Of Deciphering Bar Codes
82027691	Granted	5983316	5/29/1997	11/9/1999	08/864805	US	COMPUTING SYSTEM HAVING A SYSTEM MODE THAT UTILIZES BOTH A LOGICAL VOLUME MANAGER AND A RESOURCE MONITOR FOR MANAGING A STORAGE POOL
82028249	Granted	6028733	5/9/1997	2/22/2000	08/853625	US	DATA CARTIDGE CADDY-TO-STORAGE RACK INTERLOCK AND RELEASE SYSTEM
82028264	Granted	6169640	3/4/1998	1/2/2001	09/034972	US	Servo Band Identification In Linear Tape Systems Having Timing-based Servo Formats
82028387	Granted	6141763	9/1/1998	10/31/2000	09/144965	US	SELF-POWERED NETWORK ACCESS POINT
82028495	Granted	5944806	9/26/1997	8/31/1999	08/938866	US	Microprocessor With Versatile Addressing
82028633	Granted	5935251	12/22/1997	8/10/1999	08/995598	US	METHOD AND APPARATUS EXPEDITED LOG-ON TO AN APPLICATION PROGRAM
82028825	Granted	6078982	3/24/1998	6/20/2000	09/047248	US	PRE-LOCKING SCHEME FOR ALLOWING CONSISTENT AND CONCURRENT WORKFLOW PROCESS EXECUTION IN A WORKFLOW MANAGEMENT SYSTEM
82029128	Granted	6198627	12/17/1998	3/6/2001	09/215047	US	Noise Reduction Back Cover For Computer Devices
82029182	Granted	6115809	4/30/1998	9/5/2000	09/070442	US	COMPILING STRONG AND WEAK BRANCHING BEHAVIOR INSTRUCTION BLOCKS TO SEPARATE CACHES FOR DYNAMIC AND STATIC PREDICTION
82029188	Granted	6205545	4/30/1998	3/20/2001	09/070585	US	A METHOD AND APPARATUS FOR USING STATIC BRANCH PREDICTIONS HINTS WITH DYNAMICALLY TRANSLATED CODE TRACES TO IMPROVE PERFORMANCE
82029242	Granted	6314560	7/14/2000	11/6/2001	09/616467	US	Method and apparatus for a translation system that aggressively optimizes and preserves full synchronous exception state
82029509	Granted	6173248	2/9/1998	1/9/2001	09/020653	US	Method And Apparatus For Handling Masked Exceptions In An Instruction Interpreter
82029515	Granted	6098054	11/13/1997	8/1/2000	08/970064	US	METHOD OF SECURING SOFTWARE CONFIGURATION PARAMETERS WITH DIGITAL SIGNATURES
82029638	Granted	6182022	1/26/1998	1/30/2001	09/013672	US	Automated Adaptive Baselining And Thresholding Method And System
82029875	Granted	6026402	1/7/1998	2/15/2000	09/004131	US	A METHOD FOR RESTRICTING A PROCESS OR PROCESS HIERARCHY TO A SUBSET OF A HOS'T FILE SYSTEM

PATENT
REEL: 038498 FRAME: 0323

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82029884	Granted	6868450	5/17/2000	3/15/2005	09/572803	US	System And Method For A Process Attribute Based Computer Network Filter
82029890	Granted	6223337	12/12/1997	4/24/2001	08/990064	US	Random Test Generation For Compiler Optimization
82030196	Granted	6101158	8/6/1998	8/8/2000	09/130024	US	Apparatus And Method For Reducing Phase Discontinuity Between New Data And Previously Written Data On A Read/Write Optical Storage Medium
82030376	Granted	6631514	1/6/1998	10/7/2003	09/003572	US	EMULATION SYSTEM THAT USES DYNAMIC BINARY TRANSLATION AND PERMITS THE SAFE SPECULATION OF TRAPPING OPERATIONS
82030496	Granted	5949256	10/31/1997	9/7/1999	08/961844	US	Asymmetric Sense Amplifier For Single-Ended Memory Arrays
82030820	Granted	6226787	1/25/1999	5/1/2001	09/236495	US	Visualization Method And System For Dynamically Displaying Operations Of A Program
82030829	Granted	6076130	3/19/1998	6/13/2000	09/044660	US	SYSTEM AND METHOD FOR EFFICIENT COMMUNICATION BETWEEN BUSES
82030946	Granted	6910122	2/18/2000	6/21/2005	09/507204	US	METHOD AND APPARATUS FOR PRESERVING PIPELINE DATA DURING A PIPELINE STALL AND FOR RECOVERING FROM THE PIPELINE STALL
82030955	Granted	6240009	2/2/2000	5/29/2001	09/496714	US	Asymmetric Ram Cell
82031072	Granted	6687262	2/21/2000	2/3/2004	09/510280	US	Distributed Mux Scheme For Bi-Endian Rotator Circuit
82031078	Granted	6446187	2/19/2000	9/3/2002	09/507432	US	Virtual Address Bypassing Using Local Page Mask
82031240	Granted	6507807	8/13/1999	1/14/2003	09/373682	US	Method And Apparatus For Determining Which Branch Of A Network Of An Integrated Circuit Has The Largest Total Effective RC Delay
82031330	Granted	6823434	2/21/2000	11/23/2004	09/510128	US	SYSTEM AND METHOD FOR RESETTING AND INITIALIZING AN ALAT TO A KNOWN STATE AT POWER ON OR THROUGH MACHINE SPECIFIC STATE
82031372	Granted	6654276	1/31/2002	11/25/2003	10/061917	US	FOUR-TRANSISTOR STATIC MEMORY CELL ARRAY
82031489	Granted	6507892	2/21/2000	1/14/2003	09/510285	US	L 1 CACHE MEMORY
82031495	Granted	6728823	2/18/2000	4/27/2004	09/507203	US	CACHE CONNECTION WITH BYPASSING FEATURE
82031501	Granted	6427188	2/9/2000	7/30/2002	09/501396	US	Method And System For Early Tag Accesses For Lower-Level Caches In Parallel With First-Level Cache
82031513	Granted	6557078	2/21/2000	4/29/2003	09/510283	US	Cache Chain Structure To Implement High Bandwidth Low Latency Cache Memory Subsystem
82031519	Granted	6539457	2/21/2000	3/25/2003	09/510279	US	Cache Address Conflict Mechanism Without Store Buffers
82031570	Granted	6230240	6/23/1998	5/8/2001	09/103329	US	Storage Management System And Auto-RAID Transaction Manager For Coherent Memory Map Across Hot Plug Interface

PATENT
REEL: 038498 FRAME: 0324

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82031630	Granted	6226694	4/29/1998	5/1/2001	09/069481	US	Achieving Consistency And Synchronization Among Multiple Data Stores That Cooperate Within A Single System In The Absence Of Transaction Monitoring
82031696	Granted	6108721	6/29/1998	8/22/2000	09/107008	US	Method And Apparatus For Ensuring Data Consistency Between An I/O Channel And A Processor
82032131	Granted	6219827	3/12/1998	4/17/2001	09/041350	US	Trace Ranking In A Dynamic Translation System
82032302	Granted	6263489	4/30/1998	7/17/2001	09/070542	US	Method And Apparatus For Debugging Of Optimized Code
82032452	Granted	6580715	1/11/1999	6/17/2003	09/228110	US	Load Balancing Switch Protocols
82032626	Granted	6366707	4/13/1999	4/2/2002	09/290429	US	Imaging Apparatus Alignment System And Method
82032821	Granted	6282175	4/23/1998	8/28/2001	09/065263	US	Method For Tracking Configuration Changes In Networks Of Computer Systems Through Historical Monitoring Of Configuration Status Of Devices On The Network
82032881	Granted	6272549	5/27/1998	8/7/2001	09/085604	US	Method For Using Electronic Mail For Exchanging Data Between Computer Systems
82032884	Granted	6054987	5/29/1998	4/25/2000	09/087338	US	METHOD OF DYNAMICALLY CREATING NODAL VIEWS OF A MANAGED NETWORK
82033115	Granted	6112261	5/4/1998	8/29/2000	09/072425	US	A Data Transferring System Reading And Temporarily Storing A Record Until A Length Of The Record Is Different From A Defined Record Length Parameter Value
82033124	Granted	6138186	7/20/1998	10/24/2000	09/119168	US	Burst Transfer Management System Utilizing Pointers To Ensure That There Is Enough Space In A Buffer To Receive Burst Transfers Without Corrupting Data
82033142	Granted	6108723	7/20/1998	8/22/2000	09/119164	US	SYSTEM FOR IMPLEMENTING HARDWARE AUTOMATED CONTROL OF BURST MODE DATA TRANSFER OVER A COMMUNICATION LINK BETWEEN DEVICES OPERATING IN A BLOCK MODE
82033181	Granted	7424597	3/31/2003	9/9/2008	10/403785	US	Variable Reordering (MUX) Instructions For Parallel Table Lookups From Registers
82033193	Granted	7274825	3/31/2003	9/25/2007	10/403754	US	Image Matching Using Pixel-depth Reduction Before Image Comparison
82033490	Granted	6314433	6/12/1998	11/6/2001	09/096784	US	Frame-Based Heroic Data Recovery
82033757	Granted	6170063	3/7/1998	1/2/2001	09/036617	US	Method For Performing Atomic, Concurrent Read And Write Operations On Multiple Storage Devices
82033826	Granted	6256777	10/9/1998	7/3/2001	09/169417	US	Method And Apparatus For Debugging Of Optimized Machine Code, Using Hidden Breakpoints
82033925	Granted	8108508	6/22/1998	1/31/2012	09/102207	US	Web Server Chip For Network Manageability
82033943	Granted	6252961	4/2/1998	6/26/2001	09/053972	US	Method And Apparatus For Performing Data Encryption And Error Code Correction

PATENT
REEL: 038498 FRAME: 0325

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82034138	Granted	6061235	11/18/1998	5/9/2000	09/195256	US	Method And Apparatus For A Modular Integrated Apparatus For Heat Dissipation, Processor Integration, Electrical Interface, And Electromagnetic Interference Management
82034198	Granted	5915117	10/13/1997	6/22/1999	08/949295	US	Computer Architecture For The Deferral Of Exceptions On Speculative Instructions
82034315	Granted	5901916	3/2/1998	5/11/1999	09/033352	US	Tape Cartridge Reel Lock
82034555	Granted	6116494	9/1/1998	9/12/2000	09/144656	US	Method For Re-Attachment Of A SMT Component Using A Heated Air Jet
82034558	Granted	5906497	12/12/1997	5/25/1999	08/989937	US	Processor Retention Frame And Extraction Device
82034639	Granted	6269416	2/2/1999	7/31/2001	09/245509	US	Adaptive PCI Slot
82034687	Granted	6333838	6/22/1998	12/25/2001	09/102731	US	VOICE COIL ACTUATED CARRIAGE IN WHICH A SUPPORT STRUCTURE FOR THE CARRIAGE IS DISPOSED AT LEAST PARTIALLY WITHIN THE MOTOR
82034747	Granted	6282700	5/21/1998	8/28/2001	09/083370	US	Mechanism For Maintaining Revisions Of Objects In Flash Memory
82034765	Granted	6563706	6/23/1998	5/13/2003	09/103665	US	TYPICALLY HIGH-AVAILABILITY INFORMATION STORAGE PRODUCT
82035362	Granted	6108800	2/10/1998	8/22/2000	09/021190	US	Method And Apparatus For Analyzing The Performance Of An Information System
82035365	Granted	6819656	1/8/1999	11/16/2004	09/226904	US	Session Based Scheduling Scheme For Increasing Server Capacity
82035368	Granted	6055564	3/11/1998	4/25/2000	09/038657	US	ADMISSION CONTROL WHERE PRIORTY INDICATOR IS USED TO DISCRIMINATE BETWEEN MESSAGES
82035503	Granted	6295558	8/21/1998	9/25/2001	09/137851	US	AUTOMATIC STATUS POLLING FAILOVER OR DEVICES IN A DISTRIBUTED NETWORK MANAGEMENT HIERARCHY
82035506	Granted	6961768	7/13/2001	11/1/2005	09/905307	US	Status Polling Failover Of Devices In A Distributed Network Management Hierarchy
82035512	Granted	6728951	4/14/2000	4/27/2004	09/549346	US	System And Method For Performing Automated Incremental Compilation Of Computer Programs
82035578	Granted	6138159	6/11/1998	10/24/2000	09/096134	US	Load Direction Mechanism
82035737	Granted	7430164	8/14/2002	9/30/2008	10/219562	US	Path Recovery On Failure In Load Balancing Switch Protocols
82035740	Granted	6456597	1/11/1999	9/24/2002	09/228169	US	Discovery Of Unknown MAC Addresses Using Load Balancing Switch Protocols
82035764	Granted	6243791	8/13/1998	6/5/2001	09/133632	US	Method And Architecture For Data Coherency In Set-Associative Caches Having Specialized Sets
82035872	Granted	6006269	3/11/1998	12/21/1999	09/038868	US	Admission Control System With Messages Admitted Or Deferred For Re-Submission At A Later Time On A Priority Basis

PATENT
REEL: 038498 FRAME: 0326

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82035875	Granted	6185734	7/21/1998	2/6/2001	09/120037	US	HIERARCHICAL REGISTRY STRUCTURE FOR MANAGING MULTIPLE VERSIONS OF SOFTWARE COMPONENTS
82036064	Granted	6067619	9/24/1998	5/23/2000	09/160467	US	APPARATUS AND METHOD FOR CONFIGURING A COMPUTER NETWORKING DEVICE
82036070	Granted	6092140	5/15/1998	7/18/2000	09/080060	US	Low Latency Bridging Between High Speed Bus Networks
82036247	Granted	6227475	3/7/2000	5/8/2001	09/519955	US	Tape Threading Apparatus
82036298	Granted	6055117	6/9/1998	4/25/2000	09/095005	US	Systems And Method Having Data Encoded With Edge Placement Equalization
82036700	Granted	6026354	8/10/1998	2/15/2000	09/131561	US	Device Monitoring System With Dedicated Bus And Processor
82037363	Granted	6643226	10/27/1998	11/4/2003	09/179793	US	Mail Slot Data Cartridge Exchange System For Use With A Data Storage System
82037429	Granted	6141793	4/1/1998	10/31/2000	09/053567	US	Apparatus And Method For Increasing The Performance Of Interpreted Programs Running On A Server
82037447	Granted	6405367	6/5/1998	6/11/2002	09/092236	US	Apparatus And Method For Increasing The Performance Of Java Programs Running On A Server
82037492	Granted	6114895	5/8/1998	9/5/2000	09/075123	US	Integrated Circuit Assembly Having Output Pads With Application Specific Characteristics And Method Of Operation
82037612	Granted	6134108	6/18/1998	10/17/2000	09/099512	US	Apparatus And Method For Air-Cooling An Electronic Assembly
82037672	Granted	6507902	10/10/2000	1/14/2003	09/686532	US	DYNAMICALLY ALLOCABLE RAM DISK DYNAMIC RAM DISK
82037945	Granted	7002921	6/9/2003	2/21/2006	10/457323	US	NETWORK APPLIANCE COMBINING ASYCHRONOUS NOTIFICATION WITH INTERACTIVE NETWORK TRANSFER PROTOCOL SERVER
82037984	Granted	6243829	5/27/1998	6/5/2001	09/085204	US	Memory Controller Supporting Redundant Synchronous Memories
82037990	Granted	6978397	5/1/2001	12/20/2005	09/846868	US	Memory Controller Supporting Redundant Synchronous Memories
82038008	Granted	6344862	5/29/1998	2/5/2002	09/087066	US	USER INTERFACE MECHANISM FOR MANIPULATING CONTEXT IN COMPUTER MANAGEMENT APPLICATIONS
82038134	Granted	6304416	3/20/1998	10/16/2001	09/045548	US	Two Axis Reading Of Memory Chip In Cartridge
82038800	Granted	6115251	4/15/1999	9/5/2000	09/294305	US	Cooling Apparatus For Computer Subsystem
82038821	Granted	6446131	6/19/1999	9/3/2002	09/336551	US	Bridges And Other Layer-Two Devices For Forwarding MAC Frames
82039673	Granted	6167533	6/25/1998	12/26/2000	09/104836	US	Active Dashboard Extensible Framework
82039796	Granted	6052684	3/24/1998	4/18/2000	09/046967	US	System And Method For Performing Consistent Workflow Process Execution In A Workflow Management System
82040111	Granted	6195726	3/24/1999	2/27/2001	09/275286	US	Method And Apparatus For Performing Patterned Read And Write Operations

PATENT
REEL: 038498 FRAME: 0327

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82040378	Granted	6128699	10/27/1998	10/3/2000	09/181067	US	METHOD FOR PROVIDING READ/WRITE ACCESS WHILE COPYING DATA BETWEEN SHARED STORAGE DEVICES
82040438	Granted	6662171	10/30/2000	12/9/2003	09/699881	US	Automated Diagnostic Metric Loop
82040759	Granted	6141703	7/21/1998	10/31/2000	09/120679	US	AN INTERRUPT SHARING SYSTEM ASSIGNING EACH INTERRUPT REQUEST SIGNAL TO A SELECT ONE OF SYSTEM INTERRUPT SIGNALS BASED ON CHARACTERISTIC DATA OF EACH PERIPHERAL DEVICE
82040858	Granted	8171266	8/2/2001	5/1/2012	09/922551	US	Look-ahead Load Pre-fetch In A Processor
82040981	Granted	6158047	7/8/1998	12/5/2000	09/111956	US	CLIENT/SERVER SYSTEM FOR FAST, USER TRANSPARENT AND MEMORY EFFICIENT COMPUTER LANGUAGE TRANSLATION
82040984	Granted	6230182	7/8/1998	5/8/2001	09/111964	US	COMPUTER LANGUAGE INTERPRETER WHICH CAN PERFORM TIME-CONSUMING OPERATIONS WITH MINIMAL IMPACT ON INTERACTIVE PROGRAMS
82041194	Granted	6163867	8/28/1998	12/19/2000	09/141957	US	INPUT-OUTPUT PAD TESTING USING BI-DIRECTIONAL PADS
82041680	Granted	6138121	5/29/1998	10/24/2000	09/087203	US	Network Management Event Storage And Manipulation Using Relational Database Technology In A Data Warehouse
82041737	Granted	6175539	8/28/1998	1/16/2001	09/143688	US	SYSTEM AND METHOD FOR PROVIDING WIRELESS CONTROL SIGNALS TO CARTRIDGE ACCESS DEVICE IN A CARTRIDGE STORAGE SYSTEM
82041791	Granted	6389514	3/25/1999	5/14/2002	09/277006	US	Method And Computer System For Speculatively Closing Pages In Memory
82041794	Granted	6751056	11/6/1998	6/15/2004	09/187138	US	Tape Drive Head Cleaner
82041929	Granted	6553509	7/28/1999	4/22/2003	09/363917	US	Log Record Parsing For A Distributed Log On A Disk Array Data Storage System
82041986	Granted	6308318	10/7/1998	10/23/2001	09/167284	US	METHOD AND APPARATUS FOR HANDLING ASYNCRONOUS EXCEPTIONS IN A DYNAMIC TRANSLATION SYSTEM
82042043	Granted	6256641	12/15/1998	7/3/2001	09/212739	US	CLIENT TRANSPARENCY SYSTEM AND METHOD THEREFOR
82042112	Granted	6766424	2/9/1999	7/20/2004	09/246490	US	Computer Architecture With Dynamic Sub-page Placement
82042229	Granted	6125044	3/23/1999	9/26/2000	09/274722	US	SUPPRESSING EMI WITH PCB MOUNTED FERRITE ATTENUATOR
82042256	Granted	6045086	10/2/1998	4/4/2000	09/165518	US	Method And Apparatus For Improved Tape Packing
82042316	Granted	6336138	8/25/1998	1/1/2002	09/139959	US	TEMPLATE-DRIVEN APPROACH FOR GENERATING MODELS ON NETWORK SERVICES
82042433	Granted	6092762	9/10/1998	7/25/2000	09/150872	US	Tape Leader Pin Clamp And Method For Securing Same To Leader Pin Assembly
82042541	Granted	6124996	10/20/1998	9/26/2000	09/175908	US	Servo System And Method With Multiple Phase Clock

PATENT
REEL: 038498 FRAME: 0328

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82042562	Granted	6122124	10/20/1998	9/19/2000	09/175907	US	Servo System And Method With Digitally Controlled Oscillator
82042613	Granted	6775695	10/29/1999	8/10/2004	09/431544	US	Client Session Depth Based Caching In Proxy Servers
82042667	Granted	6205466	7/17/1998	3/20/2001	09/118248	US	Infrastructure For An Open Digital Services Marketplace
82043111	Granted	7296265	3/9/1999	11/13/2007	09/264756	US	Class Loading In A Virtual Machine For A Platform Having Minimal Resources
82043114	Granted	6332216	3/9/1999	12/18/2001	09/264755	US	HYBRID JUST-IN-TIME COMPILER THAT CONSUMES MINIMAL RESOURCE
82043294	Granted	6163454	2/22/1999	12/19/2000	09/255408	US	ELECTROMAGNETIC INTERFERENCE (EMI) SHIELD FOR ELECTRICAL COMPONENTS, AN INTERNAL EMI BARRIER, AND A STORAGE ENCLOSURE FOR ELECTRICAL/ELECTRONIC COMPONENTS
82043567	Granted	6246403	10/8/1998	6/12/2001	09/168841	US	METHOD AND APPARATUS FOR GENERATING A GRAPHICAL USER INTERFACE
82043750	Granted	6625681	3/29/1999	9/23/2003	09/272798	US	State Activated One Shot With Extended Pulse Timing For Hot-Swap Applications
82043753	Granted	6961795	7/21/2003	11/1/2005	10/623173	US	APPARATUS FOR SAFE INSTALLATION AND REMOVAL OF A CIRCUIT BOARD FOR HOT SWAP APPLICATIONS
82043756	Granted	6140926	7/21/1999	10/31/2000	09/359142	US	Redundant Status Indicators For Fault Tolerance
82044059	Granted	6191945	1/29/1999	2/20/2001	09/240266	US	Cold Plate Arrangement For Cooling Processor And Companion Voltage Regulator
82044167	Granted	6625159	11/30/1998	9/23/2003	09/201510	US	Nonblocking And Fair Queuing Switching Method And Shared Memory Packet Switch
82044350	Granted	7055040	5/10/2002	5/30/2006	10/143080	US	Method And Apparatus For Uniquely And Securely Loading Software To An Individual Computer
82044416	Granted	6260079	11/15/1998	7/10/2001	09/192548	US	METHOD AND SYSTEM FOR ENHANCING FIBRE CHANNEL LOOP RESILIENCY FOR A MASS STORAGE ENCLOSURE BY INCREASING COMPONENT REDUNDANCY AND USING SHUNT ELEMENTS AND INTELLIGENT BYPASS MANAGEMENT
82044437	Granted	6898184	11/15/1998	5/24/2005	09/192547	US	Private Arbitrated Loop Self-test Management For A Fibre Channel Storage Enclosure
82044479	Granted	6274807	11/13/1998	8/14/2001	09/191962	US	METHOD AND APPARATUS FOR CONTROLLING ELECTROMAGNETIC RADIATION EMISSIONS GENERATED BY ELECTRICAL COMPONENTS
82044482	Granted	6728099	11/13/1998	4/27/2004	09/191964	US	Electrical Component Having A Hybrid Air Cooling System And Method
82044545	Granted	6813113	2/25/1999	11/2/2004	09/257322	US	DATA CARTRIDGE EXCHANGE APPARATUS
82045049	Granted	6522989	2/29/2000	2/18/2003	09/515446	US	System And Method For Timing Analysis Of An Integrated Circuit Clocked By Mixed Clock Types

PATENT
REEL: 038498 FRAME: 0329

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82045304	Granted	7030408	10/26/2000	4/18/2006	09/699080	US	Molecular Wire Transistor (MWT)
82045310	Granted	6128214	3/29/1999	10/3/2000	09/280189	US	Molecular Wire Crossbar Memory
82045313	Granted	7948271	3/29/1999	5/24/2011	09/282045	US	Molecular Wire Crossbar Logic (MWCL)
82045316	Granted	6256767	3/29/1999	7/3/2001	09/282049	US	Demultiplexer For A Molecular Wire Crossbar Network (MWCN Demux)
82045478	Granted	6317788	10/30/1998	11/13/2001	09/183420	US	ROBOT POLICIES FOR MONITORING AVAILABILITY AND RESPONSE OF NETWORK PERFORMANCE AS SEEN FROM USER PERSPECTIVE
82045679	Granted	6229691	11/13/1998	5/8/2001	09/192397	US	Apparatus And Method For Mounting A Power Distribution Unit Within An Equipment Enclosure
82046123	Granted	6345277	2/26/1999	2/5/2002	09/258575	US	METHOD AND APPARATUS FOR USING AN INFORMATION MODEL TO ORGANIZE AN INFORMATION REPOSITORY INTO AN EXTENSIBLE
82046168	Granted	6480471	12/21/1998	11/12/2002	09/217418	US	Hardware Sampler For Statistical Monitoring Of Network Traffic
82046723	Granted	6298429	9/12/2000	10/2/2001	09/660032	US	Memory address generator capable of row-major and column-major sweeps
82046726	Granted	6175518	3/30/1999	1/16/2001	09/281612	US	REMOTE REGISTER HIERARCHY ACCESSIBLE USING A SERIAL DATA LINE
82047557	Granted	6618766	9/29/1999	9/9/2003	09/408734	US	Correlating Protocol Events In Distributed Applications
82048241	Granted	6351796	2/22/2000	2/26/2002	09/510328	US	Methods And Apparatus For Increasing The Efficiency Of A Higher Level Cache By Selectively Performing Writes To The Higher Level Cache
82048499	Granted	6385557	9/8/1999	5/7/2002	09/392199	US	TRACKING THE REMAINING USEFUL LIFE OF A MAGNETIC DATA STORAGE TAPE
82048613	Granted	6271845	3/10/2000	8/7/2001	09/523387	US	Method and structure for dynamically drilling down through a health monitoring map to determine the health status and cause of health problems associated with network objects of a managed network environment
82048616	Granted	7146568	8/6/2001	12/5/2006	09/923045	US	DYNAMICALLY DRILLING-DOWN THROUGH A HEALTH MONITORING MAP TO DETERMINE THE HEALTH STATUS AND CAUSE OF HEALTH PROBLEMS ASSOCIATED WITH NETWORK OBJECTS OF A MANAGED NETWORK ENVIRONMENT
82048625	Granted	6198630	1/20/1999	3/6/2001	09/234127	US	Method And Apparatus For Electrical And Mechanical Attachment, And Electromagnetic Interference And Thermal Management Of High Speed, High Density VLSI Modules
82049063	Granted	6772106	8/20/1999	8/3/2004	09/378580	US	Retargetable Computer Design System
82049240	Granted	6473371	2/14/2000	10/29/2002	09/503458	US	Media Handling Device Having Replaceable Modules

PATENT
REEL: 038498 FRAME: 0330

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82049309	Granted	6826683	10/23/2000	11/30/2004	09/695184	US	PREDICTING THE HEALTH OF A COMPUTER SYSTEM BY DETERMINING A SET OF MODIFICATONS INVOLVED IN A PROPOSED INTERVENTION TO AN EXISTING SYSTEM
82049312	Granted	7246229	10/19/2004	7/17/2007	10/968547	US	Predicting The Health Of A System That Would Result From The Application Of A Proposed Intervention To An Existing System
82049621	Granted	6167463	4/8/1999	12/26/2000	09/288408	US	Firm Addressing For Devices On A Fibre Channel Arbitrated Loop
82049807	Granted	6219239	5/26/1999	4/17/2001	09/320412	US	EMI REDUCTION DEVICE AND ASSEMBLY
82050107	Granted	6201711	5/18/1999	3/13/2001	09/314484	US	Computer System Housing For Attenuating Electromagnetic Interference (EMI)
82050311	Granted	6477703	6/29/1999	11/5/2002	09/342763	US	Software Patch Selection Tool
82050356	Granted	6233662	4/26/1999	5/15/2001	09/299478	US	Method And Apparatus For Interleaving Memory Across Computer Memory Banks
82050416	Granted	6389370	9/14/1999	5/14/2002	09/395500	US	System And Method For Determining Which Objects In A Set Of Objects Should Be Processed
82050782	Granted	6665698	5/12/2000	12/16/2003	09/569658	US	HIGH SPEED INCREMENTER/DECREMENTER
82050794	Granted	7075896	3/16/2000	7/11/2006	09/526830	US	Method For Automatic Layout Of Switched Network Topologies
82051118	Granted	6725335	1/5/2001	4/20/2004	09/755780	US	Method And System For Fast Unlinking Of A Linked Branch In A Caching Dynamic Translator
82051166	Granted	6363524	9/10/1999	3/26/2002	09/393904	US	System And Method For Assessing The Need For Installing Software Patches In A Computer System
82051484	Granted	6633449	5/22/2000	10/14/2003	09/575841	US	High Bandwidth Tape Positioning System And Servo Controlled Rollers For Active Tape Positioning
82051493	Granted	7340600	1/14/2000	3/4/2008	09/483185	US	Authorization Infrastructure Based On Public Key Cryptography
82051544	Granted	6309262	10/21/1999	10/30/2001	09/422875	US	A BIFURCATED CONTACT WITH A CONNECTING MEMBER AT THE TIP OF THE CONTACT
82051607	Granted	6618783	10/29/1999	9/9/2003	09/430369	US	Method And System For Managing A PCI Bus Coupled To Another System
82051622	Granted	6934283	11/8/1999	8/23/2005	09/436062	US	System And Method For Source Defined Packet Routing
82051790	Granted	6516425	10/29/1999	2/4/2003	09/430403	US	RAID Rebuild Using Most Vulnerable Data Redundancy Scheme First
82051853	Granted	7007020	3/10/2000	2/28/2006	09/524140	US	DISTRIBUTED OLAP-BASED ASSOCIATION RULE GENERATION METHOD AND SYSTEM
82051856	Granted	6917940	3/10/2000	7/12/2005	09/523446	US	Olap-based Customer Behavior Profiling Method And System
82051859	Granted	8190554	7/1/2004	5/29/2012	10/882925	US	Olap-based Customer Behavior Profiling Method And System

PATENT
REEL: 038498 FRAME: 0331

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82051865	Granted	7822629	12/15/1999	10/26/2010	09/464311	US	Customer Profiling Apparatus For Conducting Customer Behavior Pattern Analysis, And Method For Comparing Customer Behavior Patterns
82052345	Granted	7412468	10/14/2003	8/12/2008	10/686331	US	Generation Of Cryptographically Strong Random Numbers Using MISRS
82052933	Granted	6888836	5/26/1999	5/3/2005	09/318722	US	METHOD FOR ALLOCATING WEB SITES ON A WEB HOSTING CLUSTER
82053986	Granted	6904593	3/24/2000	6/7/2005	09/534703	US	Method Of Administering Software Components Using Asynchronous Messaging In A Multi-Platform, Multi-Programming Language Environment
82054055	Granted	6986075	2/23/2001	1/10/2006	09/792443	US	Storage-device Activation Control For A High-availability Storage System
82054217	Granted	7143315	10/16/2003	11/28/2006	10/688487	US	Data Storage Systems And Methods
82054976	Granted	6832370	5/9/2000	12/14/2004	09/566990	US	Data Speculation Within Modulo Scheduled Loops
82055114	Granted	7385716	9/2/1999	6/10/2008	09/388891	US	AUTHORING TOOL FOR BAYESIAN NETWORK TROUBLESHOOTERS
82055480	Granted	6624482	2/22/2002	9/23/2003	10/079531	US	Method For Creating A Useful Bipolar Junction Transistor From A Parasitic Bipolar Junction Transistor On A Mosfet
82055483	Granted	6594786	1/31/2000	7/15/2003	09/495431	US	Fault Tolerant High Availability Meter
82055654	Granted	6230903	10/27/1999	5/15/2001	09/428120	US	Snap-On Rack Slide Mounting System
82056476	Granted	7249192	3/9/2000	7/24/2007	09/521827	US	Protocol For Insuring Exactly Once Semantics Of Transactions Across An Unordered, Unreliable Network
82056527	Granted	6591257	12/23/1999	7/8/2003	09/472389	US	Apparatus And Method For A Compositional Decision Support Reasoning System
82056533	Granted	6728692	12/23/1999	4/27/2004	09/470848	US	Apparatus For A Multi-Modal Ontology Engine
82058024	Granted	6738976	12/17/1999	5/18/2004	09/466543	US	Method, System, And Apparatus To Minimize Exception Handling Overhead From Invoked Functions
82058042	Granted	7010593	4/30/2001	3/7/2006	09/845429	US	DYNAMIC GENERATION OF CONTEXT-SENSITIVE DATA AND INSTRUCTIONS FOR TROUBLESHOOTING PROBLEM EVENTS IN A COMPUTING ENVIRONMENT
82058099	Granted	6944607	10/4/2000	9/13/2005	09/684488	US	Aggregated Clustering Method And System
82058216	Granted	6757870	3/22/2000	6/29/2004	09/532538	US	Automatic Table Detection Method And System
82058228	Granted	6699779	3/22/2002	3/2/2004	10/104348	US	Method For Making Nanoscale Wires And Gaps For Switches And Transistors
82058405	Granted	6865601	2/11/2000	3/8/2005	09/502718	US	METHOD FOR ALLOCATING WEB SITES ON A WEB SERVER CLUSTER BASED ON BALANCING MEMORY AND LOAD REQUIREMENTS
82058465	Granted	6897885	6/19/2000	5/24/2005	09/596804	US	Invisible Link Visualization Method And System In A Hyperbolic Space

PATENT
REEL: 038498 FRAME: 0332

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82058486	Granted	6735637	6/28/2001	5/11/2004	09/895476	US	METHOD AND SYSTEM FOR PROVIDING ADVANCED WARNING TO A DATA STAGE DEVICE IN ORDER TO DECREASE THE TIME FOR A MIRROR SPLIT OPERATION WITHOUT STARVING HOST I/O REQUEST PROCESSSING
82058600	Granted	6742016	3/24/2000	5/25/2004	09/535101	US	REQUEST ACCEPTOR FOR A NETWORK APPLICATION SYSTEM AND A METHOD THEREOF
82058603	Granted	7117263	2/1/2000	10/3/2006	09/495818	US	APPARATUS AND METHOD FOR PROCESSING REQUESTS FROM AN EXTERNAL QUEUE IN A TCP/IP-BASED APPLICATION SYSTEM
82058666	Granted	6487636	4/24/2000	11/26/2002	09/556221	US	Method And Apparatus For Mapping Data In A Heterogeneous Disk Array Storage System
82058852	Granted	6471415	7/18/2000	10/29/2002	09/618207	US	Multiconductor Interconnect
82059212	Granted	7032222	10/13/2000	4/18/2006	09/687436	US	METHOD AND SYSTEM FOR DETERMINING RESOURCE ALLOCATION TO USERS BY GRANTING REQUEST BASED ON USER ASSOCIATED DIFFERENT LIMITS AND RESOURCE LIMIT
82059239	Granted	6687805	10/30/2000	2/3/2004	09/699596	US	Method And System For Logical-object-to-physical-location Translation And Physical Separation Of Logical Objects
82059359	Granted	6971094	2/22/2000	11/29/2005	09/510747	US	Deployed Agent Used In The Installation And Maintenance Of Software
82060034	Granted	7159173	3/7/2001	1/2/2007	09/801478	US	Method, Computer System And Computer Program Product For Printing A Document Page
82060049	Granted	6732118	3/26/2001	5/4/2004	09/817486	US	METHOD, COMPUTER SYSTEM, AND COMPUTER PROGRAM PRODUCT FOR MONITORING OBJECTS OF AN INFORMATION TECHNOLOGY ENVIRONMENT
82060091	Granted	7171554	8/13/2001	1/30/2007	09/928859	US	Method, Computer Program Product And System For Providing A Switch User Functionality In An Information Technological Network
82060589	Granted	6004619	11/7/1997	12/21/1999	08/965853	US	PROCESS FOR MANUFACTURING PRINTED CIRCUIT BOARDS
82061657	Granted	6952768	12/7/2000	10/4/2005	09/733540	US	Security Protocol
82061672	Granted	6886032	6/8/2001	4/26/2005	09/876161	US	Utilization Of Unused Disk Space On Networked Computer
82061897	Granted	6898754	4/9/2001	5/24/2005	09/828188	US	Error Detection For Data Storage And Transmission
82062101	Granted	6925288	3/29/2001	8/2/2005	09/821146	US	Gathering Information From Short-range Wireless Portals
82062347	Granted	6941476	5/10/2001	9/6/2005	09/852262	US	Information Storage
82062467	Granted	6845464	4/27/2001	1/18/2005	09/842872	US	Performing Operating System Recovery From External Back-up Media In A Headless Computer Entity
82062476	Granted	6845466	4/27/2001	1/18/2005	09/843144	US	MANAGING DISK DRIVE REPLACEMENTS ON MULITIDISK HEADLESS APPLIANCES

PATENT
REEL: 038498 FRAME: 0333

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82062485	Granted	7281159	1/3/2005	10/9/2007	11/025937	US	Managing Disk Drive Replacements On Multidisk Headless Appliances
82062653	Granted	6975470	10/30/2001	12/13/2005	09/984619	US	Data Readers
82062713	Granted	7877799	8/1/2001	1/25/2011	09/920554	US	Performance Of A Service On A Computing Platform
82062731	Granted	6754767	3/19/2001	6/22/2004	09/810171	US	Self Managing Fixed Configuration Raid Disk In Headless Appliance
82062773	Granted	8166173	10/16/2001	4/24/2012	09/977497	US	Inviting Assistant Entity Into A Network Communication Session
82062791	Granted	6996605	10/16/2001	2/7/2006	09/977496	US	OVERVIEW SUBSYSTEM FOR INFORMATION PAGE SERVER
82062830	Granted	7026983	7/13/2001	4/11/2006	09/905774	US	Location Data Diffusion And Location Discovery
82062848	Granted	7305212	7/13/2001	12/4/2007	09/905775	US	Message Passing To A Known Location
82062854	Granted	7171361	12/13/2001	1/30/2007	10/013934	US	Idiom Handling In Voice Service Systems
82063529	Granted	7353531	2/22/2002	4/1/2008	10/080477	US	Trusted Computing Environment
82063535	Granted	7159210	6/18/2002	1/2/2007	10/175553	US	Performing Secure And Insecure Computing Operations In A Compartmented Operating System
82063544	Granted	7865876	6/18/2002	1/4/2011	10/175542	US	MULTIPLE TRUSTED COMPUTING ENVIRONMENTS
82063610	Granted	7596702	6/27/2002	9/29/2009	10/180977	US	Network Storage Devices
82063643	Granted	6986042	8/17/2001	1/10/2006	10/110950	US	COMPUTER SYSTEM OPERABLE TO REVERT TO A TRUSTED STATE
82063775	Granted	6757848	6/19/2001	6/29/2004	09/883382	US	Recovery Of User Data From Partially Incorrect Data Set In Tape Data Storage System
82064024	Granted	8769478	4/22/2005	7/1/2014	11/111866	US	Aggregation Of Multiple Headless Computer Entities Into A Single Computer Entity Group
82064081	Granted	7082497	12/28/2001	7/25/2006	10/034083	US	System And Method For Managing A Moveable Media Library With Library Partitions
82064093	Granted	6862149	6/18/2001	3/1/2005	09/881763	US	Searching For Append Point In Data Storage Device
82064096	Granted	6694404	7/31/2001	2/17/2004	09/917785	US	METHOD OF IDENTIFYING DATA WITH SAME TIME STAMP ON DIFFERENT TRACKS IN STORAGE DEVICE
82064099	Granted	6693755	7/31/2001	2/17/2004	09/917781	US	DATA STORAGE
82064102	Granted	7042667	7/31/2001	5/9/2006	09/917952	US	DATA STORAGE
82064105	Granted	6883122	7/31/2001	4/19/2005	09/917768	US	WRITE PASS ERROR DETECTION
82064153	Granted	6877127	7/31/2001	4/5/2005	09/917769	US	Quality Control In Data Transfer And Storage Apparatus
82064294	Granted	7296299	7/3/2001	11/13/2007	09/897424	US	Tamper-evident And/or Tamper-resistant Electronic Components
82064336	Granted	7702549	7/12/2002	4/20/2010	10/194339	US	Sharing Of State Information
82064399	Granted	7039835	7/3/2002	5/2/2006	10/188336	US	Drop-out Management System And Method
82064594	Granted	7444666	7/25/2002	10/28/2008	10/202816	US	Multi-domain Authorization And Authentication
82064771	Granted	7702763	7/31/2002	4/20/2010	10/207802	US	Remote Monitoring Of Computer Devices
82065206	Granted	8370631	7/29/2002	2/5/2013	10/208716	US	Trusted Identities On A Trusted Computing Platform

PATENT
REEL: 038498 FRAME: 0334

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82065521	Granted	6715031	12/28/2001	3/30/2004	10/034691	US	System And Method For Partitioning A Storage Area Network Associated Data Library
82065530	Granted	6839824	12/28/2001	1/4/2005	10/033009	US	System And Method For Partitioning A Storage Area Network Associated Data Library Employing Element Addresses
82065539	Granted	7062614	12/28/2001	6/13/2006	10/032662	US	System And Method For Managing Access To Multiple Devices In A Partitioned Data Library
82065578	Granted	6999999	12/28/2001	2/14/2006	10/033010	US	System And Method For Securing Fiber Channel Drive Access In A Partitioned Data Library
82065590	Granted	8788611	12/28/2001	7/22/2014	10/033003	US	Method For Using Partitioning To Provide Capacity On Demand In Data Libraries
82065599	Granted	6845431	12/28/2001	1/18/2005	10/034580	US	System And Method For Intermediating Communication With A Moveable Media Library Utilizing A Plurality Of Partitions
82065905	Granted	7096409	7/30/2003	8/22/2006	10/632125	US	Reed-solomon Decoder And Decoding Method For Errors And Erasures Decoding
82065911	Granted	7278086	7/30/2003	10/2/2007	10/632123	US	Identifying Uncorrectable Codewords In A Reed-solomon Decoder For Errors And Erasures
82066025	Granted	7086052	1/3/2003	8/1/2006	10/336590	US	Software Installation And Operation With Random Selection
82066034	Granted	7904504	10/31/2001	3/8/2011	09/984969	US	POLICY ENFORCEMENT AND ACCESS CONTROL FOR DISTRIBUTED NETWORKED SERVICES
82066202	Granted	6983146	6/3/2002	1/3/2006	10/162036	US	Location Determination Using Location Data Items Received By Short-Range Communication
82066208	Granted	6714161	6/3/2002	3/30/2004	10/162037	US	Location Determination Using Location Data Items Received By Short-Range Communication
82066274	Granted	7219226	10/11/2002	5/15/2007	10/270039	US	Method And Apparatus For Encrypting Data
82066391	Granted	6282042	9/22/1997	8/28/2001	08/934765	US	Data Processing Apparatus And Methods
82066409	Granted	5896067	9/22/1997	4/20/1999	08/935048	US	DATA PROCESSING APPARATUS AND METHODS INCLUDING A PHASE LOCK LOOP
82066517	Granted	5949866	2/19/1997	9/7/1999	08/803058	US	COMMUNICATIONS SYSTEM FOR EXTABLISHING A COMMUNICATION CHANNEL ON THE BASIS OF A FUNCTIONAL RULE OR TASK
82066847	Granted	6307892	1/17/1997	10/23/2001	08/913899	US	OFDM FEC
82067411	Granted	6373859	9/10/1997	4/16/2002	09/068383	US	METHODS AND APPARATUS FOR ENCODING AND DECODING DATA
82067456	Granted	6115208	10/15/1997	9/5/2000	08/951047	US	TAPE DRIVES FOR USE WITH TAPE CARTRIDGES
82067471	Granted	6263454	7/7/1997	7/17/2001	08/888716	US	Storage System
82067711	Granted	6985325	7/31/2001	1/10/2006	09/917783	US	UPDATEABLE CENTRALIZED DATA POSITION INFORMATION STORAGE SYSTEM

PATENT
REEL: 038498 FRAME: 0335

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82067726	Granted	6268975	3/12/1999	7/31/2001	09/266926	US	TAPE DRIVE UTILIZING ENCODED FILE MARKERS TO LOCATE TARGET POSITIONS
82067774	Granted	6282040	2/12/1999	8/28/2001	09/249023	US	WRITE PASS IDENTIFIER
82067780	Granted	6282039	10/30/1998	8/28/2001	09/182444	US	SCRATCH PROTECTION IN TAPE DATA STORAGE SYSTEM
82067855	Granted	6272614	4/30/1999	8/7/2001	09/303460	US	PROCESSING METHOD AND APPARATUS INVOLVING A PROCESSOR INSTRUCTION USING HASHING
82067957	Granted	6941502	10/31/2001	9/6/2005	09/984976	US	Error Detection And Correction
82068137	Granted	6408416	6/16/1999	6/18/2002	09/335312	US	DATA WRITING TO DATA STORAGE MEDIUM
82068155	Granted	6307692	5/18/1999	10/23/2001	09/313453	US	DOUBLE PULSE WRITE DRIVER
82068161	Granted	6256158	5/12/1999	7/3/2001	09/311481	US	CALIBRATING WRITE PRE-EQUALISATION IN A DATA STORAGE DEVICE
82068347	Granted	6212035	7/29/1999	4/3/2001	09/363030	US	MAGNETIC TAPE APPARATUS HAVING A MULTI-FUNCTION MOTOR WHICH DRIVES A HELICAL SCANNING DRUM CLEANING ASSEMBLY
82068413	Granted	6510532	10/14/1999	1/21/2003	09/417574	US	BUS AND/ OR INTERFACE LOCAL CAPTURE MODULE FOR DIAGNOSTIC ANALYSER
82068476	Granted	6330570	2/26/1999	12/11/2001	09/259129	US	DATA BACKUP SYSTEM
82068527	Granted	6507841	2/19/1999	1/14/2003	09/252671	US	METHOD OF AND APPARATUS FOR REFINING DESCRIPTORS
82068782	Granted	6640326	5/30/2000	10/28/2003	09/580453	US	Data Set Recovery By Codeword Overlay
82069097	Granted	6704732	1/24/2000	3/9/2004	09/490784	US	Website Usage Monitoring
82069286	Granted	8407092	10/30/2001	3/26/2013	10/415449	US	Metering In A Data Processing System
82069352	Granted	6728860	2/19/2001	4/27/2004	09/959590	US	Address Mapping In Solid State Storage Device
82069394	Granted	6778506	4/27/2000	8/17/2004	09/561510	US	Loop Prevention In Networks
82070522	Granted	7150023	7/27/2001	12/12/2006	09/915404	US	Dynamic Resource Control In A Processing System
82070699	Granted	6951023	10/29/2001	9/27/2005	10/032883	US	Message-Based Software System
82070957	Granted	6839780	1/21/2003	1/4/2005	10/350299	US	CONNECTION DEVICE FOR A COMPUTER
82071017	Granted	6952731	8/14/2001	10/4/2005	09/929839	US	Remote Control Of A Device Over The Internet
82071038	Published		6/7/2002		10/165863	US	Providing Access To Diagnostic Information To An Interested Party, Such As A Computer Remote Support Agent
82071074	Granted	8208895	6/20/2002	6/26/2012	10/175284	US	A Telecommunications System, A Method Of Charging Some Or All Of The Cost Of A Call To A Callee, A Method Of Debiting A Prepay Account Of A Telecommunications Subscriber And Telecommunications Apparatus
82071089	Granted	7292686	9/5/2002	11/6/2007	10/236462	US	Exchange Node
82071326	Granted	7213070	1/21/2003	5/1/2007	10/349500	US	Method Of Brokering Network Services
82071347	Granted	7296050	1/17/2003	11/13/2007	10/347115	US	Distributed Computing System And Method
82071890	Granted	6804247	5/30/2000	10/12/2004	09/580603	US	System Providing For Multiple Virtual Circuits Between Two Network Entities

PATENT
REEL: 038498 FRAME: 0336

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82071893	Granted	6222842	9/30/1997	4/24/2001	08/940260	US	System Providing For Multiple Virtual Circuits Between Two Network Entities
82072019	Granted	6173343	9/18/1998	1/9/2001	09/156217	US	DATA PROCESSING SYSTEM AND METHOD WITH SYSTEM-DETERMINED PERIPHERAL DEVICE SERVICE
82072100	Granted	6891863	10/6/2000	5/10/2005	09/684845	US	Device And Methods For Processing Channels In A Data Stream
82075388	Granted	7073093	5/15/2001	7/4/2006	09/858105	US	HELPDESK SYSTEM AND METHOD
82076567	Granted	5838976	11/28/1995	11/17/1998	08/563334	US	System And Method For Profiling Code On Symmetric Multiprocessor Architectures
82077029	Granted	5828840	8/6/1996	10/27/1998	08/692489	US	SERVER FOR STARTING CLIENT APPLICATION ON CLIENT IF CLIENT IS NETWORK TERMINAL AND INITIATING CLIENT APPLICATION ON SERVER IF CLIENT IS NON NETWORK TERMINAL
82077131	Granted	5850446	6/17/1996	12/15/1998	08/664825	US	System, Method And Article Of Manufacture For Virtual Point Of Sale Processing Utilizing An Extensible, Flexible Architecture
82077149	Granted	6324525	7/22/1998	11/27/2001	09/121559	US	SETTLEMENT OF AGGREGATED ELECTRONIC TRANSACTIONS OVER A NETWORK
82077335	Granted	5963924	4/26/1996	10/5/1999	08/638550	US	A SYSTEM,METHOD AND ARTICLE OF MANUFACTURE FOR THE USE OF PAYMENT INSTRUMENT HOLDERS AND PAYMENT INSTRUMENTS IN NETWORK ELECTRONIC COMMERCE
82077338	Granted	5987140	4/26/1996	11/16/1999	08/639909	US	System, Method And Article Of Manufacture For Secure Network Electronic Payment And Credit Collection
82077380	Granted	5943424	6/17/1996	8/24/1999	08/664772	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR PROCESSING A PLURALITY OF TRANSACTIONS FROM A SINGLE INITIATION POINT ON A MULTICHANNEL, EXTENSIBLE, FLEXIBLE ARCHITECTURE
82077386	Granted	6026379	6/17/1996	36571	08/664634	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR MANAGING TRANSACTIONS IN A HIGH AVAILABILITY SYSTEM
82077398	Granted	6363363	8/24/1999	3/26/2002	09/382718	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR MANAGING TRANSACTIONS IN A HIGH AVAILABILITY SYSTEM
82077404	Granted	6002767	6/17/1996	12/14/1999	08/668011	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A MODULAR GATEWAY SERVER ARCHITECTURE
82077407	Granted	6072870	6/17/1996	6/6/2000	08/664633	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A GATEWAY PAYMENT ARCHITECTURE UTILIZING A MULTICHANNEL, EXTENSIBLE, FLEXIBLE ARCHITECTURE

PATENT
REEL: 038498 FRAME: 0337

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82077449	Granted	6253027	6/17/1996	6/26/2001	08/664814	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR EXCHANGING SOFTWARE AND CONFIGURATION DATA OVER A MULTICHANNEL, EXTENSIBLE, FLEXIBLE ARCHITECTURE
82077452	Granted	5987132	6/17/1996	11/16/1999	08/664835	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR CONDITIONALLY ACCEPTING A PAYMENT METHOD UTILIZING AN EXTENSIBLE, FLEXIBLE ARCHITECTURE
82077458	Granted	5889863	6/17/1996	3/30/1999	08/664824	US	System, Method And Article Of Manufacture For Remote Virtual Point Of Sale Processing Utilizing A Multichannel, Extensible, Flexible Architecture
82077506	Granted	6373950	6/17/1996	4/16/2002	08/664864	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR TRANSMITTING MESSAGES WITHIN MESSAGES UTILIZING AN EXTENSIBLE, FLEXIBLE ARCHITECTURE
82077524	Granted	5978840	9/26/1996	11/2/1999	08/721133	US	A SYSTEM,METHOD AND ARTICLE OF MANUFACTURE FOR A PAYMENT GATEWAY SYSTEM ARCHITECTURE FOR PROCESSING ENCRYTPTED PAYMENT TRANSACTIONS UTILIZING A MULTICHANNEL, EXTENSIBLE, FLEXIBLE ARCHITECTURE
82078256	Granted	5999930	8/1/1997	12/7/1999	08/905307	US	Method And Apparatus For Distributed Control Of A Shared Storage Volume
82078262	Granted	6067545	4/15/1998	5/23/2000	09/060857	US	RESOURCE REBALANCING IN NETWORKED COMPUTER SYSTEMS
82078265	Granted	6101508	4/15/1998	8/8/2000	09/060924	US	Clustered File Management For Network Resources
82078340	Granted	6044367	4/15/1998	3/28/2000	09/060864	US	Distributed I/O Store
82078343	Granted	6185601	4/15/1998	2/6/2001	09/060869	US	DYNAMIC LOAD BALANCING OF A NETWORK OF CLIENT AND SERVER COMPUTERS
82079000	Granted	6795910	10/9/2001	9/21/2004	09/973665	US	Stack Utilization Management System And Method For A Two-Stack Arrangement
82079003	Granted	7165087	12/17/2002	1/16/2007	10/322200	US	SYSTEM AND METHOD FOR INSTALLING AND CONFIGURING COMPUTING AGENTS
82079021	Granted	7765299	9/16/2002	7/27/2010	10/245669	US	Dynamic Adaptive Server Provisioning For Blade Architectures
82079255	Granted	8341211	9/14/2007	12/25/2012	11/855348	US	System And Method For Inquiry Caching In A Storage Area Network
82079258	Granted	7904539	3/13/2009	3/8/2011	12/403971	US	System And Method For Servicing Inquiry Commands About Target Devices In Storage Area Network
82079381	Granted	6910271	10/29/2002	6/28/2005	10/283907	US	Mechanical Highly Compliant Thermal Interface Pad
82079387	Granted	7131199	2/1/2005	11/7/2006	11/049346	US	Mechanical Highly Compliant Thermal Interface Pad
82079405	Granted	7236967	6/3/2002	6/26/2007	10/161369	US	METHODS AND SYSTEMS FOR MAINTANING TRANSACTION SEMANTICS IN A COMPUTER SYSTEM

PATENT
REEL: 038498 FRAME: 0338

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82079963	Granted	7019973	6/9/2004	3/28/2006	10/864165	US	Circuit Cooling Apparatus
82080209	Granted	8463617	6/3/2003	6/11/2013	10/453068	US	Network Subscriber Usage Recording System
82080215	Granted	6895534	10/26/2001	5/17/2005	10/008855	US	Systems And Methods For Providing Automated Diagnostic Services For A Cluster Computer System
82080398	Granted	6586965	10/29/2001	7/1/2003	10/016593	US	Molecular Crossbar Latch
82080653	Granted	6912635	5/8/2002	6/28/2005	10/140968	US	Distributing Workload Evenly Across Storage Media In A Storage Array
82080824	Granted	8219777	10/3/2002	7/10/2012	10/264659	US	Virtual Storage Systems, Virtual Storage Methods, And Methods Of Over Committing A Virtual RAID Storage System
82080875	Granted	6996582	10/3/2002	2/7/2006	10/264525	US	Virtual Storage Systems And Virtual Storage System Operational Methods
82080881	Granted	6857057	10/3/2002	2/15/2005	10/264661	US	Virtual Storage Systems And Virtual Storage System Operational Methods
82081004	Granted	6959370	1/3/2003	10/25/2005	10/336430	US	System And Method For Migrating Data Between Memories
82081010	Granted	7240174	7/29/2005	7/3/2007	11/193215	US	System And Method For Migrating Data Between Memories
82081016	Granted	6826922	10/31/2003	12/7/2004	10/697972	US	Cooling System
82081019	Granted	6817199	10/31/2003	11/16/2004	10/697691	US	Cooling System
82081022	Granted	6886353	10/31/2003	5/3/2005	10/697699	US	Cooling System
82081025	Granted	6854287	10/31/2003	2/15/2005	10/697697	US	Cooling System
82081028	Granted	6963970	4/29/2002	11/8/2005	10/136580	US	System And Method For Executing A Fast Reset Of A Computer System
82081070	Granted	8271897	5/24/2005	9/18/2012	11/135507	US	Method And System For Navigating A User Dialog Configured To Accomplish A Task
82081190	Granted	7839782	4/1/2004	11/23/2010	10/814224	US	Method And System Of Managing Traffic In A First Set Of Nodes Of A Computer Network
82081193	Granted	8046471	9/19/2002	10/25/2011	10/247363	US	Regressive Transport Message Delivery System And Method
82081211	Granted	6711730	5/13/2002	3/23/2004	10/179077	US	Synthesizing Signal Net Information From Multiple Integrated Circuit Package Models
82081502	Granted	8392499	5/16/2002	3/5/2013	10/146988	US	System And Method For Relating Aborted Client Accesses Of Data To Quality Of Service Provided By A Server In A Client-server Network
82081694	Granted	7287247	11/12/2002	10/23/2007	10/293626	US	Instrumenting A Software Application That Includes Distributed Object Technology
82082201	Granted	7266099	1/23/2002	9/4/2007	10/056294	US	METHOD FOR HAND-OFF OF A DATA SESSION
82082267	Granted	6853554	12/14/2001	2/8/2005	10/022112	US	Thermal Connection Layer
82082270	Granted	7043650	10/31/2001	5/9/2006	10/000703	US	System And Method For Intelligent Control Of Power Consumption Of Distributed Services During Periods When Power Consumption Must Be Reduced

PATENT
REEL: 038498 FRAME: 0339

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82082273	Granted	6957353	10/31/2001	10/18/2005	10/032942	US	SYSTEM AND METHOD FOR PROVIDING MINIMAL POWER-CONSUMING REDUNDANT COMPUTING HARDWARE FOR DISTRIBUTED SERVICES
82082375	Granted	7254562	7/11/2002	8/7/2007	10/192948	US	Rule-based Packet Selection, Storage, And Access Method And System
82082450	Granted	7224891	2/13/2002	5/29/2007	10/074734	US	Digital Photograph Presentation Using DVD Players
82082453	Published		5/28/2002		10/157661	US	A Method And System For Customizing The Content Of Targeted Advertising
82082456	Granted	7378347	10/28/2002	5/27/2008	10/281678	US	METHOD OF FORMING CATALYST NANOPARTICLES FOR NANOWIRE GROWTH AND OTHER APPLICATIONS
82082564	Granted	7028314	3/24/2003	4/11/2006	10/396011	US	Media Storage System And Method For Identifying A Storage Location Therein
82082582	Granted	7573827	5/6/2003	8/11/2009	10/430668	US	METHOD AND APPARATUS FOR DETECTING NETWORK CONGESTION
82082690	Granted	7190669	7/9/2002	3/13/2007	10/192453	US	System, Method And Computer Readable Medium For Flow Control Of Data Traffic
82082696	Granted	7322034	6/14/2002	1/22/2008	10/170642	US	Method And System For Dynamically Allocating Computer System Resources
82082702	Granted	6704909	6/19/2002	3/9/2004	10/176424	US	Reduction Of Storage Elements In Synthesized Synchronous Circuits
82082711	Granted	7301660	2/20/2003	11/27/2007	10/370016	US	Systems And Methods For Remote Testing Of Printing Devices
82082891	Granted	6859214	11/20/2001	2/22/2005	09/988969	US	USER INTERFACE MECHANISM FOR MANIPULATING CONTEXT IN COMPUTER MANAGEMENT APPLICATIONS
82082894	Granted	6744332	6/21/2002	6/1/2004	10/176833	US	Four-Drop Bus With Matched Response
82082900	Granted	7085884	6/30/2003	8/1/2006	10/611597	US	System And Method For Storing Operational Data Of A Storage Automation Device To A Removable Nonvolatile Memory Component
82083191	Granted	6758679	4/17/2002	7/6/2004	10/124999	US	INSTALLATION INSTRUCTION CONVEYING DEVICE
82083203	Granted	6894900	9/17/2002	5/17/2005	10/246322	US	Heat Sink With Heat Pipe And Base Fins
82083275	Granted	6644480	1/30/2002	11/11/2003	10/060574	US	Adjustable Rackmount Assembly With Locking Key
82083497	Granted	6728101	8/29/2002	4/27/2004	10/230754	US	Card Support Assembly
82083506	Granted	7249345	2/28/2002	7/24/2007	10/086939	US	Method And System For Automatically Generating Source Code Based On A Mark-up Language Message Definition
82083581	Granted	6937238	3/20/2003	8/30/2005	10/392646	US	System For Visualizing Massive Web Transaction Data Sets Without Overlapping
82083584	Granted	6815750	5/22/2002	38300	10/155416	US	FIELD EFFECT TRANSISTOR WITH CHANNEL EXTENDING THROUGH LAYERS ON A SUBSTRATE
82083587	Granted	6806141	10/30/2003	10/19/2004	10/696838	US	FIELD EFFECT TRANSISTOR WITH GATE LAYER AND METHOD OF MAKING SAME

PATENT
REEL: 038498 FRAME: 0340

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82083770	Granted	7516362	3/19/2004	4/7/2009	10/804275	US	METHOD AND APPARATUS FOR AUTOMATING THE ROOT CAUSE ANALYSIS OF SYSTEM FAILURES
82083773	Granted	7502803	5/28/2003	3/10/2009	10/446950	US	System And Method For Generating ACPI Machine Language Tables
82083824	Granted	6901344	2/11/2003	5/31/2005	10/364858	US	Apparatus And Method For Verification Of System Interconnect Upon Hot-plugging Of Electronic Field Replaceable Units
82084061	Granted	7065691	5/19/2003	6/20/2006	10/440890	US	Apparatus And Method For Saving Precise System State Following Exceptions
82084067	Granted	6807079	11/1/2002	10/19/2004	10/285802	US	Device Having A State Dependent Upon The State Of Particles Dispersed In A Carrier
82084247	Granted	6858162	4/1/2002	2/22/2005	10/114410	US	SINGLE MOLECULE REALIZATION OF THE SWITCH AND DOIDE COMBINATION
82084253	Granted	7644006	7/22/2002	1/5/2010	10/200306	US	Semantically Investigating Business Processes
82084271	Granted	7516917	6/14/2004	4/14/2009	10/867024	US	Management Device For Excess Cabling
82084328	Granted	7114555	5/31/2002	10/3/2006	10/157892	US	Controlled Cooling Of A Data Center
82084436	Granted	7155721	6/28/2002	12/26/2006	10/183563	US	Method And Apparatus For Communicating Information Between Lock Stepped Processors
82084442	Granted	7725899	11/14/2006	5/25/2010	11/598781	US	Method And Apparatus For Communicating Information Between Lock Stepped Processors
82084445	Granted	7808794	3/31/2003	10/5/2010	10/403358	US	Media Storage Systems And Control Panel For Use Therewith
82084451	Granted	6707675	12/18/2002	3/16/2004	10/323245	US	EMI Containment Device And Method
82084514	Granted	8181125	8/5/2002	5/15/2012	10/212360	US	System And Method For Providing Compliant Mapping Between Chip Bond Locations And Package Bond Locations For An Integrated Circuit
82084706	Granted	6745363	2/19/2002	6/1/2004	10/079451	US	Early Error Detection Using ECC
82084937	Granted	7346657	1/15/2003	3/18/2008	10/345028	US	Method And System For Visually Displaying And Navigating Virtual Discussion Groups
82084949	Granted	8621083	5/15/2003	12/31/2013	10/439417	US	System And Method For Multicasting Through A Localized Computer Network
82084955	Granted	6922336	4/11/2003	7/26/2005	10/411699	US	Pivoted Field Replaceable Unit Apparatus And Method
82084958	Granted	6788544	4/11/2003	9/7/2004	10/411671	US	Field Replaceable Unit Access Device And Method
82084961	Granted	6816809	7/23/2002	11/9/2004	10/200175	US	Hardware Based Utilization Metering
82084994	Granted	6891347	10/9/2002	5/10/2005	10/267766	US	Cooling Fan Control Based On Cabinet Intrusion
82085201	Granted	6956715	3/17/2003	10/18/2005	10/389833	US	High-density Media Storage System
82085243	Granted	6749447	7/9/2002	6/15/2004	10/192462	US	METHODS AND DEVICES FOR PROTECTING PINS OF A PIN CONNECTOR
82085249	Granted	6856409	7/9/2002	2/15/2005	10/192270	US	Tool And Method For Evaluating A Pin Connector

PATENT
REEL: 038498 FRAME: 0341

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0342

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82085375	Granted	7219230	5/8/2002	5/15/2007	10/140058	US	Optimizing Costs Associated With Managing Encrypted Data
82085444	Granted	7309875	11/22/2004	12/18/2007	10/995809	US	Nanocrystal Protective Layer For Crossbar Molecular Electronic Devices
82085447	Granted	8060643	8/30/2002	11/15/2011	10/233234	US	Method And Apparatus For Dynamically Managing Bandwidth For Clients In A Storage Area Network
82085705	Granted	8667103	4/26/2002	3/4/2014	10/133617	US	System And Method For Message Traffic Analysis, Categorization And Reporting, Within A System For Harvesting Community Knowledge
82085708	Granted	7360044	7/20/2004	4/15/2008	10/896100	US	Storage System With Primary Mirror Shadow
82085771	Granted	7512066	3/30/2004	3/31/2009	10/814073	US	CONGESTION CONTROL SYSTEM
82085816	Published		7/30/2002		10/209374	US	Method And System For Storing Sparse Data In Memory And Accessing Stored Sparse Data
82085873	Granted	7519800	3/27/2003	4/14/2009	10/400856	US	Apparatus And Method For Enforcing Homogeneity Within Partitions Of Heterogeneous Computer Systems
82085999	Granted	6820027	11/1/2002	11/16/2004	10/285774	US	System And Method For Generating A SHMOO Plot By Avoiding Testing In Failing Regions
82086020	Granted	6613984	4/29/2002	9/2/2003	10/135165	US	MEANS AND METHODS OF INSULATING A BOLSTER PLATE
82086311	Granted	7225118	10/31/2002	5/29/2007	10/284098	US	Global Data Placement
82086503	Granted	6952358	5/5/2003	10/4/2005	10/429421	US	Molecular Wire Content Addressable Memory
82086629	Granted	6775997	10/3/2002	8/17/2004	10/262879	US	Cooling Of Data Centers
82086632	Granted	6772604	10/31/2003	8/10/2004	10/697693	US	Cooling Of Data Centers
82086635	Granted	6832489	10/31/2003	12/21/2004	10/697694	US	Cooling Of Data Centers
82086638	Granted	6854284	10/31/2003	2/15/2005	10/697689	US	Cooling Of Data Centers
82086641	Granted	6832490	10/31/2003	12/21/2004	10/697698	US	Cooling Of Data Centers
82086644	Granted	6834512	10/31/2003	12/28/2004	10/697659	US	Cooling Of Data Centers
82086647	Granted	6868683	10/31/2003	3/22/2005	10/697690	US	Cooling Of Data Centers
82086680	Granted	6812719	5/28/2003	11/2/2004	10/447798	US	Electronic Probe With A Tip That Is Securable To An Electronic Device
82086692	Granted	7376733	2/3/2003	5/20/2008	10/357092	US	METHOD AND APPARATUS AND PROGRAM FOR SCHEDULING AND EXECUTING EVENTS IN REAL TIME OVER A NETWORK
82086695	Granted	7386610	9/18/2000	6/10/2008	09/664499	US	Internet Protocol Data Mirroring
82087019	Granted	7292972	1/30/2003	11/6/2007	10/354379	US	System And Method For Combining Text Summarizations
82087187	Granted	6873190	3/18/2003	38440	10/392062	US	Apparatus For Sensing The Presence Of An Inductive Load Driven By A Pulse Width Modulated Signal
82087196	Granted	6924777	3/17/2003	8/2/2005	10/391125	US	Enhanced Antenna Using Flexible Circuitry
82087247	Granted	6907314	9/16/2003	6/14/2005	10/665131	US	Inventory Control Device
82087256	Granted	7437451	5/16/2002	10/14/2008	10/147249	US	System And Method For Collecting Desired Information For Network Transactions At The Kernel Level

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82087745	Granted	7454520	11/20/2002	11/18/2008	10/299908	US	Method And Apparatus For Generating A Routing Table
82087748	Granted	7554988	9/10/2002	6/30/2009	10/237618	US	Creating Expressway For Overlay Routing
82087751	Granted	7289520	11/20/2002	10/30/2007	10/299907	US	Method, Apparatus, And System For Expressway Routing Among Peers
82087757	Granted	6985928	10/1/2002	1/10/2006	10/260431	US	Placing An Object At A Node In A Peer-to-Peer System Based On A Zoom-in Algorithm
82087760	Granted	7555553	10/1/2002	6/30/2009	10/260430	US	Placing An Object At A Node In A Peer-to-peer System Based On Storage Utilization
82087874	Granted	7024758	5/28/2003	4/11/2006	10/447343	US	Assembly For Aligning A Component
82087886	Granted	7229050	11/27/2002	6/12/2007	10/306132	US	Raceway System
82087946	Granted	7009989	3/5/2002	3/7/2006	10/091874	US	Forwarding Ordered Data Packets With Less Delay
82087949	Granted	7363392	7/30/2003	4/22/2008	10/630067	US	AUTOMATIC MAINTENANCE OF CONFIGURATION INFORMATION IN A REPLACEABLE ELECTRONIC MODULE
82087955	Granted	7870312	3/12/2008	1/11/2011	12/047254	US	AUTOMATIC MAINTENANCE OF CONFIGURATION INFORMATION IN A REPLACEABLE ELECTRONIC MODULE
82087994	Granted	6922456	3/25/2002	7/26/2005	10/106536	US	COUNTER SYSTEM AND METHOD
82088003	Granted	7513779	6/4/2003	4/7/2009	10/455638	US	Connector Having A Bypass Capacitor And Method For Reducing The Impedance And Length Of A Return-signal Path
82088063	Granted	7233598	3/5/2002	6/19/2007	10/091775	US	System And Method For Speculatively Issuing Memory Requests While Maintaining A Specified Packet Order
82088069	Granted	8051089	4/30/2003	11/1/2011	10/427572	US	Systems And Methods For Location-based Real Estate Services
82088120	Granted	7310773	1/13/2003	12/18/2007	10/346795	US	Removal Of Extraneous Text From Electronic Documents
82088135	Granted	7021895	11/13/2002	4/4/2006	10/292989	US	Fan Module With Integrated Diffuser
82088138	Granted	6760245	5/1/2002	7/6/2004	10/138076	US	Molecular Wire Crossbar Flash Memory
82088270	Granted	7242690	3/5/2002	7/10/2007	10/091837	US	SYSTEM FOR PERFORMING INPUT PROCESSING ON A DATA PACKET
82088333	Granted	8412808	8/21/2002	4/2/2013	10/225785	US	Method And Framework For Server-based Remote Support Delivery
82088642	Granted	7058828	8/12/2002	6/6/2006	10/216437	US	System, Method And Apparatus For The Frequency Management Of Blades In A Bladed Architecture Based On Performance Requirements
82088681	Granted	6829150	7/9/2002	12/7/2004	10/192172	US	Ejector Latch Indicator Light
82088690	Granted	6827595	7/9/2002	12/7/2004	10/192400	US	Ejector Latch Connector
82088699	Granted	7979632	9/6/2002	7/12/2011	10/235924	US	A Storage System Including A Fast Storage Device For Storing Redundant Data
82088894	Granted	6925409	10/3/2002	8/2/2005	10/264022	US	System And Method For Protection Of Active Files During Extreme Conditions
82088933	Granted	7793879	4/6/2007	9/14/2010	11/697303	US	Apparatus And Method For Reversing Tapewind Direction

PATENT
REEL: 038498 FRAME: 0343

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82088945	Granted	7116522	5/19/2003	10/3/2006	10/440573	US	System And Method Related To A Flexible Circuit
82088996	Granted	6631756	9/10/2002	10/14/2003	10/238144	US	High Performance Passive Cooling Device With Ducting
82089116	Granted	7747339	10/3/2002	6/29/2010	10/264474	US	Managing Procurement Risk
82089131	Granted	6944552	6/25/2003	9/13/2005	10/606134	US	System And Method For Detecting Power Deficiencies In A Computer Component
82089200	Granted	7548971	8/12/2002	6/16/2009	10/216229	US	System And Method For Managing The Operating Frequency Of Blades In A Bladed-system
82089263	Granted	6616525	4/29/2002	9/9/2003	10/135942	US	Modular Fan System
82089266	Granted	6896611	6/30/2003	5/24/2005	10/610772	US	Modular Fan System
82089518	Granted	8185663	5/11/2004	5/22/2012	10/844478	US	Mirroring Storage Interface
82089614	Granted	6993639	4/1/2003	1/31/2006	10/405170	US	PROCESSING INSTRUCTION ADDRESSED BY RECEIVED REMOTE INSTRUCTION AND GENERATING REMOTE INSTRUCTION TO RESPECTIVE OUTPUT PORT FOR ANOTHER CELL
82089992	Granted	8258801	3/5/2009	9/4/2012	12/380910	US	Nanoscale Multiplexer
82090061	Granted	7886430	12/13/2002	2/15/2011	10/318856	US	METHOD OF INSTALLING CIRCUIT BOARD COMPONENT
82090130	Granted	6774446	10/31/2002	8/10/2004	10/284183	US	Efficient Spin-Injection Into Semiconductors
82090133	Granted	6809388	10/31/2002	10/26/2004	10/284360	US	MAGNETIC SENSOR BASED ON EFFICIENT SPIN INJECTION INTO SEMICONDUCTORS
82090187	Granted	7149919	5/15/2003	12/12/2006	10/440209	US	Disaster Recovery System With Cascaded Resynchronization
82090199	Granted	7240500	9/17/2003	7/10/2007	10/664256	US	Dynamic Fluid Sprayjet Delivery System
82090310	Granted	7568023	12/24/2002	7/28/2009	10/327035	US	Method, System, And Data Structure For Monitoring Transaction Performance In A Managed Computer Network Environment
82090385	Granted	8386389	4/30/2002	2/26/2013	10/135720	US	Service Delivery Systems And Methods
82090439	Granted	7483897	12/3/2002	1/27/2009	10/308761	US	System And Method For Harvesting Of Data From Peripheral Devices
82090577	Granted	7143413	5/15/2002	11/28/2006	10/144991	US	Method And System For Allocating System Resources Among Applications Using Weights
82090688	Granted	7000141	11/14/2001	2/14/2006	10/295554	US	Data Placement For Fault Tolerance
82090703	Granted	6917993	5/23/2003	7/12/2005	10/445072	US	Modular Storage Library With Automatic Configuration
82090754	Granted	7512703	1/31/2003	3/31/2009	10/355118	US	Method Of Storing Data Concerning A Computer Network
82091258	Granted	7483875	1/24/2003	1/27/2009	10/350327	US	Single System For Managing Multi-platform Data Retrieval
82091264	Granted	7904432	1/24/2003	3/8/2011	10/350356	US	Compressed Data Structure For Extracted Changes To A Database And Method Of Generating The Data Structure
82091300	Granted	6744632	9/20/2002	6/1/2004	10/251525	US	Composite Construction Baffle For Modular Electronic Systems
82091363	Granted	7380081	6/6/2003	5/27/2008	10/456345	US	Asynchronous Data Redundancy Technique

PATENT
REEL: 038498 FRAME: 0344

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82091372	Granted	6896541	2/18/2003	5/24/2005	10/369832	US	Interface Connector That Enables Detection Of Cable Connection
82091387	Granted	7657533	11/26/2003	2/2/2010	10/723949	US	Data Management Systems, Data Management System Storage Devices, Articles Of Manufacture, And Data Management Methods
82091447	Granted	7437439	12/3/2002	10/14/2008	10/308784	US	System And Method For The Hybrid Harvesting Of Information From Peripheral Devices
82091510	Granted	6988224	10/31/2002	1/17/2006	10/284372	US	Measurement Apparatus
82091639	Granted	7356576	10/1/2002	4/8/2008	10/260292	US	Method, Apparatus, And Computer Readable Medium For Providing Network Storage Assignments
82091762	Granted	7389599	2/12/2003	6/24/2008	10/365258	US	System And Method For Providing Access To Equipment Identity Information
82091765	Granted	D490084	2/6/2003	5/18/2004	29/175633	US	Bezel
82091825	Granted	8051210	10/15/2002	11/1/2011	10/271516	US	Server With LAN Switch That Connects Ports Based On Connection Information Received From First And Second Lans
82091864	Granted	7055114	10/8/2003	5/30/2006	10/681815	US	Systems And Processes For Asymmetrically Shrinking A VLSI Layout
82092317	Granted	6804781	5/12/2003	10/12/2004	10/435782	US	System And Method For Security Of Information In A Memory
82092563	Granted	8019840	10/31/2002	9/13/2011	10/284966	US	Storage Area Network Mapping
82092686	Granted	6779593	4/30/2003	8/24/2004	10/427670	US	High Performance Cooling Device With Heat Spreader
82092740	Published		11/19/2001		10/495633	US	Computer-based Transaction Tax Processing System, Service Module, Method And Computer Program Product For Providing Transaction Tax Services
82092758	Granted	8615452	3/14/2005	12/24/2013	11/081069	US	DATA REPRESENTION OF TRANSACTION-TAX-RELATED INFORMATION
82093010	Granted	6856518	7/14/2003	2/15/2005	10/619026	US	Assembly For Supporting A Short Printed Circuit Card
82093061	Granted	7673125	6/26/2003	3/2/2010	10/606462	US	Resetting Multiple Cells Within A Partition Of A Multiple Partition Computer System
82093067	Granted	8250373	10/29/2008	8/21/2012	12/260153	US	AUTHENTICATING AND VERIFYING AN AUTHENTICABLE AND VERIFIABLE MODULE
82093367	Granted	7415113	7/30/2003	8/19/2008	10/629599	US	Management Of Security Key Distribution
82093373	Granted	7512240	10/29/2003	3/31/2009	10/694824	US	Management Of Security Key Distribution
82093430	Granted	7917752	8/18/2003	3/29/2011	10/643306	US	METHOD OF CONTROLLING THE PROCESSING OF DATA
82093511	Granted	7451183	3/21/2003	11/11/2008	10/394608	US	ASSEMBLY AND METHOD FOR BALANCING PROCESSORS IN A PARTITIONED SERVER
82093676	Granted	7356813	9/26/2002	4/8/2008	10/255748	US	System And Method For Optimizing A Program
82093763	Granted	6877926	9/10/2002	4/12/2005	10/241330	US	Slide Member Positive Coupling Alignment Assembly

PATENT
REEL: 038498 FRAME: 0345

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82094129	Granted	6778111	9/2/2003	8/17/2004	10/653341	US	MULTI-DIMENSIONAL DEGLITCH FILTER FOR HIGH SPEED DIGITAL SIGNALS
82094180	Granted	6880146	1/31/2003	4/12/2005	10/355465	US	Molecular-Wire-Based Restorative Multiplexer, And Method For Constructing A Multiplexer Based On A Configurable, Molecular-Junction-Nanowire Crossbar
82094189	Granted	7363312	7/3/2003	4/22/2008	10/613151	US	Combining Data Descriptions
82094192	Granted	6898098	1/31/2003	5/24/2005	10/356027	US	Molecular-Junction-Nanowire-Crossbar-Based Associative Array
82094432	Granted	7356215	8/23/2003	4/8/2008	10/646512	US	Methods And Apparatus For Selectively Coupling Optical Paths
82094513	Granted	7444376	5/22/2003	10/28/2008	10/444812	US	TECHNIQUES FOR CREATING AN ACTIVATION SOLUTION FOR PROVIDING COMMERCIAL NETWORK SERVICES
82094555	Granted	7765284	10/24/2002	40386	10/279531	US	Dynamically Modified, Multiple-platform Computer Programs, And Methods And Apparatus Utilizing Same
82094570	Granted	7024583	10/31/2002	4/4/2006	10/284255	US	Method And Apparatus For Detecting File System Corruption
82094612	Granted	7047471	3/3/2003	5/16/2006	10/378248	US	Voltage Margin Testing Of Bladed Servers
82094615	Granted	6711021	1/15/2003	3/23/2004	10/342833	US	Systems And Methods That Use At Least One Component To Remove The Heat Generated By At Least One Other Component
82094618	Granted	6862185	11/10/2003	3/1/2005	10/705557	US	Systems And Methods That Use At Least One Component To Remove The Heat Generated By At Least One Other Component
82094636	Granted	8015279	4/26/2006	9/6/2011	11/410979	US	Network Analysis
82094924	Granted	8051389	8/26/2003	11/1/2011	10/647210	US	Methods Of Displaying Resources Of Overlapping But Separate Hierarchies
82094996	Granted	6765295	4/23/2003	7/20/2004	10/421499	US	Multiplexing System And Method For Crossing Signals On A Single Metal Layer Of An Integrated Circuit
82095002	Granted	7907544	3/14/2003	3/15/2011	10/387456	US	Overlay Network For Location-independent Communication Between Computer Systems
82095059	Granted	8799501	6/27/2002	8/5/2014	10/184414	US	System And Method For Anonymously Sharing And Scoring Information Pointers, Within A System For Harvesting Community Knowledge
82095062	Granted	6883150	3/14/2003	4/19/2005	10/389136	US	Automatic Manufacturing Test Case Generation Method And System
82095179	Granted	7188174	12/30/2002	3/6/2007	10/330312	US	Admission Control For Applications In Resource Utility Environments
82095308	Granted	8104024	10/15/2004	1/24/2012	10/545524	US	Voice Mark-up And Interpreter
82095548	Granted	7356574	2/25/2003	4/8/2008	10/372088	US	Apparatus And Method For Providing Dynamic And Automated Assignment Of Data Logical Unit Numbers

PATENT
REEL: 038498 FRAME: 0346

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82095557	Granted	7039734	9/24/2002	5/2/2006	10/254372	US	System And Method Of Mastering A Serial Bus
82095560	Granted	6934711	10/1/2002	8/23/2005	10/260412	US	Method And Arrangement For Communicating With SCSI Devices
82095926	Granted	6798663	4/21/2003	9/28/2004	10/419386	US	Heat Sink Hold-Down With Fan-Module Attach Location
82095929	Granted	7308502	12/20/2002	12/11/2007	10/326774	US	Method And Architecture To Provide Client Session Failover
82096235	Granted	6889167	2/27/2003	5/3/2005	10/376436	US	Diagnostic Exerciser And Methods Therefor
82096481	Granted	8597091	7/28/2005	12/3/2013	11/191052	US	System Fan Management Based On System Loading Options For A System Having Replacable Electronics Modules
82096484	Granted	7337018	7/31/2003	2/26/2008	10/632218	US	Heat Sink Fan Management Based On Performance Requirements
82096490	Granted	7054156	9/2/2003	5/30/2006	10/653377	US	FAN ROTOR SYSTEMS HAVING COLLAPSIBLE FAN BLADES
82096865	Granted	7421433	10/31/2002	9/2/2008	10/284093	US	Semantic-based system including semantic vectors
82096874	Granted	7433316	2/20/2003	10/7/2008	10/368426	US	Summarizing Nodes In Route Propagation In Auxiliary Network For P2P Overlay Networks
82096877	Granted	7379428	10/31/2002	5/27/2008	10/284100	US	Autonomous System Topology Based Auxiliary Network For Peer-to-peer Overlay Network
82096880	Granted	7266125	10/31/2002	9/4/2007	10/284355	US	Landmark Numbering Based Auxiliary Network For Peer-to-peer Overlay Network
82096934	Granted	7480143	4/21/2003	1/20/2009	10/419373	US	Variable-gap Thermal-interface Device
82097063	Granted	8311194	6/13/2005	11/13/2012	11/629097	US	Method And System For Establishing Communications
82097237	Granted	7324370	8/25/2005	1/29/2008	11/212936	US	System And Method For Determining The Value Of A Memory Element
82097240	Granted	7493450	4/14/2003	2/17/2009	10/414194	US	Method Of Triggering Read Cache Pre-fetch To Increase Host Read Throughput
82097243	Granted	7146467	4/14/2003	12/5/2006	10/414189	US	Method Of Adaptive Read Cache Pre-fetching To Increase Host Read Throughput
82097297	Granted	7353539	1/16/2003	4/1/2008	10/345701	US	SIGNAL LEVEL PROPAGATION MECHANISM FOR DISTRIBUTION OF A PAYLOAD TO VULNERABLE SYSTEMS
82097300	Granted	6985359	4/21/2003	1/10/2006	10/419406	US	Variable-Wedge Thermal-Interface Device
82097309	Granted	7364244	5/14/2003	4/29/2008	10/437525	US	User-controllable Latching Carrier Rail System
82097483	Granted	6823401	1/15/2003	11/23/2004	10/346158	US	MONITOR FOR OBTAINING DEVICE STATE BY INTELLIGENTS SAMPLING
82097501	Granted	6930886	4/30/2003	8/16/2005	10/426582	US	Electronic Component Securement System
82097573	Granted	8019989	6/6/2003	9/13/2011	10/455691	US	Public Key Infrastructure In Network Management
82097606	Granted	8862770	11/6/2003	10/14/2014	10/704041	US	Processor Architecture Verification
82097672	Granted	7240039	10/29/2003	7/3/2007	10/695707	US	System And Method For Combining Valuations Of Multiple Evaluators

PATENT
REEL: 038498 FRAME: 0347

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82097675	Granted	7634450	12/12/2003	12/15/2009	10/734459	US	SYSTEM AND METHOD FOR DETERMINING DIFFICULTY MEASURES FOR TRAINING CASES USED IN DEVELOPING A SOLUTION TO A PROBLEM
82097813	Granted	6938433	12/4/2002	9/6/2005	10/309196	US	Cooling System With Evaporators Distributed In Series
82097858	Granted	7388981	2/27/2003	6/17/2008	10/376435	US	Telepresence System With Automatic Preservation Of User Head Size
82097879	Granted	7080242	12/19/2002	7/18/2006	10/324345	US	Instruction Set Reconciliation For Heterogeneous Symmetric-multiprocessor Systems
82097885	Granted	7228345	10/15/2002	6/5/2007	10/271641	US	Server With LAN Switch That Connects Ports Based On Boot Progress Information
82097987	Granted	6803783	1/31/2003	10/12/2004	10/355559	US	Time Borrowing Using Dynamic Clock Shift For Bus Speed Performance
82098110	Granted	7281076	4/30/2003	10/9/2007	10/427767	US	Form Factor Converter And Tester In An Open Architecture Modular Computing System
82098251	Granted	7424021	1/31/2003	9/9/2008	10/355213	US	Method And Apparatus For Processing Network Topology Data
82098308	Granted	7496685	3/3/2003	2/24/2009	10/376252	US	Method And System For Managing A Device Within A Private Network Using A Management Device External To The Private Network
82098320	Granted	7554993	3/27/2003	6/30/2009	10/401237	US	Method And Apparatus For Performing Connection Management With Multiple Stacks
82098509	Granted	7948916	1/31/2003	5/24/2011	10/354960	US	Method And Apparatus For Discovering Topology Information In A Network
82098545	Granted	6834811	4/1/2003	12/28/2004	10/405307	US	Market-Based Temperature Control System And Method
82098674	Granted	7143270	1/30/2004	11/28/2006	10/769203	US	System And Method For Adding An Instruction To An Instruction Set Architecture
82098806	Granted	7924874	3/11/2003	4/12/2011	10/387148	US	Evaluating And Allocating System Resources To Improve Resource Utilization
82098821	Granted	7730476	7/1/2003	6/1/2010	10/611558	US	Field-replaceable Unit Revision Compatibility
82098941	Granted	7089413	3/5/2003	8/8/2006	10/382346	US	Dynamic Computer System Reset Architecture
82099103	Granted	7378165	4/29/2003	5/27/2008	10/425169	US	System And Method For Providing Electrical Power To An Equipment Rack Using A Fuel Cell
82099109	Granted	7873723	1/30/2003	1/18/2011	10/354109	US	Device Data
82099112	Granted	6796506	3/10/2003	9/28/2004	10/383657	US	Tracking Electronic Devices
82099115	Granted	7350715	3/10/2003	4/1/2008	10/383652	US	Tracking Electronic Devices
82099118	Granted	7272730	7/31/2003	9/18/2007	10/632412	US	Application-driven Method And Apparatus For Limiting Power Consumption In A Processor-controlled Hardware Platform
82099124	Granted	7373268	7/30/2003	5/13/2008	10/632311	US	Method And System For Dynamically Controlling Cooling Resources In A Data Center

PATENT
REEL: 038498 FRAME: 0348

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82099127	Granted	8185348	10/31/2003	5/22/2012	10/698736	US	Techniques For Monitoring A Data Stream
82099415	Granted	7421689	10/28/2003	9/2/2008	10/695267	US	Processor-architecture For Facilitating A Virtual Machine Monitor
82099430	Granted	7003966	12/19/2003	2/28/2006	10/739037	US	Energy Consumption Reduction In A Multi-Effect Absorption System
82099439	Granted	6920410	7/8/2003	7/19/2005	10/614938	US	Systems And Methods For Testing A Network Service
82099442	Granted	7496658	7/8/2003	2/24/2009	10/615547	US	Systems And Methods For Testing Network Services
82099565	Granted	D485843	11/20/2002	1/27/2004	29/171299	US	Design For A Bezel Having A Pull Out Label
82099667	Granted	7003640	7/28/2003	2/21/2006	10/629032	US	Power-Aware Adaptation In An Information Server
82099673	Granted	7810097	7/28/2003	10/5/2010	10/629033	US	Priority Analysis Of Access Transactions In An Information System
82099676	Granted	7546475	5/13/2003	6/9/2009	10/436849	US	Power-aware Adaptation In A Data Center
82099691	Granted	7045996	1/30/2003	5/16/2006	10/354112	US	Position Determination Based On Phase Difference
82099988	Granted	6809925	1/31/2003	10/26/2004	10/356080	US	Dual-Purpose Computer Having Gravity-Actuated Fan Speed Control
82099991	Granted	8291176	3/27/2003	10/16/2012	10/400313	US	Protection Domain Groups
82099994	Granted	8296406	4/25/2003	10/23/2012	10/423315	US	Configurable Device Replacement
82100003	Granted	7360223	9/24/2003	4/15/2008	10/670482	US	Arrangements And Methods For Invoking An Upcall In A Computer System
82100006	Granted	7081684	10/6/2003	7/25/2006	10/678268	US	Converting Heat Generated By A Component To Electrical Energy
82100042	Granted	7228432	9/11/2003	6/5/2007	10/660335	US	METHOD AND APPARATUS FOR PROVIDING SECURITY FOR A COMPUTER SYSTEM
82100228	Granted	7376949	10/1/2003	5/20/2008	10/676921	US	RESOURCE ALLOCATION AND PROTECTION IN A MULTI-VIRTUAL ENVIRONMENT
82100231	Granted	7451443	10/1/2003	11/11/2008	10/676665	US	Online Computer Maintenance Utilizing A Virtual Machine Monitor
82100309	Granted	7047472	10/17/2003	5/16/2006	10/688520	US	METHOD FOR CORRECTING NOISE ERRORS IN A DIGITAL SIGNAL
82100426	Granted	7936469	12/31/2003	5/3/2011	10/749525	US	System And Method For Distributed Printer Processing
82100429	Granted	7039539	10/7/2003	5/2/2006	10/681720	US	Rack Equipment Environmental Condition Adjustment System And Method
82100444	Granted	7424624	12/18/2003	9/9/2008	10/741906	US	Rack Equipment Power Purchase Plan Supervision System And Method
82100486	Granted	6815706	12/17/2002	11/9/2004	10/323139	US	Nano Optical Sensors Via Molecular Self-Assembly
82100489	Granted	7294526	8/12/2004	11/13/2007	10/917751	US	Nano Optical Sensors Via Molecular Self-assembly
82100501	Granted	D546827	5/21/2003	7/17/2007	29/182196	US	Bezel For Rack-mounted Device
82100504	Granted	7068498	5/20/2003	6/27/2006	10/442036	US	Computer System With Slidable Motherboard
82100561	Granted	8006115	10/6/2003	8/23/2011	10/679725	US	Central Processing Unit With Multiple Clock Zones And Operating Method

PATENT
REEL: 038498 FRAME: 0349

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0350

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82100615	Granted	7321561	6/27/2003	1/22/2008	10/607731	US	Verification Of Connections Between Devices In A Network
82100675	Granted	7533285	4/22/2004	5/12/2009	10/830375	US	Synchronizing Link Delay Measurement Over Serial Links
82100678	Granted	7289587	4/22/2004	10/30/2007	10/830367	US	Repeatability Over Communication Links
82100681	Granted	6832168	4/4/2003	12/14/2004	10/407757	US	METHOD AND SYSTEM FOR VERIFYING NETWORK DEVICE POWER CABLING CONFIGURATION
82100690	Granted	7478229	3/11/2003	1/13/2009	10/386189	US	Apparatus And Methods For Device Configuration And Management
82100693	Granted	D492315	11/18/2002	6/29/2004	29/171168	US	Storage Rack Door
82100855	Granted	7092252	4/17/2003	8/15/2006	10/419032	US	Air-directing Unit
82101107	Granted	7057506	1/16/2004	6/6/2006	10/758229	US	Cooling Fluid Provisioning With Location Aware Sensors
82101185	Granted	6791843	6/11/2003	9/14/2004	10/459231	US	Parallel Board Connection System And Method
82101191	Granted	7236358	6/11/2003	6/26/2007	10/459075	US	Computer System
82101293	Granted	7313238	1/31/2003	12/25/2007	10/355470	US	Method And System For Relating Cryptographic Keys
82101308	Granted	7140801	8/22/2003	11/28/2006	10/646005	US	Pre-loading Latch
82101542	Granted	7916854	4/2/2004	3/29/2011	10/817575	US	Methods And Apparatus For Controlling Processing Entities, Such As Distributed Signalling Gateways
82101554	Granted	7415643	8/6/2003	8/19/2008	10/635371	US	Coverage Circuit For Performance Counter
82101560	Granted	7275191	8/6/2003	9/25/2007	10/635372	US	Coverage Decoder Circuit For Performance Counter
82101602	Granted	7188277	3/28/2003	3/6/2007	10/402034	US	INTEGRATED CIRCUIT
82101611	Granted	7483385	3/26/2004	1/27/2009	10/811215	US	Process For Monitoring The Quality Of Service In A Telecommunication Network And Apparatus For The Same
82101614	Granted	8352588	7/9/2003	1/8/2013	10/617002	US	Systems And Methods For Collecting Data Regarding Network Service Operation
82101617	Granted	6876207	8/1/2003	4/5/2005	10/632270	US	System And Method For Testing Devices
82101731	Granted	7991930	2/23/2004	8/2/2011	10/783031	US	DATA STORAGE DRIVE AND METHOD EMPLOYING DATA COPRESSION
82101809	Granted	7075788	6/11/2003	7/11/2006	10/459301	US	Computer Cooling System And Method
82101920	Granted	7057415	12/10/2003	6/6/2006	10/732695	US	Output Buffer Compensation Control
82101980	Granted	7558216	2/1/2005	7/7/2009	11/048126	US	Network Connection Control
82101992	Granted	6693798	5/9/2003	2/17/2004	10/434619	US	Electronic Unit Enclosure And Method
82101995	Granted	6882540	11/3/2003	4/19/2005	10/701281	US	Electronic Unit Enclosure And Method
82102115	Granted	7426570	7/25/2003	9/16/2008	10/627324	US	DETERMINING PLACEMENT OF DISTRIBUTED APPLICATION ONTO DISTRIBUTED RESOURCE INFRASTRUCTURE
82102118	Granted	7277960	7/25/2003	10/2/2007	10/627883	US	INCORPORATING CONSTRAINTS AND PREFERENCES FOR DETERMINING PLACEMENT OF DISTRIBUTED APPLICATION ONTO DISTRIBUTED RESOURCE INFRASTRUCTURE
82102124	Granted	7340630	8/8/2003	3/4/2008	10/638696	US	Multiprocessor System With Interactive Synchronization Of Local Clocks
82102130	Granted	7018215	12/19/2003	3/28/2006	10/741577	US	Routing System
82102184	Granted	7543291	8/1/2003	6/2/2009	10/632772	US	Processor Purging System And Method

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82102187	Granted	7466699	4/30/2004	12/16/2008	10/835821	US	SYSTEM FOR COMMUNICATING BETWEEN NETWORK END-POINTS USING A PAYLOAD OFFSET AND BUFFER POOL HANDLE
82102190	Granted	7440458	4/30/2004	10/21/2008	10/835940	US	System For Determining Network Route Quality Using Sequence Numbers
82102298	Granted	6768952	10/21/2002	7/27/2004	10/274787	US	System And Method Of Measuring Low Impedances
82102430	Granted	7483391	9/19/2003	1/27/2009	10/666620	US	Providing A Notification Including Location Information For Nodes In An Overlay Network
82102433	Granted	7788400	9/19/2003	8/31/2010	10/666621	US	Utilizing Proximity Information In An Overlay Network
82102733	Granted	7567250	10/27/2003	7/28/2009	10/694076	US	Visual Boundaries For Aggregate Information In Pixel-oriented Graphs
82103249	Granted	7966389	4/22/2003	6/21/2011	10/420584	US	System And Method For Application Programming Interface For Extended Intelligent Platform Management
82103300	Granted	7064956	12/1/2003	6/20/2006	10/724077	US	Cooling System For A Display Projector
82103360	Granted	8086884	12/16/2002	12/27/2011	10/320586	US	System And Method For Implementing An Integrated Circuit Having A Dynamically Variable Power Limit
82103474	Granted	8296847	7/25/2003	10/23/2012	10/627017	US	Method Of Managing Utilization Of Network Intrusion Detection Systems In A Dynamic Data Center
82103480	Granted	8326925	1/31/2005	12/4/2012	11/047254	US	Connecting To Experts In A Discussion Board
82103483	Granted	8327202	7/13/2005	12/4/2012	11/180429	US	System And Method For Scan Testing
82103495	Granted	7082032	8/25/2003	7/25/2006	10/648532	US	HEAT DISSIPATION DEVICE WITH TILTED FINS
82103498	Granted	6995973	7/15/2003	2/7/2006	10/620640	US	Preventing A Plurality Of Electronic Devices From Being Pulled Out Of A Rack Simultaneously
82103501	Granted	7590909	8/24/2005	9/15/2009	11/210415	US	In-circuit Testing System And Method
82103543	Granted	7630304	6/12/2003	12/8/2009	10/461080	US	METHOD OF OVERFLOW RECOVERY OF I2C PACKETS ON AN I2C ROUTER
82103561	Granted	7276813	2/5/2004	10/2/2007	10/773008	US	Redundant Input Power System
82103624	Granted	7570508	12/22/2003	8/4/2009	10/743165	US	Method And Apparatus For Reducing Soft Errors
82103663	Granted	6798661	5/8/2003	9/28/2004	10/434762	US	CHASSIS CONDUCTED COOLING THERMAL DISSIPATION APPARATUS FOR SERVERS
82103666	Granted	7145775	7/30/2004	12/5/2006	10/903000	US	Chassis Conducted Cooling Thermal Dissipation Apparatus For Servers
82103681	Granted	8621304	10/7/2004	12/31/2013	10/960590	US	Built-in- Self-test System And Method For An Integrated Circuit
82103690	Granted	7821792	10/31/2007	10/26/2010	11/932153	US	Cell Board Interconnection Architecture
82103864	Granted	7487399	11/7/2003	2/3/2009	10/703306	US	SYSTEM AND METHOD FOR TESTING A COMPONENT IN A COMPUTER SYSTEM USING FREQUENCY MARGINING
82103873	Granted	7418367	10/31/2003	8/26/2008	10/699423	US	System And Method For Testing A Cell
82104731	Granted	7103785	5/30/2003	9/5/2006	10/448708	US	METHOD AND APPARATUS FOR POWER MANAGEMENT EVENT WAKE UP

PATENT
REEL: 038498 FRAME: 0351

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82104851	Granted	7480797	7/31/2004	1/20/2009	10/909793	US	Method And System For Preventing Current-privilege-level-information Leaks To Non-privileged Code
82104917	Granted	7917903	3/27/2003	3/29/2011	10/400556	US	Quality Of Service Controller And Method For A Data Storage System
82104926	Granted	7643983	3/27/2003	1/5/2010	10/400232	US	Data Storage System Emulation
82104986	Granted	7379031	11/18/2003	5/27/2008	10/715960	US	Generating Pointer Position Data From Position Data Of A Pointing Device Of A Remote Console
82104998	Granted	7671283	1/20/2005	3/2/2010	11/038964	US	Apparatus For Shielding Electromagnetic Radiation
82105043	Granted	8566446	1/28/2004	10/22/2013	10/767130	US	Write Operation Control In Storage Networks
82105160	Granted	7107600	3/17/2003	9/12/2006	10/389573	US	System And Method For Cleaning Electrical Delivery Systems
82105175	Granted	7149945	5/9/2003	12/12/2006	10/435149	US	Systems And Methods For Providing Error Correction Code Testing Functionality
82105187	Granted	7366854	5/8/2003	4/29/2008	10/434044	US	Systems And Methods For Scheduling Memory Requests Utilizing Multi-level Arbitration
82105226	Granted	7447205	5/9/2003	11/4/2008	10/435639	US	Systems And Methods To Insert Broadcast Transactions Into A Fast Data Stream Of Transactions
82105289	Granted	7120023	8/25/2003	10/10/2006	10/649518	US	Method Of Assembly Of A Wedge Thermal Interface To Allow Expansion After Assembly
82105313	Granted	6788135	7/8/2003	9/7/2004	10/615549	US	Terminating Pathway For A Clock Signal
82105472	Granted	7410904	4/24/2003	8/12/2008	10/423063	US	Sensor Produced Using Imprint Lithography
82105538	Granted	8065306	5/26/2009	11/22/2011	12/472203	US	Method And System For Lexical Mapping Between Document Sets Having A Common Topic
82105547	Granted	7600261	3/26/2004	10/6/2009	10/810308	US	Security Attributes In Trusted Computing Systems
82105556	Granted	7552328	3/26/2004	6/23/2009	10/810348	US	SECURITY ATTRIBUTES OF NODES IN TRUSTED COMPUTING SYSTEMS
82105742	Granted	7454424	1/16/2003	11/18/2008	10/345719	US	SYSTEM AND METHOD FOR EFFICIENTLY REPLICATING A FILE
82105748	Granted	7281063	7/22/2003	10/9/2007	10/624625	US	SIGNAL ROUTING CIRCUIT BOARD COUPLING CONTROLLER AND STORAGE ARRAY CIRCUIT BOARD FOR STORAGE SYSTEM
82105793	Granted	7392329	3/28/2003	6/24/2008	10/401820	US	System And Method For Applying An Action Initiated For A Portion Of A Plurality Of Devices To All Of The Plurality Of Devices
82105796	Granted	7840072	3/13/2003	11/23/2010	10/386462	US	Method And System For Pattern Matching
82105853	Granted	8670959	7/26/2006	3/11/2014	11/494292	US	PROCESSING AND DISPLAY OF A REAL WORLD MODEL
82105865	Published		7/8/2005		11/178110	US	Analysing A Multi Stage Process
82105868	Granted	6776578	11/26/2002	8/17/2004	10/304923	US	Winglet-Enhanced Fan

PATENT
REEL: 038498 FRAME: 0352

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82105928	Granted	7506085	10/20/2006	3/17/2009	11/551438	US	SYSTEM AND METHOD FOR SENDING DATA ACROSS A BUS CABLE HAVING IN-BAND AND SIDE-BAND SIGNAL CONDUCTORS
82106045	Granted	8078670	5/24/2004	12/13/2011	10/852850	US	Method And Apparatus For Providing Support For An Electronic Device
82106048	Granted	7146496	1/23/2003	12/5/2006	10/350660	US	Methods And Apparatus For Managing Temporary Capacity In A Computer System
82106108	Granted	7890999	8/7/2003	2/15/2011	10/637172	US	RPC Port Mapper Integrity Checker To Improve Security Of A Provisionable Network
82106180	Granted	7096310	3/16/2004	8/22/2006	10/801617	US	Switch Configurable For A Plurality Of Communication Protocols
82106237	Granted	7521264	1/5/2007	4/21/2009	11/649931	US	SPIN INJECTION CONTROL USING ELECTRIC CURRENT
82106249	Granted	7324685	10/20/2003	1/29/2008	10/689410	US	Inspection Systems And Methods
82106285	Granted	7313585	8/30/2003	12/25/2007	10/652899	US	Multiplier Circuit
82106294	Granted	7577670	3/8/2004	8/18/2009	10/794063	US	Method And Apparatus For Inferring Address And Subnet Relationships
82106300	Granted	6837626	11/12/2003	1/4/2005	10/712877	US	Electro-Optical Connector
82106408	Granted	7603582	2/17/2006	10/13/2009	11/356576	US	Systems And Methods For CPU Repair
82106414	Granted	8667324	2/17/2006	3/4/2014	11/356521	US	Systems And Methods For CPU Repair
82106423	Granted	7805723	10/1/2003	9/28/2010	10/677159	US	Runtime Virtualization And Devirtualization Of Memory By A Virtual Machine Monitor
82106534	Granted	8214786	9/8/2004	7/3/2012	10/935845	US	Scalable, Component-accessible, And Highly Interconnected Three-dimensional Component Arrangement Within A System
82106600	Granted	7640551	6/9/2003	12/29/2009	10/458449	US	System And Method For Asynchronous Reporting Of Printer Maintenance Data For A Printer
82106732	Granted	6879013	7/30/2003	38454	10/632038	US	Amplifiers Using Spin Injection And Magnetic Control Of Electron Spins
82106738	Granted	7739240	12/9/2002	6/15/2010	10/315582	US	Replication And Replica Management In A Wide Area File System
82107104	Granted	7584405	12/3/2003	9/1/2009	10/726976	US	Fault-detecting Computer System
82107122	Granted	7606892	4/22/2003	10/20/2009	10/421249	US	Method And System Of Supporting A Computer Network Resource Pool
82107167	Granted	7518884	7/5/2007	4/14/2009	11/825153	US	Tailoring Impedances Of Conductive Traces In A Circuit Board
82107296	Granted	D454881	12/22/2000	3/26/2002	29/134609	US	SERVER CABINET
82107299	Granted	D455154	12/22/2000	4/2/2002	29/134489	US	DOUBLE SERVER BEZEL
82109603	Granted	D461807	1/7/2000	8/20/2002	29/116633	US	SINGLE CONNECTOR ATTACHMENT DRIVE TRAY
82110281	Granted	7936763	5/18/2004	5/3/2011	10/557405	US	Method And Apparatus For Load-balancing In A Distributed Processing System

PATENT
REEL: 038498 FRAME: 0353

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82110308	Granted	6189111	3/26/1998	2/13/2001	09/048937	US	RESOURCE HARVESTING IN SCALABLE, FAULT-TOLERANT, SINGLE SYSTEM IMAGE CLUSTERS
82110362	Granted	6279094	8/20/1998	8/21/2001	09/137763	US	METHOD AND APPARATUS FOR MANAGING INVALIDATION OF VIRTUAL MEMORY MAPPING TABLE ENTRIES
82110365	Granted	6279095	11/9/1998	8/21/2001	09/189601	US	METHOD AND APPARATUS FOR OMNIBUS WIRING OF VIRTUAL MAPPING TABLE ENTRIES
82110368	Granted	6219770	3/23/1998	4/17/2001	09/046943	US	METHOD AND APPARATUS FOR MANAGING COPY ON WRITE OPERATIONS IN A VIRTUAL MEMORY
82110416	Granted	6393582	12/10/1998	5/21/2002	09/209635	US	ERROR SELF-CHECKING AND RECOVERY USING LOCK-STEP PROCESSOR PAIR ARCHITECTURE
82110476	Granted	6457125	12/14/1998	9/24/2002	09/212003	US	ENCRYPTED DOWNLOAD OF SRAM-BASED FPGAS
82110485	Granted	6249879	4/30/1998	6/19/2001	09/071048	US	ROOT FILESYSTEM FAILOVER IN A SINGLE SYSTEM IMAGE ENVIRONMENT
82110491	Granted	6122629	4/30/1998	9/19/2000	09/070897	US	METHOD FOR MULTILEVEL DATA INTEGRITY IN A COMPUTER NODE CLUSTER ENVIRONMENT
82110494	Granted	6247139	4/30/1998	6/12/2001	09/071145	US	FILESYSTEM FAILOVER IN A SINGLE SYSTEM IMAGE ENVIRONMENT
82110665	Granted	6173249	7/24/1998	1/9/2001	09/122689	US	METHOD OF DETERMINING OF A PROCESS UNDER A SIMULATED OPERATING SYSTEM
82110674	Granted	6378072	2/3/1998	4/23/2002	09/017759	US	CRYPTOGRAPHIC SYSTEM
82110677	Granted	7055029	9/7/2001	5/30/2006	09/949323	US	CRYPTOGRAPHIC SYSTEM ENABLING OWNERSHIP OF A SECURE PROCESS
82110683	Granted	6625601	1/7/1999	9/23/2003	09/226998	US	ESCROW-LOCKING MULTITHREADED PROCESS-PAIR RESOURCE MANAGER DICTIONARY
82110737	Granted	6339772	7/6/1999	1/15/2002	09/347997	US	SYSTEM AND METHOD FOR PERFORMING DATABASE OPERATIONS ON A CONTINUOUS STREAM OF TUPLES
82110740	Granted	6604102	11/29/2001	8/5/2003	09/997823	US	SYSTEM AND METHOD FOR PERFORMING DATABASE OPERATIONS ON A CONTINUOUS STREAM OF TUPLES
82110746	Granted	6304873	7/6/1999	10/16/2001	09/347995	US	SYSTEM AND METHOD FOR PERFORMING DATABASE OPERATIONS AND FOR SKIPPING OVER TUPLES LOCKED IN AN INCOMPATIBLE MODE
82110797	Granted	6205441	3/31/1999	3/20/2001	09/283384	US	SYSTEM AND METHOD FOR REDUCING COMPILE TIME IN A TOP DOWN RULE BASED SYSTEM USING RULE HEURISTICS BASED UPON THE PREDICTED RESULTING DATA FLOW
82110800	Granted	6870814	10/12/1999	3/22/2005	09/415731	US	LINK EXTENDERS WITH ERROR PROPAGATION AND REPORTING
82110806	Granted	6738344	9/27/2000	5/18/2004	09/671940	US	LINK EXTENDERS WITH LINK ALIVE PROPAGATION
82110842	Granted	6765922	9/27/2000	7/20/2004	09/671938	US	Speculative Transmit For System Area Network Latency Reduction

PATENT
REEL: 038498 FRAME: 0354

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82110845	Granted	6882656	4/13/2004	4/19/2005	10/823182	US	Speculative Transmit For System Area Network Latency Reduction
82111547	Granted	5757918	9/30/1996	5/26/1998	08/727174	US	METHOD AND APPARATUS FOR USER AND SECURITY DEVICE AUTHENTICATION
82111664	Granted	5890003	9/7/1993	3/30/1999	08/116950	US	SYNCHRONIZATION OF INTERRUPTS BETWEEN ASYNCHRONOUSLY OPERATING CPUS IN FAULT TOLERANT COMPUTER SYSTEM
82114988	Granted	6233702	6/7/1995	5/15/2001	08/485055	US	SELF-CHECKED, LOCK-STEP PROCESSOR PAIRS
82115042	Granted	5914953	6/7/1995	6/22/1999	08/474772	US	NETWORK MESSAGE ROUTING USING ROUTING TABLE INFORMATION AND SUPPLEMENTAL ENABLE INFORMATION FOR DEADLOCK PREVENTION
82115852	Granted	5842204	11/1/1994	11/24/1998	08/332966	US	METHOD AND APPARATUS FOR TRANSLATING SOURCE CODE FROM ONE HIGH-LEVEL COMPUTER LANGUAGE TO ANOTHER
82115984	Granted	5832203	1/23/1995	11/3/1998	08/377381	US	A METHOD FOR PROVIDING RECOVERY FROMA FAILURE IN A SYSTEM UTILIZING DISTRIBUTED AUDIT
82116542	Granted	5872701	2/27/1997	2/16/1999	08/807608	US	BLIND ALIGNMENT METHOD AND APPARATUS FOR CIRCUIT BOARDS
82116551	Granted	6035301	12/18/1997	3/7/2000	08/993216	US	METHOD AND APPARATUS FOR ACCESSING TRANSACTION SERVICES USING OBJECT LINKING AND EMBEDDING
82116599	Granted	5954794	12/20/1995	9/21/1999	08/578366	US	COMPUTER SYSTEM DATA I/O BY REFERENCE AMONG I/O DEVICES AND MULTIPLE MEMORY UNITS
82116662	Granted	5785397	12/21/1995	7/28/1998	08/576750	US	MODULE CONNECTION MECHANISM
82116665	Granted	5725324	12/21/1995	3/10/1998	08/576747	US	MODULE LATCH ASSEMBLY
82116668	Granted	5861684	12/27/1995	1/19/1999	08/579376	US	FLEXIBLE IMPLEMENTATION OF DISTRIBUTED DC POWER
82116671	Granted	5602721	12/22/1995	2/11/1997	08/572903	US	EXPANDABLE MODULAR COMPUTER SYSTEM
82116677	Granted	5826066	8/8/1996	10/20/1998	08/694073	US	METHOD FOR KEEPING ACCURATE TIME IN A COMPUTER SYSTEM
82116773	Granted	5819255	12/27/1996	10/6/1998	08/773695	US	SYSTEM AND METHOD FOR DATABASE QUERY OPTIMIZATION
82116839	Granted	5822747	8/23/1996	10/13/1998	08/702106	US	AN IMPROVED SYSTEM AND METHOD FOR OPTIMIZING DATABASE QUERIES
82116851	Granted	5999936	6/2/1997	12/7/1999	08/865405	US	METHOD AND APPARATUS FOR COMPRESSING AND DECOMPRESSING SEQUENTIAL RECORDS IN A COMPUTER SYSTEM
82116905	Granted	6199169	12/15/1998	3/6/2001	09/212021	US	SYSTEM AND METHOD FOR SYNCHRONIZING TIME ACROSS A COMPUTER CLUSTER
82116908	Granted	6351821	1/22/2001	2/26/2002	09/767586	US	SYSTEM AND METHOD FOR SYNCHRONIZING TIME ACROSS A COMPUTER CLUSTER

PATENT
REEL: 038498 FRAME: 0355

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82116911	Granted	6058388	6/16/1997	5/2/2000	08/876850	US	IMPLEMENTATION OF ESCROW-LOCKING SCALAR QUANTITIES VIA PROCESS-PAIR RESOURCE MANAGERS
82116914	Granted	6128615	6/17/1997	10/3/2000	08/877529	US	PROCESS-PAIR RESOURCE MANAGER IMPLEMENTATION OF OBJECT BAGS
82116917	Granted	6105147	4/16/1997	8/15/2000	08/840749	US	USING PROCESS PAIRS AS TRANSACTION-COORDINATED RESOURCE MANAGERS
82116959	Granted	6085083	1/11/1997	7/4/2000	08/781264	US	METHOD AND APPARATUS FOR PROVIDING FRAUD PROTECTION MEDIATION IN A MOBILE TELEPHONE SYSTEM
82116962	Granted	6112079	1/4/1999	8/29/2000	09/225176	US	METHOD AND APPARATUS FOR PROVIDING FRAUD PROTECTION MEDIATION IN A MOBILE TELEPHONE SYSTEM
82116968	Granted	6026298	1/11/1997	2/15/2000	08/781262	US	METHOD AND APPARATUS FOR PROVIDING SWITCH CAPABILITY MEDIATION IN A MOBILE TELEPHONE SYSTEM
82116971	Granted	6421537	8/31/1999	7/16/2002	09/387168	US	METHOD AND APPARATUS FOR PROVIDING SWITCH CAPABILITY MEDIATION IN A MOBILE TELEPHONE SYSTEM
82116977	Granted	6633935	9/27/2000	10/14/2003	09/671939	US	AUTOMATIC BUS TERMINATION READJUSTMENT
82117025	Granted	6148308	4/30/1993	11/14/2000	08/055802	US	METHOD OF SELECTING AND REPRESENTING TIME-VARYING DATA
82117208	Granted	6791429	10/30/2003	9/14/2004	10/697130	US	TRANSMISSION LINE PARASITIC ELEMENT DISCONTINUITY CANCELLATION
82117211	Granted	6980063	8/3/2004	12/27/2005	10/910028	US	Transmission Line Parasitic Element Discontinuity Cancellation
82117226	Granted	6601187	3/31/2000	7/29/2003	09/539745	US	SYSTEM FOR DATA REPLICATION USING REDUNDANT PAIRS OF STORAGE CONTROLLERS, FIBRE CHANNEL FABRICS AND LINKS THEREBETWEEN
82117229	Granted	6658590	3/30/2000	12/2/2003	09/539011	US	CONTROLLER-BASED TRANSACTION LOGGING SYSTEM FOR DATA RECOVERY IN A STORAGE AREA NETWORK
82117232	Granted	7111189	3/30/2000	9/19/2006	09/538700	US	METHOD FOR TRANSACTION LOG FAILOVER MERGING DURING ASYNCHRONOUS OPERATIONS IN A DATA STORAGE NETWORK
82117235	Granted	6629264	3/30/2000	9/30/2003	09/538908	US	CONTROLLER-BASED REMOTE COPY SYSTEM WITH LOGICAL UNIT GROUPING
82117238	Granted	7058848	9/15/2003	6/6/2006	10/662668	US	Controller-based Remote Copy System With Logical Unit Grouping
82117271	Granted	6754737	12/24/2001	6/22/2004	10/035983	US	METHOD AND APPARATUS TO ALLOW DYNAMIC VARIATION OF ORDERING ENFORCEMENT BETWEEN TRANSACTIONS IN A STRONGLY ORDERED COMPUTER INTERCONNECT

PATENT
REEL: 038498 FRAME: 0356

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82117274	Granted	7308522	6/9/2004	12/11/2007	10/864617	US	Method And Apparatus To Allow Dynamic Variation Of Ordering Enforcement Between Transactions In A Strongly Ordered Computer Interconnect
82117286	Granted	6745174	3/29/2001	6/1/2004	09/822996	US	METHOD OF EXECUTING BEFORE-TRIGGERS IN AN ACTIVE DATABASE
82117298	Granted	6961930	3/31/2000	11/1/2005	09/540952	US	Efficient, Transparent And Flexible Latency Sampling
82117301	Granted	6817009	11/30/2000	11/9/2004	09/728629	US	METHOD AND APPARATUS FOR VERIFYING DATA LOCAL TO A SINGLE THREAD
82117337	Granted	6442067	5/23/2000	8/27/2002	09/576849	US	RECOVERY ROM FOR ARRAY CONTROLLERS
82117340	Granted	6807649	5/23/2000	10/19/2004	09/576749	US	ENCRYPTION KEYS FOR MULTIPLE DRIVE FAULT TOLERANCE
82117343	Granted	8015260	8/26/2004	9/6/2011	10/926497	US	ENCRYPTION KEYS FOR MULTIPLE DRIVE FAULT TOLERANCE
82117346	Granted	6643822	5/23/2000	11/4/2003	09/576666	US	COMPUTER SYSTEM WITH GREATER THAN FIFTEEN DRIVE FAULT TOLERANCE
82117349	Granted	6694479	5/23/2000	2/17/2004	09/576665	US	MULTIPLE DRIVE FAILURE RECOVERY FOR A COMPUTER SYSTEM HAVING AN ARRAY OF STORAGE DRIVES
82117352	Granted	6732298	7/31/2000	5/4/2004	09/628747	US	NONMASKABLE INTERRUPT WORKAROUND FOR A SINGLE EXCEPTION INTERRUPT HANDLER PROCESSOR
82117403	Granted	6692293	11/13/2002	2/17/2004	10/293517	US	TECHNIQUE FOR IDENTIFYING MULTIPLE CIRCUIT COMPONENTS
82117412	Granted	6785835	1/25/2001	8/31/2004	09/769957	US	RAID MEMORY
82117418	Granted	6690757	6/20/2000	2/10/2004	09/596980	US	HIGH-SPEED INTERCONNECTION ADAPTER HAVING AUTOMATED LANE DE-SKEW
82117421	Granted	7197100	10/8/2003	3/27/2007	10/680913	US	HIGH-SPEED INTERCONNECTION ADAPTER HAVING AUTOMATED LANE DE-SKEW
82117466	Granted	6608564	1/25/2001	8/19/2003	09/770100	US	REMOVABLE MEMORY CARTRIDGE SYSTEM FOR USE WITH A SERVER OR OTHER PROCESSOR-BASED DEVICE
82117469	Granted	7116241	5/14/2003	10/3/2006	10/437571	US	Removable Memory Cartridge System For Use With A Server Or Other Processor-based Device
82117472	Granted	6975241	5/14/2003	12/13/2005	10/438150	US	Removable Memory Cartridge System For Use With A Server Or Other Processor-Based Device
82117475	Granted	6747563	5/14/2003	6/8/2004	10/437567	US	REMOVABLE MEMORY CARTRIDGE SYSTEM FOR USE WITH A SERVER OR OTHER PROCESSOR-BASED DEVICE
82117523	Granted	6760229	9/9/2002	7/6/2004	10/237420	US	System For Protecting Electronic Components
82117535	Granted	6381149	6/9/2000	4/30/2002	09/591524	US	CARDGUIDE RETAINER
82117538	Granted	6735091	4/23/2002	5/11/2004	10/128104	US	CARDGUIDE RETAINER
82117541	Granted	6901467	2/23/2001	5/31/2005	09/792867	US	ENHANCING A PCI-X SPLIT COMPLETION TRANSACTION BY ALIGNING CACHELINES WITH AN ALLOWABLE DISCONNECT BOUNDARY'S ENDING ADDRESS

PATENT
REEL: 038498 FRAME: 0357

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82117550	Granted	6754838	1/26/2001	6/22/2004	09/770589	US	SYSTEM FOR REDUCING TUNING ETCH IN A CLOCK-FORWARDED INTERFACE
82117589	Granted	6462670	10/18/2000	10/8/2002	09/691600	US	SERVER SYSTEM HAVING FRONT AND REAR IDENTIFICATION
82117595	Granted	6754084	10/18/2000	6/22/2004	09/691373	US	SYSTEM FOR MOUNTING PCI CARDS
82117604	Granted	6778381	10/18/2000	8/17/2004	09/691603	US	RETRACTABLE DISPLAY MODULE
82117646	Granted	6715057	8/31/2000	3/30/2004	09/652552	US	EFFICIENT TRANSLATION LOOKASIDE BUFFER MISS PROCESSING IN COMPUTER SYSTEMS WITH A LARGE RANGE OF PAGE SIZES
82117649	Granted	6678840	8/31/2000	1/13/2004	09/651949	US	FAULT CONTAINMENT AND ERROR RECOVERY IN A SCALABLE MULTIPROCESSOR
82117652	Granted	7152191	10/23/2003	12/19/2006	10/691744	US	FAULT CONTAINMENT AND ERROR RECOVERY IN A SCALABLE MULTIPROCESSOR
82117712	Granted	6701332	7/31/2000	3/2/2004	09/629066	US	CLUSTER FILE SYSTEM MULTI-VOLUME ROOT SUPPORT
82117724	Granted	6799980	12/31/2001	10/5/2004	10/039138	US	Method And Apparatus For Grounding A Processor Board
82117727	Granted	6662272	9/29/2001	12/9/2003	09/967614	US	DYNAMIC CACHE PARTITIONING
82117730	Granted	6865647	12/8/2003	3/8/2005	10/730761	US	DYNAMIC CACHE PARTITIONING
82117733	Granted	6915446	9/29/2001	7/5/2005	09/967612	US	SUPPORTING ERROR CORRECTION AND IMPROVING ERROR DETECTION DYNAMICALLY ON THE PCI-X BUS
82117778	Granted	6598122	4/19/2001	7/22/2003	09/839621	US	ACTIVE LOAD ADDRESS BUFFER
82117781	Granted	6854075	4/19/2001	2/8/2005	09/837995	US	Simultaneous And Redundantly Threaded Processor Store Instruction Comparator
82117784	Granted	6854051	4/19/2001	2/8/2005	09/839459	US	Cycle Count Replication In A Simultaneous And Redundantly Threaded Processor
82117790	Granted	6792525	4/19/2001	9/14/2004	09/838069	US	Input Replicator For Interrupts In A Simultaneous And Redundantly Threaded Processor
82117793	Granted	6823473	4/19/2001	11/23/2004	09/839626	US	Simultaneous And Redundantly Threaded Processor Uncached Load Address Comparator And Data Value Replication Circuit
82117799	Granted	6859876	12/29/2000	2/22/2005	09/751187	US	System And Method For Detecting And Using A Replacement Boot Block During Initialization By An Original Boot Block
82117850	Granted	6771512	7/22/2002	8/3/2004	10/200840	US	MOUNTING SYSTEM FOR CIRCUIT BOARD
82117904	Granted	6665763	7/31/2000	12/16/2003	09/630246	US	HOT-PLUG STORAGE DRIVE
82117961	Granted	6622225	8/31/2000	9/16/2003	09/652325	US	System For Minimizing Memory Bank Conflicts In A Computer System
82117964	Granted	6754739	8/31/2000	6/22/2004	09/651945	US	Computer Resource Management And Allocation System
82117967	Granted	6636955	8/31/2000	10/21/2003	09/652480	US	MECHANISM FOR SYNCHRONIZING MULTIPLE SKEWED SOURCE-SYNCHRONOUS DATA CHANNELS WITH AUTOMATIC INITIALIZATION FEATURE

PATENT
REEL: 038498 FRAME: 0358

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82118021	Granted	6745258	8/22/2000	6/1/2004	09/643633	US	RAID SYSTEM HAVING MULTIPLE REPLY QUEUES FOR USE WITH MULTIPROCESSOR HOST
82118024	Granted	6725393	11/6/2000	4/20/2004	09/707132	US	SYSTEM, MACHINE, AND METHOD FOR MAINTENANCE OF MIRRORED DATASETS THROUGH SURROGATE WRITES DURING STORAGE-AREA NETWORK TRANSIENTS
82118027	Granted	7584377	2/20/2004	9/1/2009	10/783865	US	SYSTEM, MACHINE, AND METHOD FOR MAINTENANCE OF MIRRORED DATASETS THROUGH SURROGATE WRITES DURING STORAGE-AREA NETWORK TRANSIENTS
82118039	Granted	6782438	8/31/2000	8/24/2004	09/652641	US	IO Speed And Length Programmable With Bus Population
82118042	Granted	6973517	8/31/2000	12/6/2005	09/652458	US	Partition Formation Using Microprocessors In A Multiprocessor Computer System
82118045	Granted	6820165	8/31/2001	11/16/2004	09/944517	US	System And Method For Increasing The Count Of Outstanding Split Transactions
82118048	Granted	6647453	8/31/2000	11/11/2003	09/652984	US	SYSTEM AND METHOD FOR PROVIDING FORWARD PROGRESS AND AVOIDING STARVATION AND LIVELOCK IN A MULTIPROCESSOR COMPUTER SYSTEM
82118084	Granted	6944718	10/24/2003	9/13/2005	10/693303	US	APPARATUS AND METHOD FOR SPECULATIVE PREFETCHING AFTER DATA CACHE MISSES
82118099	Granted	6725343	10/5/2001	4/20/2004	09/972477	US	SYSTEM AND METHOD FOR GENERATING CACHE COHERENCE DIRECTORY ENTRIES AND ERROR CORRECTION CODES IN A MULTIPROCESSOR SYSTEM
82118105	Granted	6845417	1/9/2002	1/18/2005	10/042999	US	Ensuring Fairness In A Multiprocessor Environment Using Historical Abuse Recognition In Spinlock Acquisition
82118165	Granted	8799883	1/31/2003	8/5/2014	10/356304	US	System And Method Of Measuring Application Resource Usage
82118174	Granted	7328290	6/1/2001	2/5/2008	09/872600	US	System And Method Of Automatically Switching Control Of A Bus In A Processor-based Device
82118210	Granted	7318160	2/1/2002	1/8/2008	10/062808	US	Cryptographic Key Setup In Queued Cryptographic Systems
82118216	Granted	7051045	5/15/2001	5/23/2006	09/855878	US	LOGICAL ARCHITECTURE FOR BUSINESS-TO-EMPLOYEE WEB SERVICES
82118276	Granted	6895585	3/30/2001	5/17/2005	09/823837	US	METHOD OF MIXED WORKLOAD HIGH PERFORMANCE SCHEDULING
82118339	Granted	6977908	8/31/2001	12/20/2005	09/945083	US	METHOD AND APPARATUS FOR DISCOVERING COMPUTER SYSTEMS IN A DISTRIBUTED MULTI-SYSTEM CLUSTER
82118408	Granted	6901512	12/12/2000	5/31/2005	09/736715	US	CENTRALIZED CRYPTOGRAPHIC KEY ADMINISTRATION SCHEME FOR ENABLING SECURE CONTEXT-FREE APPLICATION OPERATION
82118423	Granted	6628205	10/17/2002	9/30/2003	10/272845	US	VISUAL METER FOR PROVIDING A LONG-TERM INDICATION OF DYNAMIC PARAMETERS

PATENT
REEL: 038498 FRAME: 0359

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82118465	Granted	6892259	9/29/2001	5/10/2005	09/967608	US	Method And Apparatus For Allocating Computer Bus Device Resources To A Priority Requester And Retrying Requests From Non-priority Requesters
82118471	Granted	6694411	9/28/2001	2/17/2004	09/966503	US	Technique For Implementing A Distributed Lock In A Processor-Based Device
82118477	Granted	6697927	9/28/2001	2/24/2004	09/966478	US	CONCURRENT NON-BLOCKING FIFO ARRAY
82118582	Granted	6725324	4/23/2002	4/20/2004	10/127878	US	METHOD AND APPARATUS FOR INCREASING FLASH ROM PROGRAMMING PERFORMANCE IN A MULTIPLE PROCESSOR COMPUTER SYSTEM
82118591	Granted	7353224	12/4/2001	4/1/2008	10/005193	US	SYSTEM AND METHOD FOR EFFICIENTLY FINDING NEAR-SIMILAR IMAGES IN MASSIVE DATABASES
82118651	Granted	7558217	8/15/2003	7/7/2009	10/642002	US	Method And System For Initializing Host Location Information Across Smart Bridge Topology Changes
82118663	Granted	7240186	7/16/2001	7/3/2007	09/906345	US	System And Method To Avoid Resource Contention In The Presence Of Exceptions
82119539	Granted	5870602	1/27/1998	2/9/1999	09/014369	US	MULTI-PROCESSOR SYSTEM WITH SYSTEM WIDE RESET AND PARTIAL SYSTEM RESET CAPABILITIES
82119644	Granted	6757689	9/7/2001	6/29/2004	09/948928	US	ENABLING A ZERO LATENCY ENTERPRISE
82119722	Granted	6760788	11/30/2001	7/6/2004	09/998439	US	Domain Validation Process That Is Transparent To A Device Driver
82119770	Granted	6667889	1/7/2002	12/23/2003	10/041010	US	SYSTEM AND METHOD FOR PIVOTAL INSTALLATION AND REMOVAL OF A CIRCUIT BOARD FROM A CHASSIS
82119773	Granted	6970361	10/28/2003	11/29/2005	10/695202	US	System And Method For Pivotal Installation And Removal Of A Circuit Board From A Chassis
82119782	Granted	7299345	9/28/2001	11/20/2007	09/966064	US	RESERVED ROM SPACE FOR STORAGE OF OPERATING SYSTEM DRIVERS
82119833	Granted	6785696	6/1/2001	8/31/2004	09/872323	US	SYSTEM AND METHOD FOR REPLICATION OF DISTRIBUTED DATABASES THAT SPAN MULTIPLE PRIMARY NODES
82119836	Granted	7055139	3/28/2002	5/30/2006	10/109287	US	MULTIPROCESS DEBUGGING USING MULTIPLE CONVENTIONAL DEBUGGERS
82119848	Granted	7003635	10/3/2002	2/21/2006	10/263742	US	GENERALIZED ACTIVE INHERITANCE CONSISTENCY MECHANISM HAVING LINKED WRITES
82119854	Granted	6829665	9/28/2001	12/7/2004	09/965871	US	Next Snoop Predictor In A Host Controller
82119857	Granted	6823409	9/28/2001	11/23/2004	09/965894	US	Coherency Control Module For Maintaining Cache Coherency In A Multi-Processor-Bus System
82119893	Granted	6884101	10/17/2001	4/26/2005	09/981511	US	Interposer One-Step Load And Self-Lock Socket
82119896	Granted	6886048	11/15/2001	4/26/2005	10/002809	US	TECHNIQUES FOR PROCESSING OUT-OF -ORDER REQUESTS IN A PROCESSOR-BASED SYSTEM
82119902	Granted	6912599	10/19/2001	6/28/2005	10/038231	US	METHOD AND APPARATUS FOR SENSING POSITIONS OF DEVICE ENCLOSURES WITHIN MULTI-SHELF CABINETS

PATENT
REEL: 038498 FRAME: 0360

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82119905	Granted	7886298	3/26/2002	2/8/2011	10/106903	US	Data Transfer Protocol For Data Replication Between Multiple Pairs Of Storage Controllers On A SAN Fabric
82119914	Granted	6947981	3/26/2002	9/20/2005	10/106908	US	FLEXIBLE DATA REPLICATION MECHANISM
82119923	Granted	7542987	4/21/2005	6/2/2009	11/111380	US	AUTOMATIC SITE FAILOVER
82119956	Granted	7028213	9/28/2001	4/11/2006	09/965883	US	Error Indication In A Raid Memory System
82119977	Granted	6985502	11/19/2001	1/10/2006	09/989911	US	TIME-DIVISION MULTIPLEXED LINK FOR USE IN A SERVICE AREA NETWORK
82119983	Granted	7043647	9/28/2001	5/9/2006	09/966180	US	Intelligent Power Management For A Rack Of Servers
82120022	Granted	7856420	12/7/2001	12/21/2010	10/013091	US	ZERO LATENCY ENTERPRISE ENRICHED PUBLISH/SUBSCRIBE
82120103	Granted	7149556	6/7/2002	12/12/2006	10/165417	US	METHOD AND APPARATUS FOR OPTIMIZED BATTERRY LIFE AND AUTHENTICATION IN CONTACTLESS TECHNOLOGY
82120106	Granted	6830394	6/4/2001	12/14/2004	09/873778	US	KEYBOARD HAVING A TRACK BALL MECHANISM AND A SCROLL MECHANISM
82120148	Granted	8090751	2/5/2002	1/3/2012	10/068466	US	Operational Data Store
82120160	Granted	6925537	10/31/2003	8/2/2005	10/698130	US	Multiprocessor Cache Coherence System And Method In Which Processor Nodes And Input/Output Nodes Are Equal Participants
82120163	Granted	6751720	1/7/2002	6/15/2004	10/042054	US	METHOD AND SYSTEM FOR DETECTING AND RESOLVING VIRTUAL ADDRESS SYNONYMS IN A TWO-LEVEL CACHE HIERARCHY
82120166	Granted	6646883	8/21/2001	11/11/2003	09/934269	US	INSERTION LATCH AND EJECTABLE PULL HANDLE FOR RACK MOUNTED ELECTRONIC DEVICES
82120169	Granted	6636949	1/7/2002	10/21/2003	10/042008	US	SYSTEM FOR HANDLING COHERENCE PROTOCOL RACES IN A SCALABLE SHARED MEMORY SYSTEM BASED ON CHIP MULTIPROCESSING
82120172	Granted	6697919	6/11/2001	2/24/2004	09/878985	US	System And Method For Limited Fanout Daisy Chaining Of Cache Invalidation Requests In A Shared-memory Multiprocessor System
82120214	Granted	6870436	3/11/2002	3/22/2005	10/097215	US	METHOD AND APPARATUS TO ATTENUATE POWER PLANE NOISE ON A PRINTED CIRCUIT BOARD USING HIGH ESR CAPACITORS
82120226	Granted	6667879	12/13/2001	12/23/2003	10/022744	US	System For Latching And Ejecting A Modular Component From An Electronic Device
82120409	Granted	6782443	4/9/2003	8/24/2004	10/410541	US	Extension Of USB Functionality Through Shadowing Of A Remote USB Host Controller
82120415	Granted	7051239	12/28/2001	5/23/2006	10/034717	US	METHOD AND APPARATUS FOR EFFICIENTLY IMPLEMENTING TRACE AND/OR LOGIC ANALYSIS MECHANISMS ON A PROCESSOR CHIP
82120463	Granted	6801970	9/30/2001	10/5/2004	09/968056	US	PRIORITY TRANSACTION SUPPORT ON THE PCI-X BUS

PATENT
REEL: 038498 FRAME: 0361

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82120466	Granted	6871248	9/29/2001	3/22/2005	09/967606	US	Isochronous Transactions For Interconnect Busses Of A Computer System
82120469	Granted	7340545	8/15/2005	3/4/2008	11/203733	US	Distributed Peer-to-peer Communication For Interconnect Busses Of A Computer System
82120484	Granted	7110413	12/31/2001	9/19/2006	10/038793	US	DOWNSTREAM BROADCAST PCI SWITCH
82120529	Granted	6724628	12/26/2001	4/20/2004	10/036165	US	BLINDMATE HEAT SINK ASSEMBLY
82120532	Granted	6829146	3/22/2004	12/7/2004	10/805901	US	Blindmate Heat Sink Assembly
82120535	Granted	6987672	12/1/2004	1/17/2006	11/000647	US	Blindmate Heat Sink Assembly
82120538	Granted	6546444	11/20/2001	4/8/2003	09/989051	US	Tuned Stub, SCSI Topology
82120541	Granted	6895467	10/22/2001	5/17/2005	10/040194	US	System And Method For Atomizing Storage
82120544	Granted	7146460	11/2/2004	12/5/2006	10/979731	US	Dynamic Spindle Usage Leveling
82120595	Granted	7096306	7/31/2002	8/22/2006	10/209846	US	DISTRIBUTED SYSTEM WITH CROSS-CONNECT INTERCONNECT TRANSACTION ALIASING
82120598	Granted	6779064	1/24/2002	8/17/2004	10/057404	US	System, Method, And Computer Program Product For On-line Replacement Of A Host Bus Adapter
82120604	Granted	7152174	3/6/2003	12/19/2006	10/382456	US	METHOD AND APPARATUS FOR OPERATING A SERVER SYSTEM INCLUDING DETERMINING THE POWER SUPPLIED BY ONE OF A PLURALITY OF POWER SUPPLIES BY MEASURING VOLTAGE ON A LOAD SHARE SIGNAL LINE
82120643	Granted	7099879	4/26/2002	8/29/2006	10/133166	US	REAL-TIME MONITORING OF SERVICE PERFORMANCE THROUGH THE USE OF RELATIONAL DATABASE CALCULATION CLUSTERS
82120661	Granted	6826036	6/28/2002	11/30/2004	10/185530	US	MODULAR POWER DISTRIBUTION SYSTEM FOR USE IN COMPUTER EQUIPMENT RACKS
82120664	Granted	7215535	11/22/2004	5/8/2007	10/995737	US	MODULAR POWER DISTRIBUTION SYSTEM FOR USE IN COMPUTER EQUIPMENT RACKS
82120670	Granted	7447975	9/12/2002	11/4/2008	10/243995	US	Supporting Cyclic Redundancy Checking For PCI-X
82120709	Granted	7080142	9/20/2002	7/18/2006	10/251089	US	EXTENSIBLE COMPUTER MANAGEMENT RULE ENGINE
82120856	Granted	5884054	1/6/1993	3/16/1999	08/001091	US	MULTIPROCESSOR COMMUNICATION USING REDUCED ADDRESSING LINES
82121651	Granted	7447995	6/28/2002	11/4/2008	10/186114	US	System And Method For Cursor Calibration
82121654	Granted	6918007	9/9/2002	7/12/2005	10/237330	US	Memory Controller Interface With XOR Operations On Memory Read To Accelerate RAID Operations
82121663	Granted	6901458	7/11/2002	5/31/2005	10/192909	US	Multi-mode SCSI Backplane And Detection Logic
82121711	Granted	6889341	6/28/2002	5/3/2005	10/186054	US	METHOD AND APPARATUS FOR MAINTAINING DATA INTEGRITY USING A SYSTEM MANAGEMENT PROCESSOR
82121714	Granted	6968465	6/24/2002	11/22/2005	10/178300	US	Multiple Server In-Rush Current Reduction
82121717	Granted	6687134	6/13/2002	2/3/2004	10/170730	US	Card Extraction And Separation System
82121774	Granted	6792511	8/16/2002	9/14/2004	10/222045	US	DUAL CACHE MODULE SUPPORT FOR ARRAY CONTROLLER

PATENT
REEL: 038498 FRAME: 0362

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82121792	Granted	7143275	8/1/2002	11/28/2006	10/210274	US	SYSTEM FIRMWARE BACK-UP USING A BIOS-ACCESSIBLE PRE-BOOT PARTITION
82121795	Granted	6768295	5/30/2002	7/27/2004	10/158336	US	Offset Calibration Of Current Sharing Signal For Power Supply Units In Redundant Operation
82121837	Granted	7105950	9/26/2003	9/12/2006	10/672522	US	Power Management In A System Having A Plurality Of Power Supplies
82121840	Granted	7502895	9/13/2005	3/10/2009	11/225937	US	Techniques For Reducing Castouts In A Snoop Filter
82121852	Granted	7739485	10/11/2002	6/15/2010	10/269195	US	CACHED FIELD REPLACEABLE UNIT EEPROM DATA
82121855	Granted	6735097	12/19/2002	5/11/2004	10/324542	US	Method And Apparatus Of Using Leakage Inductance As A Boost Inductor
82121894	Granted	7193971	6/24/2002	3/20/2007	10/178716	US	ACTIVE PATH SELECTION FOR SCTP
82121897	Granted	7028215	6/25/2002	4/11/2006	10/178981	US	HOT MIRRORING IN A COMPUTER SYSTEM WITH REDUNDANT MEMORY SUBSYSTEMS
82121900	Granted	7397314	9/11/2002	7/8/2008	10/241014	US	Redundant Clock Source
82122038	Granted	7392384	6/28/2002	6/24/2008	10/187266	US	Method And System For Secure Storage, Transmission And Control Of Cryptographic Keys
82122080	Granted	8135132	12/23/2009	3/13/2012	12/645516	US	Method And System For Secure Storage, Transmission And Control Of Cryptographic Keys
82122095	Granted	7317623	12/20/2002	1/8/2008	10/324945	US	Swappable Mount For Cable Support And System And Method Incorporating Same
82126892	Granted	5809560	10/13/1995	9/15/1998	08/543067	US	ADAPTIVE READ-AHEAD DISK CACHE
82126898	Granted	5961652	6/23/1997	10/5/1999	08/879667	US	READ CHECKING FOR DRIVE REBUILD
82126901	Granted	5822584	10/13/1995	10/13/1998	08/542800	US	USER SELECTABLE PRIORITY FOR DISK ARRAY BACKGROUND OPERATIONS
82126913	Granted	5717954	10/13/1995	2/10/1998	08/542801	US	LOCKED EXCHANGE FIFO
82126949	Granted	5692200	10/16/1995	11/25/1997	08/543724	US	BRIDGE CIRCUIT FOR PREVENTING DATA INCOHERENCY BY HOLDING OFF PROPAGATION
82126952	Granted	5721839	10/13/1995	2/24/1998	08/542882	US	APPARATUS AND METHOD FOR SYNCHRONOUSLY PROVIDING A FULLNESS INDICATION OF A DUAL PORTED BUFFER SITUATED BETWEEN TWO ASYNCHRONOUS BUSES
82126961	Granted	5815677	12/31/1996	9/29/1998	08/774746	US	BUFFER RESERVATION METHOD FOR A BUS BRIDGE SYSTEM
82126964	Granted	6260095	9/29/1998	7/10/2001	09/162924	US	BUFFER RESERVATION METHOD FOR A BUS BRIDGE SYSTEM
82127030	Granted	5797018	12/7/1995	8/18/1998	08/568478	US	APPARATUS AND METHOD OF PREVENTING A DEADLOCK CONDITION IN A COMPUTER SYSTEM
82127033	Granted	5673172	1/5/1996	9/30/1997	08/583415	US	APPARATUS FOR ELECTROMAGNETIC INTERFERENCE AND ELECTROSTATIC DISCHARGE SHIELDING OF HOT PLUG-CONNECTED HARD DISK DRIVES

PATENT
REEL: 038498 FRAME: 0363

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82127219	Granted	5673171	12/5/1995	9/30/1997	08/567566	US	HARD DISC DRIVE SUPPORT TRAY APPARATUS WITH BUILT-IN HANDLING SHOCK REDUCTION, EMI SHIELDING AND MOUNTING ALIGNMENT STRUCTURES
82127222	Granted	5864710	7/22/1996	1/26/1999	08/685310	US	CONTROLLERLESS MODEM
82127225	Granted	6112260	1/31/1997	8/29/2000	08/791590	US	METHOD AND APPARATUS FOR REDIRECTING INPUT/OUTPUT DEVICE DATA IN A COMPUTER SYSTEM THROUGH USE OF DEBUG REGISTERS
82127261	Granted	5691870	11/7/1995	11/25/1997	08/551787	US	CIRCUIT FOR MONITORING AND DISABLING POWER SUPPLY SIGNALS TO A MICROPROCESSOR IN A COMPUTER SYSTEM UTILIZING SECONDARY VOLTAGE REGULATORS
82127264	Granted	5970236	11/14/1995	10/19/1999	08/557487	US	CIRCUIT FOR SELECTIVELY PERFORMING DATA FORMAT CONVERSION
82127324	Granted	5838993	4/26/1996	11/17/1998	08/639879	US	SYSTEM FOR DMA CONTROLLER SHARING CONTROL SIGNALS IN CONVENTIONAL MODE AND HAVING SEPARATE CONTROL SIGNALS FOR EACH NUMBER OF CHANNELS IN DISTRIBUTED MODE
82127462	Granted	5805903	5/21/1996	9/8/1998	08/651049	US	PROTECTION OF COMPUTER SYSTEM AGAINST INCORRECT CARD INSERTION DURING START-UP
82127465	Granted	5774736	12/15/1995	6/30/1998	08/572794	US	REDUNDANT CPU POWER SYSTEM
82127468	Granted	5659789	12/15/1995	8/19/1997	08/573963	US	STOPCLOCK TOGGLE SYSTEM FOR POWERING TWO CPUS FROM A REGULATOR ONLY SIZED FOR ONE CPU
82127474	Granted	5784599	12/15/1995	7/21/1998	08/572957	US	METHOD AND APPARATUS FOR ESTABLISHING HOST BUS CLOCK FREQUENCY AND PROCESSOR CORE CLOCK RATIOS IN A MULTI-PROCESSOR COMPUTER SYSTEM
82127573	Granted	6021466	3/14/1996	2/1/2000	08/615401	US	TRANSFERRING DATA BETWEEN CACHES IN A MULTIPLE PROCESSOR ENVIRONMNENT
82127579	Granted	5898861	10/18/1996	4/27/1999	08/733521	US	TRANSPARENT KEYBOARD HOT PLUG
82127588	Granted	5790895	10/18/1996	8/4/1998	08/733415	US	MODEM SHARING
82127636	Granted	6032271	6/5/1996	2/29/2000	08/658750	US	METHOD AND APPARATUS FOR IDENTIFYING FAULTY DEVICES IN A COMPUTER SYSTEM
82127660	Granted	6021480	5/14/1998	2/1/2000	08/658752	US	ALIGNING A MEMORY READ REQUEST WITH A CACHE LINE BOUNDARY WHEN THE REQUEST IS FOR DATA BEGINNING AT A LOCATION IN THE MIDDLE OF THE CACHE LINE
82127705	Granted	6055596	6/5/1996	4/25/2000	08/658603	US	EXPANSION CARD SPACE RESERVATION
82127723	Granted	5911055	6/5/1996	6/8/1999	08/658634	US	USING SUBORDINATE BUS DEVICES THAT ARE CONNECTED TO A COMMON BUS
82127762	Granted	5872939	6/5/1996	2/16/1999	08/658485	US	BUS ARBITRATION
82127771	Granted	6024486	6/5/1996	2/15/2000	08/658732	US	DATA ERROR DETECTION AND CORRECTION
82127774	Granted	5809534	6/13/1996	9/15/1998	08/662491	US	PERFORMING A WRITE CYCLE TO MEMORY IN A MULTI-PROCESSOR SYSTEM

PATENT
REEL: 038498 FRAME: 0364

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82127780	Granted	6000040	10/29/1996	12/7/1999	08/739687	US	METHOD AND APPARATUS FOR DIAGNOSING FAULT STATES IN A COMPUTER SYSTEM
82127897	Granted	6772204	10/5/1998	8/3/2004	09/166677	US	METHOD AND APPARATUS FOR PROVIDING A WINDOW-BASED GUIDED CONFIGURATION USER INTERFACE OF UNCONFIGURED NETWORK AND INTERNETWORK REMOTE DEVICES
82127906	Granted	5838907	2/20/1996	11/17/1998	08/603062	US	CONFIGURATION MANAGER FOR NETWORK DEVICES AND AN ASSOCIATED METHOD FOR PROVIDING CONFIGURATION INFORMATION THERETO
82127951	Granted	5914963	6/21/1996	6/22/1999	08/667618	US	CLOCK SKEW REDUCTION
82127954	Granted	6138192	12/31/1996	10/24/2000	08/777575	US	DELIVERING A REQUEST TO WRITE OR READ DATA BEFORE DELIVERING AN EARLIER WRITE REQUEST
82127957	Granted	6070209	11/19/1998	5/30/2000	09/196373	US	DELIVERING TRANSACTIONS BETWEEN DATA BUSES IN A COMPUTER SYSTEM.
82128017	Granted	6476854	10/18/1996	11/5/2002	08/733254	US	VIDEO EAVESDROPPING AND REVERSE ASSEMBLY TO TRANSMIT VIDEO ACTION TO A REMOTE CONSOLE
82128086	Granted	5822300	4/2/1996	10/13/1998	08/627692	US	CONGESTION MANAGEMENT SCHEME
82128089	Granted	5787084	6/5/1996	7/28/1998	08/658742	US	MULTICAST DATA COMMUNICATION SWITCHING SYSTEM AND ASSOCIATED METHOD
82128092	Granted	6076139	9/30/1997	6/13/2000	08/940914	US	MULTIMEDIA COMPUTER ARCHITECTURE WITH MULTI-CHANNEL CONCURRENT MEMORY ACCESS
82128197	Granted	5819053	6/5/1996	10/6/1998	08/658696	US	COMPUTER SYSTEM BUS PERFORMANCE MONITORING
82128227	Granted	6052513	6/5/1996	4/18/2000	08/659355	US	MULTI-THREADED BUS MASTER
82128332	Granted	5761030	6/19/1996	6/2/1998	08/666812	US	ELECTRONIC DEVICE WITH CIRCUIT BOARD LATCHING AND RETAINING STRUCTURE
82128476	Granted	5772448	4/2/1996	6/30/1998	08/631606	US	EDGECARD CIRCUIT BOARD
82128572	Granted	5852720	8/16/1996	12/22/1998	08/695828	US	SYSTEM FOR STORING DISPLAY DATA DURING FIRST TIME PERIOD PRIOR TO FAILURE OF COMPUTER AND DURING SECOND TIME PERIOD AFTER RESET OF THE COMPUTER
82128575	Granted	6173340	10/9/1998	1/9/2001	09/169316	US	SERVER CONTROLLER FOR STORING AND RETRIEVING SEQUENCES OF VIDEO SCREENS FORWARDED BY A SERVER HOST COMPUTER
82128596	Granted	5857074	8/16/1996	1/5/1999	08/695827	US	SERVER CONTROLLER RESPONSIVE TO VARIOUS COMMUNICATION PROTOCOLS FOR ALLOWING REMOTE COMMUNICATION TO A HOST COMPUTER CONNECTED THERETO
82128635	Granted	6081865	2/17/1999	6/27/2000	09/251960	US	ISOLATION OF PCI AND EISA MASTERS BY MASKING CONTROL AND INTERRUPT LINES
82128644	Granted	5864653	12/31/1996	1/26/1999	08/775770	US	PCI HOT SPARE CAPABLITY FOR FAILED COMPONENTS
82128647	Granted	6105146	1/6/1999	8/15/2000	09/226359	US	PCI HOT SPARE CAPABILITY FOR FAILED COMPONENTS

PATENT
REEL: 038498 FRAME: 0365

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82128650	Granted	5907689	12/31/1996	5/25/1999	08/777826	US	MASTER-TARGET BASED ARBITRATION PRIORITY
82128653	Granted	5850559	8/7/1996	12/15/1998	08/693458	US	METHOD AND APPARATUS FOR SECURE EXECUTION OF SOFTWARE PRIOR TO A COMPUTER SYSTEM BEING POWERED DOWN OR ENTERING A LOW ENERGY CONSUMPTION MODE
82128704	Granted	5757795	5/20/1996	5/26/1998	08/650456	US	METHOD AND APPARATUS FOR HASHING ADDRESSES IN A NETWORK SWITCH
82128710	Granted	5913037	7/3/1996	6/15/1999	08/675582	US	DYNAMIC MANAGEMENT INFORMATION BASE MANAGER
82128713	Granted	5819115	6/28/1996	10/6/1998	08/672648	US	A DRIVER BUNDLE INCLUDING A COMPRESSED, SELF-EXTRACTING, EXECUTABLE DRIVER FOR THE HOST PROCESSOR AND AN ADAPTER DRIVER FOR THE PROCESSOR OF A NETWORK ADAPTER CARD
82128716	Granted	5764896	6/28/1996	6/9/1998	08/671583	US	METHOD AND SYSTEM FOR REDUCING TRANSFER LATENCY WHEN TRANSFERRING DATA FROM A NETWORK TO A COMPUTER SYSTEM
82128719	Granted	5905874	4/22/1998	5/18/1999	09/064432	US	METHOD AND SYSTEM FOR REDUCING DATA TRANSFER LATENCY WHEN TRANSFERRING DATA FROM A NETWORK TO A COMPUTER SYSTEM
82128722	Granted	6260073	12/30/1996	7/10/2001	08/774605	US	NETWORK SWITCH INCLUDING A SWITCH MANAGER FOR PERIODICALLY POLLING THE NETWORK PORTS TO DETERMINE THEIR STATUS AND CONTROLLING THE FLOW OF DATA BETWEEN PORTS
82128758	Granted	6098109	12/30/1996	8/1/2000	08/774601	US	PROGRAMMABLE ARBITRATION SYSTEM FOR DETERMINING PRIORITY OF THE PORTS OF A NETWORK SWITCH
82128770	Granted	5862338	12/30/1996	1/19/1999	08/774602	US	POLLING SYSTEM THAT DETERMINES THE STATUS OF NETWORK PORTS AND THAT STORES VALUES INDICATIVE THEREOF
82128788	Granted	6094434	12/30/1996	7/25/2000	08/774555	US	NETWORK SWITCH WITH SEPARATE CUT-THROUGH BUFFER
82128821	Granted	6430626	8/1/2000	8/6/2002	09/630415	US	NETWORK SWITCH WITH A MULTIPLE BUS STRUCTURE AND A BRIDGE INTERFACE FOR TRANSFERRING NETWORK DATA BETWEEN DIFFERENT BUSES
82128851	Granted	7333485	9/23/1997	2/19/2008	10/667649	US	NETWORK COMMUNICATION DEVICE INCLUDING BONDED PORTS FOR INCREASED BANDWIDTH
82128884	Granted	5867676	8/20/1996	2/2/1999	08/699918	US	RESET CIRCUIT FOR A PERIPHERAL COMPONENT INTERCONNECT
82128893	Granted	5907687	8/22/1996	5/25/1999	08/701721	US	POWER SHUTDOWN APPARATUS
82128896	Granted	5832236	5/20/1996	11/3/1998	08/650949	US	HIGH SPEED FRAME TRANSLATION FOR COMPUTER NETWORKS

PATENT
REEL: 038498 FRAME: 0366

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82128959	Granted	5867645	9/30/1996	2/2/1999	08/723767	US	EXTENDED-BUS FUNCTIONALITY IN CONJUNCTION WITH NON-EXTENDED-BUS FUNCTIONALITY IN THE SAME BUS SYSTEM
82129016	Granted	5913034	8/27/1996	6/15/1999	08/709208	US	ADMINISTRATOR STATION FOR A COMPUTER SYSTEM
82129022	Granted	5974438	12/31/1996	10/26/1999	08/775144	US	SCOREBOARD FOR CACHED MULTI-THREAD PROCESSES
82129208	Granted	5867675	8/6/1996	2/2/1999	08/692488	US	APPARATUS AND METHOD FOR COMBINING DATA STREAMS WITH PROGRAMMABLE WAIT STATES
82129259	Granted	5922060	12/31/1996	7/13/1999	08/775133	US	EXPANSION CARD INSERTION AND REMOVAL
82129346	Granted	6310782	10/31/1996	10/30/2001	08/741699	US	AN APPARATUS FOR MAXIMIZING MEMORY DENSITY WITHIN EXISTING COMPUTER SYSTEM FORM FACTORS
82129445	Granted	6085274	3/2/1999	7/4/2000	09/260962	US	COMPUTER SYSTEM WITH BRIDGES HAVING POSTED MEMORY WRITE BUFFERS
82129448	Granted	5832243	12/31/1996	11/3/1998	08/775301	US	COMPUTER SYSTEM IMPLEMENTING A STOP CLOCK ACKNOWLEDGE SPECIAL CYCLE
82129457	Granted	6148359	11/5/1998	11/14/2000	09/186597	US	BUS-TO-BUS BRIDGE IN COMPUTER SYSTEM, WITH FAST BURST MEMORY RANGE
82129460	Granted	RE37980	11/3/2000	2/4/2003	09/706883	US	BUS-TO-BUS BRIDGE IN COMPUTER SYSTEM, WITH FAST BURST MEMORY RANGE
82129463	Application		4/5/1999		08/775128	US	COMPUTER SYSTEM WITH DELAYED TRANSACTION PROCESSING
82129466	Granted	5959841	12/31/1996	9/28/1999	08/777816	US	MODULAR COMPUTER CHASSIS WITH EXTRACTOR DEVICE MOUNTED TO THE HOUSING
82129469	Granted	5923754	5/2/1997	7/13/1999	08/850729	US	COPY PROTECTION FOR RECORDED MEDIA
82129472	Granted	5974250	6/18/1999	10/26/1999	08/764177	US	SYSTEM AND METHOD FOR SECURE INFORMATION TRANSMISSION OVER A NETWORK
82129514	Granted	5870567	12/31/1996	2/9/1999	08/775300	US	DELAYED TRANSACTION PROTOCOL FOR COMPUTER SYSTEM BUS
82129517	Granted	5878232	12/27/1996	3/2/1999	08/775021	US	DYNAMIC RECONFIGURATION OF NETWORK DEVICE'S VIRTUAL LANS USING THE ROOT IDENTIFIERS AND ROOT PORTS DETERMINED BY A SPANNING TREE PROCEDURE
82129637	Granted	6014383	2/10/1997	1/11/2000	08/797129	US	SYSTEM AND METHOD FOR CONTROLLING MULTIPLE INITIATORS IN A FIBRE CHANNEL ENVIRONMENT
82129646	Granted	5944798	2/19/1997	8/31/1999	08/802673	US	SYSTEM AND METHOD FOR ARBITRATED LOOP RECOVERY
82129649	Granted	6126451	8/18/1999	10/3/2000	08/867102	US	SCSI CONNECTOR
82129655	Granted	6654829	9/30/2002	11/25/2003	10/260932	US	SCSI Connector
82129658	Granted	5946495	4/8/1997	8/31/1999	08/838366	US	DATA COMMUNICATION CIRCUIT FOR CONTROLLING DATA COMMUNICATION BETWEEN REDUNDANT POWER SUPPLIES AND PERIPHERAL DEVICES

PATENT
REEL: 038498 FRAME: 0367

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82129661	Granted	5937173	6/12/1997	8/10/1999	08/873420	US	DUAL PURPOSE COMPUTER BRIDGE INTERFACE FOR ACCELERATED GRAPHICS PORT OR REGISTERED PERIPHERAL COMPONENT INTERCONNECT DEVICES
82129706	Granted	5999743	9/9/1997	12/7/1999	08/926422	US	SYSTEM AND METHOD FOR DYNAMICALLY ALLOCATING ACCELERATED GRAPHICS PORT MEMORY SPACE
82129709	Granted	5914727	9/9/1997	6/22/1999	08/925773	US	VALID FLAG FOR DISABLING ALLOCATION OF ACCELERATED GRAPHICS PORT MEMORY SPACE
82129715	Granted	5936640	9/30/1997	8/10/1999	08/941862	US	ACCELERATED GRAPHICS PORT MEMORY MAPPED STATUS AND CONTROL REGISTERS
82129718	Granted	5914730	9/9/1997	6/22/1999	08/926421	US	SYSTEM AND METHOD FOR INVALIDATING AND UPDATING INDIVIDUAL GART TABLE ENTIRES FOR ACCELERATED GRAPHICS PORT TRANSACTION REQUESTS
82129763	Granted	5805428	12/20/1996	9/8/1998	08/771569	US	TRANSISTOR/RESISTOR PRINTED CIRCUIT BOARD LAYOUT
82129772	Granted	5861764	12/31/1996	1/19/1999	08/775771	US	CLOCK SKEW REDUCTION USING SPIDER CLOCK TRACE ROUTING
82129838	Granted	6092169	4/2/1997	7/18/2000	08/832367	US	APPARATUS AND METHOD FOR STORAGE SUBSYSTEM DRIVE MOVEMENT AND VOLUME ADDITION
82129946	Granted	6073188	7/25/1997	6/6/2000	08/900676	US	ELECTRONIC SWITCHBOX FOR SELECTION AND SHARING OF INTERNAL PERIPHERAL DEVICES AMONG DIFFERENT COMPUTERS, THE INTERNAL PERIPHERAL DEVICES LOCATED IN SLOTS OF A CHASSIS
82129955	Granted	6061754	5/20/1999	36655	08/882615	US	DATA BUS HAVING SWITCH FOR SELECTIVELY CONNECTING AND DISCONNECTING DEVICES TO OR FROM THE BUS
82129958	Granted	6073196	6/30/1997	6/6/2000	08/885110	US	USING COMMUNICATION CYCLES FOR CONNECTING AND DISCONNECTING DEVICES IN A COMPUTER SYSTEM
82129961	Granted	6003144	6/30/1997	12/14/1999	08/860029	US	ERROR DETECTION AND CORRECTION
82129964	Granted	6098137	6/25/1997	8/1/2000	08/882504	US	FAULT TOLERANT COMPUTER SYSTEM
82129973	Granted	6466996	9/14/1998	10/15/2002	09/153211	US	METHOD AND SYSTEM FOR IMPLEMENTING INTELLIGENT DISTRIBUTED INPUT-OUTPUT PROCESSING AS A SOFTWARE PROCESS IN A HOST OPERATING SYSTEM ENVIRONMENT
82130069	Granted	6441861	5/7/2001	8/27/2002	09/850220	US	COMPUTER CONVERGENCE DEVICE CONTROLLER FOR MANAGING DISPARATE VIDEO SOURCES
82130135	Granted	5905497	3/31/1997	5/18/1999	08/828525	US	AUTOMATIC AND SEAMLESS CURSOR AND POINTER INTEGRATION
82130144	Granted	5905509	9/30/1997	5/18/1999	08/941860	US	ACCELERATED GRAPHICS PORT TWO LEVEL GART CACHE HAVING DISTRIBUTED FIRST LEVEL CACHES

PATENT
REEL: 038498 FRAME: 0368

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82130147	Granted	6101559	10/22/1997	8/8/2000	08/955790	US	SYSTEM FOR IDENTIFYING THE PHYSICAL LOCATION OF ONE OR MORE PERIPHERAL DEVICES BY SELECTING ICONS ON A DISPLAY REPRESENTING THE ONE OR MORE PERIPHERAL DEVICES
82130150	Granted	6205500	9/24/1997	3/20/2001	08/936208	US	SYSTEM AND METHOD FOR ELECTRONICALLY ISOLATING A DEVICE FROM HIGHER VOLTAGE DEVICES
82130159	Granted	6341342	11/4/1997	1/22/2002	08/963862	US	METHOD AND APPARATUS FOR ZEROING A TRANSFER BUFFER MEMORY AS A BACKGROUND TASK
82130162	Granted	6772310	12/4/2001	8/3/2004	10/006553	US	METHOD AND APPARATUS FOR ZEROING A TRANSFER BUFFER MEMORY AS A BACKGROUND TASK
82130195	Granted	6061794	9/30/1997	5/9/2000	08/940551	US	SYSTEM AND METHOD FOR PERFORMING SECURE DEVICE COMMUNICATIONS IN A PEER-TO-PEER BUS ARCHITECTURE
82130336	Granted	6067590	6/12/1997	5/23/2000	08/873636	US	DATA BUS AGENT INCLUDING A STORAGE MEDIUM BETWEEN A DATA BUS AND THE BUS AGENT DEVICE
82130390	Granted	5938772	6/11/1997	8/17/1999	08/872715	US	RESPONSIVE BACKLIT HARDWIRE BUTTON ARRAY PROVIDING ILLUMINATION AND USER FEEDBACK IN A COMPUTER
82130573	Granted	6137678	10/4/1999	10/24/2000	08/941409	US	CONFIGURING A COMPUTER SYSTEM
82130639	Granted	5867444	9/25/1997	2/2/1999	08/937535	US	PROGRAMMABLE MEMORY DEVICE THAT SUPPORTS MULTIPLE OPERATIONAL MODES
82130642	Granted	5922080	9/30/1997	7/13/1999	08/940054	US	METHOD AND APPARATUS FOR PERFORMING ERROR DETECTION AND CORRECTION WITH MEMORY DEVICES
82130651	Granted	6098132	9/30/1997	8/1/2000	08/940419	US	INSTALLATION AND REMOVAL OF COMPONENTS OF A COMPUTER
82130654	Granted	6047343	4/3/1999	4/4/2000	09/307254	US	METHOD AND APPARATUS FOR DETECTING INSERTION AND REMOVAL OF A MEMORY MODULE USING STANDARD CONNECTORS
82130657	Granted	6587909	3/6/2000	7/1/2003	09/519138	US	INSTALLATION AND REMOVAL OF COMPONENTS OF A COMPUTER
82130660	Granted	6010345	8/8/1997	1/4/2000	08/910954	US	LEVERAGED APPARATUS FOR SELECTIVELY DECOUPLING EITHER OF TWO PERPENDICULARLY COUPLED CIRCUIT BOARDS FROM THE OTHER CIRCUIT BOARD
82130696	Granted	5948081	12/22/1997	9/7/1999	08/995367	US	SYSTEM FOR FLUSHING QUEUED MEMORY WRITE REQUEST CORRESPONDING TO A QUEUED READ REQUEST AND ALL PRIOR WRITE REQUESTS WITH COUNTER INDICATING REQUESTS TO BE FLUSHED
82130948	Granted	5918059	8/15/1997	6/29/1999	08/911648	US	METHOD AND APPARATUS FOR RESPONDING TO ACTUATION OF A POWER SUPPLY SWITCH FOR A COMPUTING SYSTEM

PATENT
REEL: 038498 FRAME: 0369

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82130951	Granted	5938751	8/15/1997	8/17/1999	08/912092	US	BUS RING-BACK AND VOLTAGE OVER-SHOOT REDUTION TECHNIQUES COUPLED WITH HOT-PLUGGABILITY
82130960	Granted	5909584	8/15/1997	6/1/1999	08/911250	US	POWER INTERLOCK WITH FAULT INDICATORS FOR COMPUTER SYSTEM
82131206	Granted	6122287	2/9/1996	9/19/2000	08/599183	US	METHOD AND APPARATUS FOR DETECTING SWITCHED NETWORK PROTOCOLS
82131263	Granted	6119228	8/22/1997	9/12/2000	08/916273	US	METHOD FOR SECURELY COMMUNICATING REMOTE CONTROL COMMANDS IN A COMPUTER NETWORK
82131272	Granted	6223301	9/30/1997	4/24/2001	08/940282	US	FAULT TOLERANT MEMORY
82131275	Granted	6430702	11/15/2000	8/6/2002	09/713738	US	FAULT TOLERANT MEMORY
82131278	Granted	7409581	8/5/2002	8/5/2008	10/212603	US	MAIN MEMORY CONTROLLER ADAPTED TO CORRECT CORRUPTED DATA BY XORING CORRUPTED DATA TO DIRECTLY GENERATE CORRECT DATA
82131392	Granted	6675248	10/3/2000	1/6/2004	09/678034	US	APPARATUS, METHOD AND SYSTEM FOR ACCELERATED GRAPHICS PORT BUS BRIDGES
82131398	Granted	5986677	9/30/1997	11/16/1999	08/941859	US	ACCELERATED GRAPHICS PORT READ TRANSACTION MERGING
82131407	Granted	6442631	5/7/1999	8/27/2002	09/306878	US	ALLOCATING SYSTEM RESOURCES BASED UPON PRIORITY
82131512	Granted	6360333	11/19/1998	3/19/2002	09/196463	US	METHOD AND APPARATUS FOR DETERIMINING A PROCESSOR FAILURE IN A MULTIPROCESSOR COMPUTER
82131575	Granted	6260158	5/11/1998	7/10/2001	09/075623	US	SYSTEM AND METHOD FOR FAIL-OVER DATA TRANSPORT
82131578	Granted	6389555	4/23/2001	5/14/2002	09/840671	US	SYSTEM AND METHOD FOR FAIL-OVER DATA TRANSPORT
82131584	Granted	6173373	10/15/1998	1/9/2001	09/173597	US	METHOD AND APPARATUS FOR IMPLEMENTING STABLE PRIORITY QUEUES USING CONCURRENT NON-BLOCKING QUEUING TECHNIQUES
82131635	Granted	6141708	6/15/1998	10/31/2000	09/098015	US	HOST BRIDGE CONFIGURED TO MASK A PORTION OF PERIPHERAL DEVICES COUPLED TO A BUS FURTHER DOWNSTREAM OF THE HOST BRIDGE FROM A HOST PROCESSOR
82131647	Granted	6052749	11/14/1997	4/18/2000	08/970367	US	SYSTEM FOR FORMING AN INTELLIGENT I/O (I20)-AWARE DEVICE BY CONNECTING BOTH A PERIPHERAL CONTROL CONNECTOR HAVING AN I/O PROCESSOR MOUNTED AND NON-I20 DEVICE TO SAME BUS
82131656	Granted	6385682	5/17/1999	5/7/2002	09/313220	US	SYSTEM AND METHOD FOR CONTROLLING REMOTE CONSOLE FUNCTIONALITY ASSIST LOGIC
82131716	Granted	6202070	12/31/1997	3/13/2001	09/002152	US	COMPUTER MANUFACTURING SYSTEM ARCHITECTURE WITH ENHANCED SOFTWARE DISTRIBUTION FUNCTIONS
82131719	Granted	6199167	3/25/1998	3/6/2001	09/047789	US	COMPUTER ARCHITECTURE WITH PASSWORD-CHECKING BUS BRIDGE

PATENT
REEL: 038498 FRAME: 0370

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82131953	Granted	6496945	6/4/1998	12/17/2002	09/090123	US	COMPUTER SYSTEM IMPLEMENTING FAULT DETECTION AND ISOLATION USING UNIQUE IDENTIFICATION CODES STORED IN NON-VOLATILE MEMORY
82131956	Granted	6463550	3/12/1999	10/8/2002	09/267587	US	COMPUTER SYSTEM IMPLEMENTING FAULT DETECTION AND ISOLATION USING UNIQUE IDENTIFICATION CODES STORED IN NON-VOLATILE MEMORY
82131962	Granted	6678813	10/28/1999	1/13/2004	09/428874	US	DYNAMICALLY ADAPTIVE BUFFER MECHANISM
82132016	Granted	6662220	4/30/1999	12/9/2003	09/303118	US	METHOD AND APPARATUS FOR REMOTE COMPUTER MANAGEMENT USING WEB BROWSER AND HYPER-MEDIA MANAGED OBJECT APLLICATIONS
82132019	Granted	6701364	5/31/2000	3/2/2004	09/584602	US	Method And Apparatus For Remote Computer Management Using Web Browser Application To Display System Hardware And Software Configuration
82132094	Granted	6116509	7/14/1998	9/12/2000	09/115068	US	COMPACT MOUNTING OF CHIP CARD READER AT FRONT OF COMPUTER DEVICE BAY AREA
82132154	Granted	6088221	6/15/1998	7/11/2000	09/097324	US	HOT-PLUGGABLE DISK DRIVE CARRIER ASSEMBLY WITH NO LOOSE PARTS
82132268	Granted	6898740	1/25/2001	5/24/2005	09/769953	US	Computer System Having Configurable Core Logic Chipset For Connection To A Fault-Tolerant Accelerated Graphics Port Bus And Peripheral Component Interconnect Bus
82132340	Granted	6754755	11/21/2000	6/22/2004	09/717667	US	Service Request System Using An Activity Indicator To Reduce Processing Overhead
82132394	Granted	6442144	6/15/1998	8/27/2002	09/098026	US	METHOD AND APPARATUS FOR DISCOVERING NETWORK DEVICES USING INTERNET PROTOCOL AND PRODUCING A CORRESPONDING GRAPHICAL NETWORK MAP
82132505	Granted	6154789	6/15/1998	11/28/2000	09/097409	US	PERIPHERAL CONTROLLER COMPRISING FIRST MESSAGING UNIT FOR COMMUNICATION WITH FIRST OS DRIVER AND SECOND MESSAGING UNIT FOR COMMUNICATION WITH SECOND OS DRIVER FOR MASS-STORAGE PERIPHERAL
82132508	Granted	6128686	6/15/1998	10/3/2000	09/097408	US	HIDING PERIPHERAL MEMORY TRANSACTIONS ON A LOCAL BUS WITHIN A PERIPHERAL CONTROLLER FROM A HOST SYSTEM BUS
82132511	Granted	6061752	6/15/1998	5/9/2000	09/097493	US	TECHNIQUE FOR HOT PLUGGING A PERIPHERAL CONTROLLER CARD CONTAINING PCI AND SCSI BUSES ON A SINGLE CONNECTOR INTO A HOST SYSTEM BOARD
82132520	Granted	6212606	10/13/1998	4/3/2001	09/170965	US	COMPUTER SYSTEM AND METHOD FOR ESTABLISHING A STANDARDIZED SHARED LEVEL FOR EACH STORAGE UNIT
82132523	Granted	6842833	6/30/1998	1/11/2005	09/107539	US	Computer System And Method For Transferring Data Between Multiple Peer-Level Storage Units
82132529	Granted	6295578	4/9/1999	9/25/2001	09/288889	US	CASCADED REMOVABLE MEDIA DATA STORAGE SYSTEM

PATENT
REEL: 038498 FRAME: 0371

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82132586	Granted	6122216	12/9/1998	9/19/2000	09/208306	US	SINGLE PACKAGE DUAL MEMORY DEVICE
82132592	Granted	6097619	6/19/1998	8/1/2000	09/100919	US	SYMMETRIC MEMORY BOARD
82132595	Granted	6111753	6/19/1998	8/29/2000	09/100699	US	VOLTAGE REGULATOR MODULE
82132631	Granted	6212560	5/8/1998	4/3/2001	09/075298	US	DYNAMIC PROXY SERVER
82132634	Granted	6901596	5/7/1998	5/31/2005	09/074109	US	METHOD OF COMMUNICATING ASYNCHRONOUS EVENTS TO REMOTE PROCEDURE CALL CLIENTS
82132643	Granted	6167448	6/11/1998	12/26/2000	09/096064	US	MANAGEMENT EVENT NOTIFICATION SYSTEM USING EVENT NOTIFICATION MESSAGES WRITTEN USING A MARKUP LANGUAGE
82132655	Granted	6611865	4/30/1999	8/26/2003	09/303119	US	METHOD AND APPARATUS FOR EXPORTING DIAGNOSTICS INTERFACE AND MENU SYSTEM TO ALLOW REMOTE EXECUTION
82132658	Granted	6434615	4/30/1999	8/13/2002	09/303151	US	METHOD AND APPARATUS FOR REMOTE COMPUTER MANAGEMENT USING HTML IN A WEB BROWSER APPLICATION AND AN INTERNET SERVER EXTENSION ON AN INTERNET SERVER API-COMPLIANT WEB SERVER
82132721	Granted	6128682	6/25/1998	10/3/2000	09/104837	US	METHOD AND APPARATUS FOR BUS ISOLATION
82132772	Granted	6216183	11/20/1998	4/10/2001	09/196508	US	APPARATUS AND METHOD FOR SECURING INFORMATION ENTERED UPON AN INPUT DEVICE COUPLED TO A UNIVERSAL SERIAL BUS
82132775	Granted	6272580	3/16/1999	8/7/2001	09/268825	US	AN APPARATUS AND METHOD FOR DYNAMICALLY ELEVATING A LOWER LEVEL BUS MASTER TO AN UPPER LEVEL BUS MASTER WITHIN A MULTI-LEVEL ARBITRATION SYSTEM
82132778	Granted	6363439	12/7/1998	3/26/2002	09/206515	US	SYSTEM AND METHOD FOR POINT-TO-POINT SERIAL COMMUNICATION BETWEEN A SYSTEM INTERFACE DEVICES AND A BUS INTERFACE DEVICE IN A COMPUTER SYSTEM
82132781	Granted	6263395	1/6/1999	7/17/2001	09/227510	US	SYSTEM AND METHOD FOR SERIAL INTERRUPT SCANNING
82132886	Granted	6282660	10/1/1998	8/28/2001	09/164543	US	EXTENDING DIAL UP NETWORKING PARADIGM TO COVER ETHERNET BASED NETWORK CONNECTIONS
82132904	Granted	6272113	9/11/1998	8/7/2001	09/151557	US	NETWORK CONTROLLER SYSTEM THAT USES MULTICAST HEARTBEAT PACKETS
82132907	Granted	6229538	9/18/2000	5/8/2001	09/151265	US	PORT-CENTRIC GRAPHIC REPRESENTATIONS OF NETWORK CONTROLLERS
82133006	Granted	6779027	4/30/1999	8/17/2004	09/303308	US	INTELLIGENT MANAGEMENT MODULE APPLICATION PROGRAMMING INTERFACE WITH UTILITY OBJECTS
82133129	Granted	6058011	2/12/1999	5/2/2000	09/249039	US	COMPUTER CHASSIS WITH INTEGRATED COOLING FEATURES

PATENT
REEL: 038498 FRAME: 0372

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82133147	Granted	6826715	10/28/1999	11/30/2004	09/429226	US	AUTOMATIC CAPTURE AND COMPARISON OF COMPUTER CONFIGURATION DATA
82133207	Granted	7076629	12/26/2001	7/11/2006	10/037806	US	METHOD FOR PROVIDING CONCURRENT NON-BLOCKING HEAP MEMORY MANAGEMENT FOR FIXED SIZED BLOCKS
82133216	Granted	6862646	12/28/2001	3/1/2005	10/034464	US	Method And Apparatus For Eliminating The Software Generated Ready-Signal To Hardware Devices That Are Not Part Of The Memory Coherency Domain
82133258	Granted	6895456	12/12/2000	5/17/2005	09/735267	US	System Supporting Multicast Master Cycles Between Different Busses In A Computer System
82133327	Granted	6857040	12/5/2001	2/15/2005	10/006878	US	BI-DIRECTIONAL BUS BRIDGE IN WHICH MULTIPLE DEVICES CAN ASSERT BUS CONCURRENTLY
82133330	Granted	6435889	12/29/2000	8/20/2002	09/752129	US	REDUCED COMPLEXITY HOT PLUG BLIND MATE FAN ASSEMBLY AND CONNECTOR THEREFOR
82133336	Granted	6664969	11/12/1999	12/16/2003	09/438253	US	OPERATING SYSTEM INDEPENDENT METHOD AND APPARATUS FOR GRAPHICAL REMOTE ACCESS
82133339	Granted	8610734	7/1/2003	12/17/2013	10/611403	US	OPERATING SYSTEM INDEPENDENT METHOD AND APPARATUS FOR GRAPHICAL REMOTE ACCESS
82133384	Granted	6631440	11/30/2000	10/7/2003	09/726739	US	METHOD AND APPARATUS FOR SCHEDULING MEMORY CALIVRATIONS BASED ON QUEUED TRANSACTIONS
82133402	Granted	7073064	3/31/2000	7/4/2006	09/540697	US	METHOD AND APPARATUS TO PROVIDE ENHANCED COMPUTER PROTECTION
82133456	Granted	6624729	12/29/2000	9/23/2003	09/752059	US	SLOTTED GROUND PLANE FOR CONTROLLING THE IMPEDANCE OF HIGH SPEED SIGNALS ON A PRINTED CIRCUIT BOARD
82133573	Granted	6697620	6/23/2000	2/24/2004	09/602004	US	METHOD AND SYSTEM FOR PROVIDING TELECOMMUNICATION SERVICES ACROSS NETWORKS THAT USE DIFFERENT PROTOCOLS
82133639	Granted	6704826	9/21/2000	3/9/2004	09/666817	US	DIGITAL SIGNAL ISOLATION
82133645	Granted	6796833	10/31/2001	9/28/2004	10/003377	US	MULTI-SERVER, QUICK SWAP RACK FRAME WIH CONSOLIDATED POWER DISTRIBUTION, INTEGRATED KEYBOARD/VIDEO/MOUSE CONCENTRATOR, AND USB HUB
82133705	Granted	6976058	9/29/2000	12/13/2005	09/675281	US	COMPUTER CARD FOR STORING BOOTABLE IMAGES AND PROVIDING REMOTE MANAGEMENT FUNCTIONS
82133711	Granted	6832372	9/29/2000	12/14/2004	09/675529	US	UPDATING SYSTEM ROM CONFIGURATION UTILITY USING NVRAM
82133768	Granted	6678775	12/29/2000	1/13/2004	09/751049	US	SYSTEM ENABLING AUTOMATIC ERROR DETECTION IN RESPONSE TO REMOVAL OF BUS ADAPTER

PATENT
REEL: 038498 FRAME: 0373

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82133816	Granted	6742072	8/31/2000	5/25/2004	09/652321	US	METHOD AND APPARATUS FOR SUPPORTING CONCURRENT SYSTEM AREA NETWORK INTER-PROCESS COMMUNICATION AND I/O
82133822	Granted	7388834	6/28/2001	6/17/2008	09/895577	US	System And Method For Controlling Network Traffic Flow In A Multi-processor Network
82134566	Granted	6009269	3/10/1997	12/28/1999	08/815979	US	DETECTING CONCURRENCY ERRORS IN MULTI-THREADED PROGRAMS
82134629	Granted	5960215	9/12/1996	9/28/1999	08/712742	US	TRANSMIT DATA FIFO FOR FLOW CONTROLLED DATA
82134635	Granted	6212567	9/12/1996	4/3/2001	08/712778	US	METHOD AND APPARATUS FOR PERFORMING RAW CELL STATUS REPORT FREQUENCY MITIGATION ON RECEIVE IN A NETWORK NODE
82134638	Granted	6115775	9/12/1996	9/5/2000	08/712688	US	METHOD AND APPARATUS FOR PERFORMING INTERRUPT FREQUENCY MITIGATION IN A NETWORK NODE
82134647	Granted	6085292	6/5/1997	7/4/2000	08/870152	US	APPARATUS AND METHOD FOR PROVIDING NON-BLOCKING PIPELINED CACHE
82134701	Granted	6109777	4/16/1997	8/29/2000	08/834412	US	DIVISION WITH LIMITED CARRY-PROPAGATION IN QUOTIENT ACCUMULATION
82134776	Granted	6112318	1/4/2000	8/29/2000	08/909403	US	PERFORMANCE COUNTERS CONTROLLED BY PROGRAMMABLE LOGIC
82134833	Granted	5926366	7/21/1998	7/20/1999	08/749465	US	TAB AND SLOT DISK DRIVE VIBRATION REDUCTION STRUCTURE
82134842	Granted	5956665	11/15/1996	9/21/1999	08/749507	US	AUTOMATIC MAPPING, MONITORING, AND CONTROL OF COMPUTER ROOM COMPONENTS
82134893	Granted	5796939	3/10/1997	8/18/1998	08/812899	US	HIGH FREQUENCY SAMPLING OF PROCESSOR PERFORMANCE COUNTERS
82134947	Granted	5915098	10/24/1997	6/22/1999	08/957338	US	SYSTEM FPR COMPRESSING BIT MAPS TO BE SHARED AND DISPLAYED IN COLLABORATIVE TOOL BY CLIENT AND SERVER SYSTEMS
82134950	Granted	6292166	10/24/1997	9/18/2001	08/956742	US	SYSTEM AND METHOD FOR SHARING DIVERSE DISPLAY TYPES IN A BIT MAP SHARING COLLABORATIVE TOOL
82134956	Granted	6154816	10/24/1997	11/28/2000	08/957565	US	LOW OCCUPANCY PROTOCOL FOR MANAGING CONCURRENT TRANSACTIONS WITH DEPENDENCIES
82134965	Granted	6202126	10/24/1997	3/13/2001	08/957697	US	VICTIMIZATION OF CLEAN DATA BLOCKS
82135010	Granted	6052764	12/19/1997	4/18/2000	08/994364	US	COMPUTER DATA RESTORATION ASSEMBLY AND ASSOCIATED METHOD
82135085	Granted	5958040	5/28/1997	9/28/1999	08/864125	US	ADAPTIVE STREAM BUFFERS
82135091	Granted	5933640	2/26/1997	8/3/1999	08/806591	US	METHOD FOR ANALYZING AND PRESENTING TEST EXECUTION FLOWS OF PROGRAMS
82135094	Granted	6115814	11/14/1997	9/5/2000	08/971056	US	MEMORY PAGING SCHEME FOR 8051 CLASS MICROCONTROLLERS

PATENT
REEL: 038498 FRAME: 0374

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82135190	Granted	6275236	1/24/1997	8/14/2001	08/788519	US	SYSTEM AND METHOD FOR DISPLAYING TRACKED OBJECTS ON A DISPLAY DEVICE
82135202	Granted	5991808	6/2/1997	11/23/1999	08/867095	US	TASK PROCESSING OPTIMIZATION IN A MULTIPROCESSOR SYSTEM
82135376	Granted	5889714	11/3/1997	3/30/1999	08/963047	US	ADAPTIVE PRECHARGE MANAGEMENT FOR SYNCHRONOUS DRAM
82135391	Granted	6012106	11/3/1997	1/4/2000	08/962631	US	PREFETCH MANAGEMENT FOR DMA READ TRANSACTIONS DEPENDING UPON PAST HISTORY OF ACTUAL TRANSFER LENGTHS
82135403	Granted	6006168	12/12/1997	12/21/1999	08/990121	US	THERMAL MODEL FOR CENTRAL PROCESSING UNIT
82135439	Granted	6178521	5/22/1998	1/23/2001	09/083818	US	METHOD AND APPARATUS FOR DISASTER TOLERANT COMPUTER SYSTEM USING CASCADED STORAGE CONTROLLERS
82135448	Granted	6081909	11/6/1997	6/27/2000	08/965603	US	IRREGULARLY GRAPHED ENCODING TECHNIQUE
82135451	Granted	6298419	3/26/1998	10/2/2001	09/048231	US	PROTOCOL FOR SOFTWARE DISTRIBUTED SHARED MEMORY WITH MEMORY SCALING
82135457	Granted	6115550	6/11/1997	9/5/2000	08/873146	US	LOADER CONDITIONALLY REPLACING A CODE SEQUENCE WITH A FUNCTIONALLY-ALIKE CODE SEQUENCE IN AN EXECUTABLE PROGRAM INTENDED FOR EXECUTION IN DIFFERENT RUN-TIME ENVIRONMENTS
82135466	Granted	6069897	7/9/1997	5/30/2000	08/890167	US	INTERFACE WITH DUAL MODE OF OPERATION
82135505	Granted	6622247	12/19/1997	9/16/2003	08/993799	US	METHOD FOR CERTIFYING THE AUTHENTICITY OF DIGITAL OBJECTS BY AN AUTHENTICATION AUTHORITY AND FOR CERTIFYING THEIR COMPLIANCE BY A TESTING AUTHORITY
82135508	Granted	6230246	1/30/1998	5/8/2001	09/016320	US	NON-INTRUSIVE CRASH CONSISTENT COPYING IN DISTRIBUTED STORAGE SYSTEMS WITHOUT CLIENT COOPERATION
82135631	Granted	6085296	11/12/1997	7/4/2000	08/968238	US	SHARING MEMORY AMONG COMPUTER PROCESSES
82135646	Granted	6067604	8/11/1997	5/23/2000	08/909405	US	SPACE-TIME MEMORY
82135715	Granted	6076060	5/1/1998	6/13/2000	09/071441	US	COMPUTER METHOD AND APPARATUS FOR TRANSLATING TEXT TO SOUND
82135883	Granted	6199153	6/18/1998	3/6/2001	09/099383	US	METHOD AND APPARATUS FOR MINIMIZING PINCOUNT NEEDED BY EXTERNAL MEMORY CONTROL CHIP FOR MULTIPROCESSORS WITH LIMITED MEMORY SIZE REQUIREMENTS
82135898	Granted	6253285	7/15/1998	6/26/2001	09/116039	US	METHOD AND APPARATUS FOR MINIMIZING DCACHE INDEX MATCH ALIASING USING HASHING IN SYNONYM/SUBSET PROCESSING

PATENT
REEL: 038498 FRAME: 0375

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82135949	Granted	6101420	10/24/1997	8/8/2000	08/957543	US	METHOD AND APPARATUS FOR DISAMBIGUATING CHANGE-TO-DIRTY COMMANDS IN A SWITCH BASED MULTI-PROCESSING SYSTEM WITH COARSE DIRECTORIES
82135961	Granted	6112267	5/28/1998	8/29/2000	09/086134	US	HIERARCHICAL RING BUFFERS FOR BUFFERING DATA BETWEEN PROCESSOR AND I/O DEVICE PERMITTING DATA WRITES BY PROCESSOR AND DATA READS BY I/O DEVICE SIMULTANEOUSLY DIRECTED AT DIFFERENT BUFFERS AT DIFFERENT LEVELS
82136006	Granted	6122728	2/2/1998	9/19/2000	09/017297	US	TECHINQUE FOR ORDERING INTERNAL PROCESSOR REGISTER ACCESSES
82136018	Granted	6141734	2/3/1998	10/31/2000	09/017752	US	METHOD AND APPARATUS FOR OPTIMIZING THE PERFORMANCE OF LDXL AND STXC INTERLOCK INSTRUCTIONS IN THE CONTEXT OF A WRITE INVALIDATE PROTOCOL
82136021	Granted	6253301	11/28/2000	6/26/2001	09/061626	US	METHOD AND APPARATUS FOR A DEDICATED PHYSICALLY INDEXED COPY OF THE DATA CACHE TAG ARRAYS
82136024	Granted	6154589	5/21/1998	11/28/2000	09/082767	US	METHOD AND SYSTEM FOR REMOVAL OF LOW ORDER OPTICAL TRANSMISSION MODES IN MULTIMODE OPTICAL FIBER COMPUTER NETWORK TO IMPROVE MODAL BANDWIDTH
82136030	Granted	6185651	11/5/1997	2/6/2001	08/965073	US	SCSI BUS EXTENDER UTILIZING TAGGED QUEUING IN A MULTI-INITIATOR ENVIRONMENT
82136066	Granted	6167490	9/12/1997	12/26/2000	08/928278	US	USING GLOBAL MEMORY INFORMATION TO MANAGE MEMORY IN A COMPUTER NETWORK
82136069	Granted	6633916	6/10/1998	10/14/2003	09/095368	US	METHOD AND APPARATUS FOR VIRTUAL RESOURCE HANDLING IN A MULTI-PROCESSOR COMPUTER SYSTEM
82136153	Granted	6178469	6/30/1998	1/23/2001	09/107599	US	ENABLING ACCESS TO A SELECTED ONE OF TWO DETECTED SAME TYPE PERIPHERAL DEVICES CONNECTED TO SEPARATE PERIPHERAL SLOTS IN A COMPUTER
82136258	Granted	6119075	11/26/1997	9/12/2000	08/980164	US	METHOD FOR ESTIMATING STATISTICS OF PROPERTIES OF INTERACTIONS PROCESSED BY A PROCESSOR PIPELINE
82136276	Granted	6092180	11/26/1997	7/18/2000	08/980035	US	METHOD FOR MEASURING LATENCIES BY RANDOMLY SELECTED SAMPLING OF THE INSTRUCTIONS WHILE THE INSTRUCTION ARE EXECUTED
82136444	Granted	6073250	11/6/1997	6/6/2000	08/965606	US	LOSS RESILENT DECODING TECHNIQUE
82136465	Granted	6253289	5/29/1998	6/26/2001	09/087034	US	MAXIMIZING SEQUENTIAL READ STREAMS WHILE MINIMIZING THE IMPACT ON CACHE AND OTHER APPLICATIONS

PATENT
REEL: 038498 FRAME: 0376

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82136468	Granted	6633957	5/1/2001	10/14/2003	09/846650	US	MAXIMIZING SEQUENTIAL READ STREAMS WHILE MINIMIZING THE IMPACT ON CACHE AND OTHER APPLICATIONS
82136522	Granted	6163864	6/10/1998	12/19/2000	09/095149	US	METHOD FOR COST-EFFECTIVE PRODUCTION TESTING OF INPUT VOLTAGE LEVELS OF THE FORWARDED CLOCK INTERFACE OF HIGH PERFORMANCE INTEGRATED CIRCUITS
82136630	Granted	6158049	8/11/1998	12/5/2000	09/132449	US	USER TRANSPARENT MECHANISM FOR PROFILE FEEDBACK OPTIMIZATION
82136699	Granted	6192394	7/14/1998	2/20/2001	09/114373	US	INTER-PROGRAM SYNCHRONOUS COMMUNICATIONS USING A COLLABORATION SOFTWARE SYSTEM
82136708	Granted	6339532	6/8/2000	1/15/2002	09/590535	US	DEVICE AND METHOD FOR DAMPING A DIGITAL MEDIA DRIVE
82136714	Granted	6243744	5/26/1998	6/5/2001	09/085748	US	COMPUTER NETWORK CLUSTER GENERATION INDICATOR
82136828	Granted	6449713	10/18/1998	9/10/2002	09/195121	US	IMPLEMENTATION OF A CONDITIONAL MOVE INSTRUCTION IN AN OUT-OF-ORDER PROCESSOR
82136876	Granted	6647419	9/22/1999	11/11/2003	09/401617	US	SYSTEM AND METHOD FOR ALLOCATING SERVER OUTPUT BANDWIDTH
82136879	Granted	6560243	4/30/1999	5/6/2003	09/302781	US	SYSTEM AND METHOD FOR RECEIVER BASED ALLOCATION OF NETWORK BANDWIDTH
82136939	Granted	6647468	2/26/1999	11/11/2003	09/258477	US	METHOD AND SYSTEM FOR OPTIMIZING TRANSLATION BUFFER RECOVERY AFTER A MISS OPERATION WITHIN A MULTI-PROCESSOR ENVIRONMENT
82136942	Granted	6865651	10/21/2003	3/8/2005	10/689883	US	METHOD AND SYSTEM FOR OPTIMIZING TRANSLATION BUFFER RECOVERY AFTER A MISS OPERATION WITHIN A MULTI-PROCESSOR ENVIRONMENT
82136948	Granted	6356979	5/17/1999	3/12/2002	09/312944	US	SYSTEM AND METHOD FOR SELECTIVELY PRESENTING LOGICAL STORAGE UNITS TO MULTIPLE HOST OPERATING SYSTEMS IN A NETWORKED COMPUTING SYSTEM
82136954	Granted	7000069	4/5/1999	2/14/2006	09/286160	US	APPARATUS AND METHOD FOR PROVIDING VERY LARGE VIRTUAL STORAGE VOLUMES USING REDUNDANT ARRAYS OF DISKS
82136957	Granted	7356644	12/22/2005	4/8/2008	11/315606	US	Apparatus And Method For Providing Very Large Virtual Storage Volumes Using Redundant Arrays Of Disks
82136999	Granted	6732135	1/31/2000	5/4/2004	09/494593	US	METHOD AND APPARATUS FOR ACCUMULATING PARTIAL QUOTIENTS IN A DIGITAL PROCESSOR
82137005	Granted	6757330	6/1/2000	6/29/2004	09/584873	US	Efficient Implementation Of Half-Pixel Motion Prediction
82137008	Granted	6201418	8/13/1998	3/13/2001	09/132797	US	DIFFERENTIAL SENSE AMPLIFIER WITH REDUCED HOLD TIME

PATENT
REEL: 038498 FRAME: 0377

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82137011	Granted	6671273	12/31/1998	12/30/2003	09/224189	US	METHOD FOR USING OUTGOING TCP/IP SEQUENCE NUMBER FIELDS TO PROVIDE A DESIRED CLUSTER NODE
82137140	Granted	6144228	6/28/1999	11/7/2000	09/340774	US	GENERALIZED PUSH-PULL CASCODE LOGIC TECHNIQUE
82137146	Granted	6714196	8/20/2001	3/30/2004	09/934236	US	METHOD AND APPARATUS FOR TILED POLYGON TRAVERSAL
82137383	Granted	6721275	2/1/2000	4/13/2004	09/494858	US	BRIDGED NETWORK STATIONS LOCATION REVISION
82155134	Granted	6076158	7/1/1993	6/13/2000	08/086354	US	BRANCH PREDICTION IN HIGH-PERFORMANCE PROCESSOR
82155743	Granted	6167509	5/16/1994	12/26/2000	08/243559	US	BRANCH PERFORMANCE IN HIGH SPEED PROCESSOR
82156067	Granted	5836014	5/16/1994	11/10/1998	08/243560	US	METHOD OF CONSTRUCTING A CONSTANT-FOLDING MECHANISM IN A MULTILANGUAGE OPTIMIZING COMPILER
82160441	Granted	5819109	12/7/1992	10/6/1998	07/987116	US	SYSTEM FOR STORING PENDING PARITY UPDATE LOG ENTRIES, CALCULATING NEW PARITY, UPDATING THE PARITY BLOCK, AND REMOVING EACH ENTRY FROM THE LOG WHEN UPDATE IS COMPLETE
82162124	Granted	5829051	4/4/1994	10/27/1998	08/223069	US	APPARATUS AND METHOD FOR INTELLIGENT MULTIPLE-PROBE CACHE ALLOCATION
82162670	Granted	6249818	10/21/2000	6/19/2001	08/085505	US	NETWORK TRANSPORT DRIVER INTERFACING
82162868	Granted	5793658	1/17/1996	8/11/1998	08/591204	US	METHOD AND APPARATUS FOR VIEDO COMPRESSION AND DECOMPRESSION USING HIGH SPEED DISCRETE COSINE TRANSFORM
82163105	Granted	6704861	11/19/1996	3/9/2004	08/752729	US	MECHANISM FOR EXECUTING COMPUTER INSTRUCTIONS IN PARALLEL
82163474	Granted	6256694	6/30/1994	7/3/2001	08/269251	US	DISTRIBUTED EARLY ARBITRATION
82163735	Granted	5881313	11/7/1994	3/9/1999	08/335538	US	ARBITRATION SYSTEM BASED ON REQUESTER CLASS AND RELATIVE PRIORITY INCLUDING TRANSMIT DESCRIPTOR VALID BIT FOR A SHARED RESOURCE HAVING MULTIPLE REQUESTERS
82163921	Granted	5778175	12/22/1995	7/7/1998	08/577575	US	METHOD IMPLEMENTED BY A COMPUTER NETWORK ADAPTER FOR AUTONOMOUSLY ADJUSTING A TRANSMIT COMMENCEMENT THRESHOLD VALUE UPON OCCURRENCE OF AN UNDERFLOW CONDITION
82164044	Granted	6295585	6/7/1995	9/25/2001	08/482925	US	HIGH-PERFORMANCE COMMUNICATION METHOD AND APPARATUS FOR WRITE-ONLY NETWORKS
82164116	Granted	6311287	10/11/1994	10/30/2001	08/321334	US	VARIABLE FREQUENCY CLOCK CONTROL FOR MICROPROCESSOR-BASED COMPUTER SYSTEMS

PATENT
REEL: 038498 FRAME: 0378

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82164179	Granted	5696956	11/8/1995	12/9/1997	08/554643	US	DYNAMICALLY PROGRAMMABLE REDUCED INSTRUCTION SET COMPUTER WITH PROGRAMMABLE PROCESSOR LOADING BASED ON PROGRAM NUMBER FIELD AND PROGRAM NUMBER REGISTER CONTENTS
82164182	Granted	5819064	11/8/1995	10/6/1998	08/555058	US	HARDWARE EXTRACTION TECHNIQUE FOR PROGRAMMABLE REDUCED INSTRUCTION SET COMPUTERS
82164296	Granted	5801957	11/1/1995	9/1/1998	08/551504	US	IMPLICIT TREE-MAPPING TECHNIQUE
82164539	Granted	5790775	10/23/1995	8/4/1998	08/546804	US	HOST TRANSPARENT STORAGE CONTROLLER FAILOVER/FAILBACK OF SCSI TARGETS AND ASSOCIATED UNITS
82164608	Granted	6078565	6/20/1997	6/20/2000	08/879359	US	METHOD AND APPARATUS TO EXPAND AN ON CHIP FIFO INTO LOCAL MEMORY
82164671	Granted	5698818	4/8/1996	12/16/1997	08/629292	US	TWO PART CLOSELY COUPLED CROSS POLARIZED EMI SHIELD
82164788	Granted	5778165	10/20/1995	7/7/1998	08/546006	US	VARIABLE-LEVEL BACKUP SCHEDULING METHOD AND APPARATUS
82164848	Granted	5788869	11/2/1995	8/4/1998	08/552322	US	METHODOLOGY FOR IN SITU ETCH STOP DETECTION AND CONTROL OF PLASMA ETCHING PROCESS AND DEVICE DESIGN TO MINIMIZE PROCESS CHAMBER CONTAMINATION
82164863	Granted	5671406	10/18/1995	9/23/1997	08/544949	US	DATA STRUCTURE ENHANCEMENTS FOR IN-PLACE SORTING OF A SINGLY LINKED LIST
82164866	Granted	5761501	10/2/1995	6/2/1998	08/537375	US	STACKED SKIP LIST DATA STRUCTURES
82164914	Granted	5974506	6/28/1996	10/26/1999	08/671153	US	ENABLING MIRROR, NONMIRROR AND PARTIAL MIRROR CACHE MODES IN A DUAL CACHE SYSTEM
82164917	Granted	6279078	6/28/1996	8/21/2001	08/668512	US	APPARATUS AND METHOD FOR SYNCHRONIZING A CACHE MODE IN A DUAL CONTROLLER, DUAL CACHE MEMORY SYSTEM OPERATING IN A PLURALITY OF CACHE MODES
82164920	Granted	5754783	2/1/1996	5/19/1998	08/595085	US	APPARATUS AND METHOD FOR INTERLEAVING TIMED PROGRAM DATA WITH SECONDARY DATA
82164974	Granted	5926640	11/1/1996	7/20/1999	08/743377	US	SKIPPING CLOCK INTERRUPTS DURING SYSTEM INACTIVITY TO REDUCE POWER CONSUMPTION
82164977	Granted	6161187	1/14/1999	12/12/2000	09/232009	US	SKIPPING CLOCK INTERRUPTS DURING SYSTEM INACTIVITY TO REDUCE POWER CONSUMPTION
82165031	Granted	5612897	3/21/1996	3/18/1997	08/620110	US	SYMMETRICALLY SWITCHED MULTIMEDIA SYSTEM
82165040	Granted	5758359	10/24/1996	5/26/1998	08/736450	US	METHOD AND APPARATUS FOR PERFORMING RETROACTIVE BACKUPS IN A COMPUTER SYSTEM
82165106	Granted	6078740	2/22/1999	6/20/2000	08/740737	US	ITEM SELECTION BY PREDICTION AND REFINEMENT

PATENT
REEL: 038498 FRAME: 0379

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82165112	Granted	6192460	12/16/1997	2/20/2001	08/991828	US	METHOD AND APPARATUS FOR ACCESSING DATA IN A SHADOW SET AFTER A FAILED DATA OPERATION
82165118	Granted	5819252	4/10/1996	10/6/1998	08/630795	US	METHOD AND APPARATUS FOR HANDLING AND DETECTING AN INVALID USE OF A DATA STRUCTURE
82165121	Granted	5847575	6/21/1996	12/8/1998	08/668170	US	METHOD AND APPARATUS FOR PERFORMING SWITCHED SUPPLY DRIVE IN CMOS PAD DRIVERS
82165175	Granted	5781550	2/2/1996	7/14/1998	08/594632	US	TRANSPARENT AND SECURE NETWORK GATEWAY
82165220	Granted	6775289	8/1/2000	8/10/2004	09/630632	US	METHOD AND APPARATUS FOR RATE-BASED SCHEDULING USING A RELATIVE ERROR APPROACH
82165283	Granted	5825680	6/21/1996	10/20/1998	08/669266	US	METHOD AND APPARAUS FOR PERFORMING FAST DIVISION
82165289	Granted	5781531	12/27/1995	7/14/1998	08/578932	US	METHOD AND APPARATUS FOR HIERARCHICAL RELATIVE ERROR SCHEDULING
82165349	Granted	5821575	3/26/1998	10/13/1998	08/650561	US	COMPACT SELF-ALIGNED BODY CONTACT SILICON-ON-INSULATOR TRANSISTOR
82165358	Granted	6678951	12/12/2000	1/20/2004	09/735566	US	A METHOD OF FORMING ELECTRICAL INTERCONNECTS HAVING ELECTROMIGRATION-INHIBITING PLUGS
82165370	Granted	6292589	6/21/1996	9/18/2001	08/668153	US	METHOD FOR CHOOSING RATE CONTROL PARAMETERS IN MOTION-COMPENSATED TRANSFORM-BASED PICTURE CODING SCHEME USING NON-PARAMETRIC TECHNIQUE
82165406	Granted	6502237	2/11/2000	12/31/2002	09/503232	US	METHOD AND APPARATUS FOR PERFORMING BINARY TRANSLATION METHOD AND APPARATUS FOR PERFORMING BINARY TRANSLATION
82165418	Granted	6226789	1/29/1996	5/1/2001	08/593638	US	METHOD AND APPARATUS FOR DATA FLOW ANALYSIS
82165430	Granted	5802373	1/29/1996	9/1/1998	08/592982	US	METHOD FOR PROVIDING A PIPELINE INTERPRETER FOR A VARIABLE LENGTH INSTRUCTION SET
82165433	Granted	5978892	5/3/1996	11/2/1999	08/642706	US	VIRTUAL MEMORY ALLOCATION IN A VIRTUAL ADDRESS SPACE HAVING AN INACCESSIBLE GAP
82165436	Granted	6125430	10/30/1998	9/26/2000	09/183677	US	VIRTUAL MEMORY ALLOCATION IN A VIRTUAL ADDRESS SPACE HAVING AN INACCESSIBLE GAP
82165472	Granted	6128467	3/21/1996	10/3/2000	08/619377	US	CROSSPOINT SWITCHED MULTIMEDIA SYSTEM
82165532	Granted	7043516	3/13/1998	5/9/2006	09/042417	US	Reduction Of Add-Pipe Logic By Operand Offset Shift
82165601	Granted	5764766	6/11/1996	6/9/1998	08/661425	US	SYSTEM AND METHOD FOR GENERATION OF ONE-TIME ENCRYPTION KEYS FOR DATA COMMUNICATIONS AND A COMPUTER PROGRAM PRODUCT FOR IMPLEMENTING THE SAME
82165613	Granted	6108737	10/24/1997	8/22/2000	08/957097	US	METHOD AND APPARATUS FOR REDUCING LATENCY OF INTERREFERENCE ORDERING IN A MULTIPROCESSOR SYSTEM

PATENT
REEL: 038498 FRAME: 0380

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82165619	Granted	6085263	10/24/1997	7/4/2000	08/956861	US	METHOD AND APPARATUS FOR EMPLOYING COMMIT-SIGNALS AND PREFETCHING TO MAINTAIN INTER-REFERENCE ORDERING IN A HIGH-PERFORMANCE I/O PROCESSOR
82165622	Granted	6061765	10/24/1997	5/9/2000	08/957505	US	INDEPENDENT VICTIM DATA BUFFER AND PROBE BUFFER RELEASE CONTROL UTILIZING CONTROL FLAG
82165793	Granted	5826015	2/20/1997	10/20/1998	08/804096	US	METHOD AND APPARATUS FOR SECURE REMOTE PROGRAMMING OF FIRMWARE AND CONFIGURATIONS OF A COMPUTER OVER A NETWORK
82165796	Granted	5912621	7/14/1997	6/15/1999	08/892138	US	CABINET SECURITY STATE DETECTION
82165856	Granted	6061774	5/23/1997	5/9/2000	08/863084	US	LIMITED VIRTUAL ADDRESS ALIASING AND FAST CONTEXT SWITCHING WITH MULTI-SET VIRTUAL CACHE WITHOUT BACKMAPS
82165916	Granted	5802585	7/17/1996	9/1/1998	08/682341	US	BATCHED CHECKING OF SHARED MEMORY ACCESSES
82165919	Granted	5761729	7/17/1996	6/2/1998	08/672221	US	VALIDATION CHECKING OF SHARED MEMORY ACCESSES
82165922	Granted	5787480	7/17/1996	7/28/1998	08/684281	US	LOCK-UP FREE DATA SHARING
82165925	Granted	5758183	7/17/1996	5/26/1998	08/682203	US	METHOD OF REDUCING THE NUMBER OF OVERHEAD INSTRUCTIONS BY MODIFYING THE PROGRAM TO LOCATE INSTRUCTIONS THAT ACCESS SHARED DATA STORED AT TARGET ADDRESSES BEFORE PROGRAM EXECUTION
82165997	Granted	6463548	5/10/1999	10/8/2002	09/309070	US	METHOD AND APPARATUS TO ENFORCE CLOCKED CIRCUIT FUNCTIONALITY AT REDUCED FREQUENCY WITHOUT LIMITING PEAK PERFORMANCE
82166030	Granted	6701387	8/31/2000	3/2/2004	09/652644	US	ADAPTIVE DATA FETCH PREDICTION ALGORITHM
82166033	Granted	6233668	10/27/1999	5/15/2001	09/428014	US	CONCURRENT PAGE TABLES
82166054	Granted	7315884	4/3/2001	1/1/2008	09/825661	US	REDUCTION OF NETWORK RETRIEVAL LATENCY USING CACHE AND DIGEST
82166285	Granted	6609208	7/7/2000	8/19/2003	09/611808	US	ENERGY-BASED SAMPLING FOR PERFORMANCE MONITORING
82166300	Granted	7120902	12/4/2001	10/10/2006	10/005923	US	Method And Apparatus For Automatically Inferring Annotations
82166360	Granted	7404070	11/28/2000	7/22/2008	09/723687	US	Branch Prediction Combining Static And Dynamic Prediction Techniques
82166363	Granted	6618794	10/31/2000	9/9/2003	09/702575	US	SYSTEM FOR GENERATING A POINT-IN -TIME COPY OF DATA IN A DATA STORAGE SYSTEM
82166366	Granted	8122114	10/6/2000	2/21/2012	09/684472	US	Modular, Dynamically Extensible, And Integrated Storage Area Network Management System
82167716	Granted	7286969	7/18/2003	10/23/2007	10/623444	US	Method For Determining Placement Of Components In Rack
82167728	Granted	7289335	7/8/2003	10/30/2007	10/615011	US	Force Distributing Spring Element

PATENT
REEL: 038498 FRAME: 0381

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82167731	Granted	7539027	10/29/2007	5/26/2009	11/926761	US	Force Distributing Spring Element
82167737	Granted	7493534	8/29/2003	2/17/2009	10/652098	US	Memory Error Ranking
82167740	Granted	7346755	9/16/2003	3/18/2008	10/663128	US	Memory Quality Assurance
82167743	Granted	7372147	7/2/2003	5/13/2008	10/612663	US	Supporting A Circuit Package Including A Substrate Having A Solder Column Array
82167779	Granted	7707443	7/18/2003	4/27/2010	10/623417	US	Rack-level Power Management Of Computer Systems
82167788	Granted	8176250	8/29/2003	5/8/2012	10/652536	US	System And Method For Testing A Memory
82167797	Granted	7350109	11/14/2003	3/25/2008	10/714302	US	System And Method For Testing A Memory Using DMA
82167806	Granted	7797134	11/14/2003	9/14/2010	10/714386	US	System And Method For Testing A Memory With An Expansion Card Using DMA
82167908	Granted	7035096	10/31/2003	4/25/2006	10/698605	US	Locking Mechanism For Removable Components
82168112	Granted	7647327	9/24/2003	1/12/2010	10/669822	US	Method And System For Implementing Storage Strategies Of A File Autonomously Of A User
82168118	Granted	7333293	6/29/2004	2/19/2008	10/880312	US	Storage System Having A Reader With A Light Sensing Portion Inclined With Respect To An Axis Of A Label Of A Storage Medium
82168154	Granted	7210061	4/17/2003	4/24/2007	10/418409	US	Data Redundancy For Writes Using Remote Storage System Cache Memory
82168157	Granted	6937425	6/18/2003	8/30/2005	10/464102	US	Head-track Alignment
82168169	Granted	7200604	2/17/2004	4/3/2007	10/780235	US	Data De-duplication
82168292	Granted	7028106	12/5/2003	4/11/2006	10/728480	US	Remapping Routing Information Entries In An Expander
82168301	Granted	7685443	10/14/2003	3/23/2010	10/684768	US	Server Card Power Switch
82168469	Granted	7083089	1/20/2004	8/1/2006	10/761752	US	Off-line Pin Verification Using Identity-based Signatures
82168484	Granted	7444636	7/15/2003	10/28/2008	10/619853	US	Method And System Of Determining Attributes Of A Functional Unit In A Multiple Processor Computer System
82168490	Granted	7392359	10/1/2003	6/24/2008	10/677398	US	Non-blocking Distinct Grouping Of Database Entries With Overflow
82168619	Granted	7181575	9/29/2004	2/20/2007	10/953669	US	Instruction Cache Using Single-ported Memories
82168907	Granted	7289300	1/26/2004	10/30/2007	10/764842	US	PIEZOELECTRIC MOTOR FOR MOVING A CARRIAGE ALONG A GUIDE
82168913	Granted	7127235	4/30/2003	10/24/2006	10/426392	US	Multiple Protocol Database
82168928	Granted	7142647	9/3/2003	11/28/2006	10/655242	US	Database For Use In Telephone Communications
82168931	Granted	7483521	10/23/2006	1/27/2009	11/584835	US	Database For Use In Telephone Communications
82168964	Granted	7152182	6/6/2003	12/19/2006	10/456053	US	DATA REDUNDANCY SYSTEM AND METHOD
82168973	Granted	7287137	6/6/2003	10/23/2007	10/456363	US	Batched, Asynchronous Data Redundancy Technique
82168988	Granted	8352637	9/23/2003	1/8/2013	10/667313	US	Techniques For Resolving Network Connectivity
82168994	Granted	7543113	7/2/2004	6/2/2009	10/883860	US	CACHE MEMORY SYSTEM AND METHOD CAPABLE OF ADAPTIVELY ACCOMMODATING VARIOUS MEMORY LINE SIZES

PATENT
REEL: 038498 FRAME: 0382

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82169030	Granted	8464353	10/3/2003	6/11/2013	10/679092	US	Method And System For Content Downloads Via An Insecure Communications Channel To Devices
82169099	Granted	8626944	5/5/2003	1/7/2014	10/429797	US	System And Method For Efficient Replication Of Files Encoded With Multiple Description Coding
82169153	Granted	7567522	4/23/2004	7/28/2009	10/831258	US	Suppression Of Router Advertisement
82169156	Published		6/14/2004		10/868093	US	Rate Limiting Of Events
82169159	Granted	7358446	10/14/2003	4/15/2008	10/685175	US	Power Distribution System
82169162	Granted	6954631	2/13/2003	10/11/2005	10/366072	US	Apparatus And Method For Telecommunications Services
82169174	Granted	6989523	4/11/2003	1/24/2006	10/412019	US	Photon Number Resolving Systems And Methods
82169216	Granted	7796515	4/28/2004	9/14/2010	10/833057	US	Propagation Of Viruses Through An Information Technology Network
82169222	Granted	8505096	7/29/2005	8/6/2013	11/192469	US	Method Of, And Apparatus For, Monitoring Traffic Emanating From A Source In A Network
82169234	Granted	7793287	10/1/2003	9/7/2010	10/676922	US	Runtime Virtualization And Devirtualization Of I/O Devices By A Virtual Machine Monitor
82169483	Granted	7370200	1/30/2004	5/6/2008	10/769190	US	Validation For Secure Device Associations
82169546	Granted	7712133	6/20/2003	5/4/2010	10/600113	US	INTEGRATED INTRUSION DETECTION SYSTEM AND METHOD
82169609	Granted	7512800	2/3/2004	3/31/2009	10/772065	US	Key Management Technique For Establishing A Secure Channel
82169849	Granted	7447943	5/28/2003	11/4/2008	10/447118	US	Handling Memory Errors In Response To Adding New Memory To A System
82169855	Granted	6996648	5/28/2003	2/7/2006	10/447117	US	GENERATING NOTIFICATION THAT A NEW MEMORY MODULE HAS BEEN ADDED TO A SECOND MEMORY SLOT IN RESPONSE TO REPLACEMENT OF A MEMORY MODULE IN A FIRST MEMORY SLOT
82169858	Granted	7644182	3/11/2004	1/5/2010	10/797200	US	Reconfiguring A Multicast Tree
82170158	Granted	7268970	11/20/2003	9/11/2007	10/719515	US	Method And Apparatus For Storing Data On Magnetic Tape
82170167	Granted	7237084	10/27/2003	6/26/2007	10/694302	US	Method And Program Product For Avoiding Cache Congestion By Offsetting Addresses While Allocating Memory
82170341	Granted	8261063	10/16/2003	9/4/2012	10/688397	US	Method And Apparatus For Managing A Hierarchy Of Nodes
82170347	Granted	7089378	3/27/2003	8/8/2006	10/401231	US	Shared Receive Queues
82170356	Granted	8260916	10/31/2003	9/4/2012	10/698016	US	Network Server And Method Of Discovery Of A Network Node
82171028	Granted	7287185	4/6/2004	10/23/2007	10/819241	US	ARCHITECTURAL SUPPORT FOR SELECTIVE USE OF HIGH-RELIABILITY MODE IN A COMPUTER SYSTEM
82171037	Granted	7203864	6/25/2004	4/10/2007	10/876865	US	METHOD AND SYSTEM FOR CLUSTERING COMPUTERS INTO PEER GROUPS AND COMPARING INDIVIDUAL COMPUTERS TO THEIR PEERS

PATENT
REEL: 038498 FRAME: 0383

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82171040	Granted	7380177	6/25/2004	5/27/2008	10/876814	US	METHOD AND SYSTEM FOR COMPARING INDIVIDUAL COMPUTERS TO CLUSTER REPRESENTATIONS OF THEIR PEERS
82171055	Granted	8825902	10/27/2003	9/2/2014	10/694323	US	Configuration Validation Checker
82171157	Granted	8023828	10/17/2005	9/20/2011	11/252964	US	Quantum Information Conversion Between Matter And Light Representations
82171172	Granted	6817196	3/7/2003	11/16/2004	10/384456	US	Spray Cooling System With Cooling Regime Detection
82171226	Granted	7529360	11/12/2003	5/5/2009	10/704605	US	METHOD AND SYSTEM FOR CONNECTING CALLS
82171241	Granted	7296181	4/6/2004	11/13/2007	10/818993	US	Lockstep Error Signaling
82171301	Granted	7136931	10/20/2003	11/14/2006	10/687663	US	Method And System For Identifying The Health Of Virtual Routers
82171400	Granted	7349527	1/30/2004	3/25/2008	10/769137	US	System And Method For Extracting Demographic Information
82171481	Granted	7478154	6/26/2003	1/13/2009	10/608585	US	Storage System With Link Selection Control
82171676	Granted	7653051	1/13/2004	1/26/2010	10/757807	US	Signaling Gateway Aggregation
82171778	Granted	7730472	9/24/2004	40330	10/949124	US	Dynamic Linking Of Modules In A Pre-operating System Environment
82171787	Granted	7761421	5/16/2003	7/20/2010	10/440548	US	Read, Write, And Recovery Operations For Replicated Data
82171799	Granted	7237067	4/22/2004	6/26/2007	10/829186	US	Managing A Multi-way Associative Cache
82171802	Granted	7505967	1/21/2004	3/17/2009	10/761642	US	Displaying Metrics From An Alternative Representation Of A Database
82171856	Granted	7345891	10/7/2003	3/18/2008	10/680445	US	Circuit Board Assembly
82171862	Granted	7646595	2/20/2008	1/12/2010	12/034646	US	Computing Device
82171922	Granted	7349906	7/15/2003	3/25/2008	10/619805	US	SYSTEM AND METHOD HAVING IMPROVED EFFICIENCY FOR DISTRIBUTING A FILE AMONG A PLURALITY OF RECIPIENTS
82171925	Granted	7523217	7/15/2003	4/21/2009	10/619737	US	System And Method Having Improved Efficiency And Reliability For Distributing A File Among A Plurality Of Recipients
82171988	Granted	6931350	8/28/2003	8/16/2005	10/650589	US	Regression-Clustering For Complex Real-World Data
82172045	Granted	6879178	12/22/2003	4/12/2005	10/745101	US	Measuring Current On A Die
82172279	Granted	7613961	10/14/2003	11/3/2009	10/685177	US	CPU Register Diagnostic Testing
82172285	Granted	7328380	9/11/2003	2/5/2008	10/659901	US	Memory Scrubbing Logic
82172420	Granted	7370248	11/7/2003	5/6/2008	10/704478	US	In-service Raid Mirror Reconfiguring
82172465	Granted	7398181	6/2/2004	7/8/2008	10/858743	US	METHOD FOR RETRIEVING RELIABILITY DATA IN A SYSTEM
82172468	Granted	7006949	1/27/2004	2/28/2006	10/766360	US	Method And System For Collecting Temperature Data
82172969	Granted	7272548	6/5/2003	9/18/2007	10/456199	US	Method Of Simulating An Enterprise Computing Management System
82173029	Granted	7523346	2/17/2006	4/21/2009	11/356560	US	Systems And Methods For CPU Repair
82173038	Granted	7673171	2/17/2006	3/2/2010	11/356548	US	Systems And Methods For CPU Repair

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82173044	Granted	7917804	2/17/2006	3/29/2011	11/356756	US	Systems And Methods For CPU Repair
82173050	Granted	7607040	2/17/2006	10/20/2009	11/356759	US	Methods And Systems For Conducting Processor Health-checks
82173275	Granted	D507000	6/14/2004	7/5/2005	29/207434	US	Computer Having A Front Bezel
82173482	Granted	7415570	10/15/2004	8/19/2008	10/965200	US	TAPE DRIVE APPARATUS HAVING A PERMANENT OPTICAL STORAGE DEVICE PORT
82173590	Granted	7275020	12/23/2003	9/25/2007	10/742776	US	Method And System For Testing A Computer System By Applying A Load
82173665	Granted	7310751	2/20/2004	12/18/2007	10/783112	US	TIMEOUT EVENT TRIGGER GENERATION
82173716	Published		3/26/2004		10/811259	US	Access Point That Monitors Guest Usage
82173722	Granted	7752602	9/28/2004	7/6/2010	10/953255	US	Reversible Atomic Steps To Undo Application Startup
82173788	Granted	8356098	11/10/2003	1/15/2013	10/704875	US	Dynamic Management Of Workloads In Clusters
82173791	Granted	7954086	5/19/2003	5/31/2011	10/440144	US	Self-describing Kernel Modules
82173959	Granted	6999268	8/12/2003	2/14/2006	10/639335	US	Method And System Of A Head For A Storage Media
82174022	Granted	7426728	9/24/2003	9/16/2008	10/670026	US	Reducing Latency When Accessing Task Priority Levels
82174028	Published		2/21/2006		11/358597	US	Method Of Providing System Design
82174031	Granted	7421462	11/12/2003	9/2/2008	10/706172	US	Method And Apparatus For Generating A Random Bit Stream
82174034	Granted	7302457	11/12/2003	11/27/2007	10/706181	US	Method And Apparatus For Providing Random Bits
82174157	Granted	7625214	9/21/2005	12/1/2009	11/231950	US	HIGH DENSITY POWER CONNECTOR WITH IMPEDANCE CONTROL
82174163	Granted	7272733	9/26/2003	9/18/2007	10/672101	US	METHOD OF PROVIDING DYNAMIC POWER REDUNDANCY BASED ON A DIFFERENCE OF CURRENT POWER UNITS AND CURRENTLY NEEDED POWER UNITS
82174166	Granted	7222246	9/26/2003	5/22/2007	10/672119	US	METHOD FOR DETERMINING NUMBER OF DYNAMICALLY TEMPERATURE-ADJUSTED POWER SUPPLY UNITS NEEDED TO SUPPLY POWER ACCORDING TO MEASURE OPERATING TEMPERATURE OF POWER SUPPLY UNITS
82174169	Granted	7310623	12/12/2003	12/18/2007	10/734713	US	Games Using Pair-wise Entanglements
82174220	Granted	7068509	2/3/2004	6/27/2006	10/772115	US	Small Form Factor Cooling System
82174223	Granted	7203063	5/21/2004	4/10/2007	10/849759	US	Small Form Factor Liquid Loop Cooling System
82174295	Granted	7764689	9/16/2005	7/27/2010	11/229109	US	Method And Apparatus For Arbitrating Data Packets In A Network System
82174301	Granted	7697690	7/21/2003	4/13/2010	10/624403	US	Windowed Backward Key Rotation
82174472	Granted	7930539	8/3/2004	4/19/2011	10/910652	US	Computer System Resource Access Control
82174481	Granted	8749986	12/21/2005	6/10/2014	11/314479	US	Flexible Midplane And Architecture For A Multi-processor Computer System
82174610	Granted	6989753	12/12/2003	1/24/2006	10/734444	US	METHOD OF AND COMPUTER FOR IDENTIFYING REMINDER EVENT

PATENT
REEL: 038498 FRAME: 0385

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82174649	Granted	7214131	1/15/2004	5/8/2007	10/759849	US	Airflow Distribution Control System For Usage In A Raised-floor Data Center
82174673	Granted	9160571	3/11/2004	10/13/2015	10/797152	US	Requesting A Service From A Multicast Network
82174796	Granted	7844967	5/19/2004	11/30/2010	10/850318	US	Method Of Allocating Computing Resources
82174964	Granted	8720532	4/29/2004	5/13/2014	10/836665	US	Controllable Flow Resistance In A Cooling Apparatus
82174979	Granted	8020608	8/31/2004	9/20/2011	10/931099	US	Heat Sink Fin With Stator Blade
82175162	Granted	8364948	12/15/2004	1/29/2013	11/013197	US	System And Method For Supporting Secured Communication By An Aliased Cluster
82175396	Granted	7551614	12/14/2004	6/23/2009	11/013138	US	Aggregation Over Multiple Processing Nodes Of Network Resources Each Providing Offloaded Connections Between Applications Over A Network
82175399	Granted	7273088	12/17/2003	9/25/2007	10/738435	US	One Or More Heat Exchanger Components In Major Part Operably Locatable Outside Computer Chassis
82175420	Granted	7634784	3/9/2005	12/15/2009	11/076324	US	Data Storage Means
82175423	Granted	7921439	10/31/2009	4/5/2011	12/610273	US	Data Storage Means
82175474	Granted	8966506	4/23/2004	42059	10/831469	US	Method And Apparatus For Managing Related Drivers Associated With A Virtual Bus Driver
82175477	Granted	7454488	9/23/2003	11/18/2008	10/667332	US	Method And System For Managing A Network Of Nodes
82175483	Granted	7343059	10/11/2003	3/11/2008	10/684278	US	Photonic Interconnect System
82175546	Granted	7143097	7/30/2003	11/28/2006	10/632233	US	Method And Apparatus For Migrating File Locks From One Server To Another
82175660	Granted	8291061	10/8/2003	10/16/2012	10/681782	US	A Method And System For Business-oriented Web Services Management
82175963	Granted	7509651	5/23/2003	3/24/2009	10/445237	US	System And Method For Providing Event Notifications To Information Technology Resource Managers
82176398	Granted	8424023	10/24/2003	41380	10/692939	US	Program Interface Architecture
82176482	Allowed		12/16/2003		10/737374	US	Persistent Memory Device For Backup Process Checkpoint States
82176530	Granted	7361081	7/23/2004	4/22/2008	10/898736	US	Small Form Factor Air Jet Cooling System
82176536	Granted	7447971	5/14/2004	11/4/2008	11/089578	US	Data Recovery Systems And Methods
82176671	Granted	7669246	6/16/2004	2/23/2010	10/869765	US	System And Method For Linking User Accounts To Business Entitlement Objects
82176917	Granted	7765550	5/26/2005	7/27/2010	11/139840	US	SYSTEM FOR CONTROLLING CONTEXT SWITCH OF DEFERRED REQUESTS USING COUNTER AND FLAG SETTING OF THREAD ACCESSING SHARED RESOURCE OR ENTERING CODE REGION
82176923	Granted	7577945	5/26/2005	8/18/2009	11/139814	US	Memory Mapped Lazy Signal Blocking
82177109	Granted	7706382	9/21/2004	4/27/2010	10/944894	US	Method And System For Managing A Network Having Multiple Domains

PATENT
REEL: 038498 FRAME: 0386

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82177148	Granted	7002799	4/19/2004	2/21/2006	10/828448	US	External Liquid Loop Heat Exchanger For An Electronic System
82177349	Granted	7496657	6/13/2003	2/24/2009	10/460307	US	Method And System For Determining A Source Of A Virtual Circuit Fault
82177526	Granted	7380138	4/22/2004	5/27/2008	10/831350	US	Cryptographic Method And Apparatus
82177769	Granted	7270572	7/30/2004	9/18/2007	11/089579	US	Component Connector
82177853	Granted	7580415	4/27/2005	8/25/2009	11/116885	US	Aggregation Of Hybrid Network Resources Operable To Support Both Offloaded And Non-offloaded Connections
82177919	Granted	7313461	11/26/2003	12/25/2007	10/721264	US	Data Connectivity With A Robotic Device
82177961	Granted	7065697	7/29/2003	6/20/2006	10/632207	US	Systems And Methods Of Partitioning Data To Facilitate Error Correction
82177967	Granted	7051265	7/29/2003	38860	10/632206	US	Systems And Methods Of Routing Data To Facilitate Error Correction
82178018	Granted	7720139	7/28/2005	5/18/2010	11/191730	US	Equaliser Circuit
82178168	Granted	7181586	4/5/2004	2/20/2007	10/816897	US	Formatting A Data Storage Medium To A Desired Block Format
82178207	Granted	8078705	4/5/2004	12/13/2011	10/818549	US	Key-configured Topology With Connection Management
82178342	Granted	7827144	11/17/2005	11/2/2010	11/283471	US	Methods Of Reading And Writing Data
82178405	Granted	7366956	6/16/2004	4/29/2008	10/870722	US	Detecting Data Races In Multithreaded Computer Programs
82178459	Granted	7653108	9/9/2004	1/26/2010	10/936874	US	Apparatus And Method Of Establishing Optical Communication Channels Between A Steerable Array Of Laser Emitters And An Array Of Optical Detectors
82178462	Granted	9142938	12/3/2009	9/22/2015	12/630044	US	APPARATUS AND METHOD OF ESTABLISHING OPTICAL COMMUNICATION CHANNELS BETWEEN A STEERABLE ARRAY OF LASER EMITTERS AND AN ARRAY OF OPTICAL DETECTORS
82178468	Granted	7809278	7/26/2004	10/5/2010	10/898834	US	Apparatus And Method Of Providing Separate Control And Data Channels Between Arrays Of Light Emitters And Detectors For Optical Communication And Alignment
82178471	Granted	7400790	11/3/2004	7/15/2008	10/980595	US	Optical Connections And Methods Of Forming Optical Connections
82178477	Granted	8059927	2/22/2010	11/15/2011	12/710336	US	Optical Connections And Methods Of Forming Optical Connections
82178480	Granted	7118285	11/3/2004	10/10/2006	10/980746	US	Optical Connections And Methods Of Forming Optical Connections
82178519	Granted	7228462	1/23/2004	6/5/2007	10/764165	US	Cluster Node Status Detection And Communication
82178528	Granted	6928589	1/23/2004	8/9/2005	10/764244	US	Node Management In High-Availability Cluster
82178657	Granted	7617376	8/14/2003	11/10/2009	10/641127	US	Method And Apparatus For Accessing A Memory
82178660	Granted	8959171	9/18/2003	2/17/2015	10/666174	US	Method And Apparatus For Acknowledging A Request For Data Transfer

PATENT
REEL: 038498 FRAME: 0387

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82178663	Granted	7302679	10/31/2003	39413	10/699067	US	Scalable Cross-file Inlining Through Locality-based Transformation Ordering
82178666	Granted	7231543	1/14/2004	6/12/2007	10/758570	US	Systems And Methods For Fault-tolerant Processing With Processor Regrouping Based On Connectivity Conditions
82178720	Granted	7656906	1/21/2005	2/2/2010	11/040940	US	System And Method For Communicating A Timing Signal Between Backplanes
82178723	Granted	7814467	1/15/2004	10/12/2010	10/758376	US	PROGRAM OPTIMIZATION USING OBJECT FILE SUMMARY INFORMATION
82178729	Granted	7589560	10/19/2006	9/15/2009	11/583322	US	Apparatus For Configuring I/O Signal Levels Of Interfacing Logic Circuits
82178732	Granted	7719312	7/2/2009	5/18/2010	12/458204	US	Apparatus For Configuring I/O Signal Levels Of Interfacing Logic Circuits
82178792	Granted	7426725	2/20/2004	9/16/2008	10/783761	US	Cross-module In-lining
82178837	Granted	8549186	2/17/2005	10/1/2013	11/060720	US	System And Method For Sharing A Device Across Operating Systems
82178849	Granted	7434128	3/24/2005	10/7/2008	11/088648	US	Systems And Methods For Identifying System Links
82178858	Granted	7555665	12/29/2004	6/30/2009	11/025703	US	Method And Apparatus Of Disabling Converters In A Power Module
82178891	Granted	8145741	1/8/2010	3/27/2012	12/684468	US	Method And Apparatus For Designing Multi-tier Systems
82178957	Granted	8150996	12/16/2003	4/3/2012	10/737207	US	Method And Apparatus For Handling Flow Control For A Data Transfer
82179020	Granted	7248942	2/19/2004	7/24/2007	10/780631	US	Airflow Detection System Having An Airflow Indicating Device
82179221	Granted	8028174	5/4/2005	9/27/2011	11/121892	US	Controlling Upate Of Content Of A Programmable Read-only Memory
82179224	Granted	7549039	7/29/2005	6/16/2009	11/193680	US	Generating An Interrupt In A System Having Plural Partitions That Share A Resource
82179338	Granted	7068508	12/8/2003	6/27/2006	10/728889	US	DOCKING STATION COOLING SYSTEM INCLUDING LIQUID-FILLED HOLLOW STRUCTURE
82179521	Granted	7434008	4/23/2004	10/7/2008	10/831050	US	SYSTEM AND METHOD FOR COHERENCY FILTERING
82179527	Granted	8205046	1/31/2005	6/19/2012	11/047539	US	System And Method For Snooping Cache Information Using A Directory Crossbar
82179530	Granted	7254027	12/21/2004	8/7/2007	11/021504	US	Processor Module For System Board
82179536	Granted	7072185	12/21/2004	7/4/2006	11/021527	US	Electronic Module For System Board With Pass-thru Holes
82179542	Granted	7327569	12/13/2004	2/5/2008	11/011328	US	Processor Module With Thermal Dissipation Device
82179641	Granted	8806103	4/28/2004	8/12/2014	10/833582	US	System And Method For Interleaving Memory
82179656	Granted	7451302	3/10/2004	11/11/2008	10/797530	US	System And Method For Managing Configuration Data For A Multi-cell Computer System
82179788	Granted	7388200	10/19/2006	6/17/2008	11/583262	US	SENSING METHOD AND NANOSENSING DEVICE FOR PERFORMING THE SAME

PATENT
REEL: 038498 FRAME: 0388

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82179845	Granted	7484125	12/15/2003	1/27/2009	10/737111	US	Method And Apparatus For Providing Updated Processor Polling Information
82179854	Granted	7752500	12/19/2008	7/6/2010	12/339646	US	Method And Apparatus For Providing Updated Processor Polling Information
82179857	Granted	7484065	4/20/2004	1/27/2009	10/827946	US	Selective Memory Allocation
82180100	Granted	8090914	1/20/2004	1/3/2012	10/760652	US	System And Method For Creating Ordering Points
82180103	Granted	7395374	1/20/2004	7/1/2008	10/760651	US	System And Method For Conflict Responses In A Cache Coherency Protocol With Ordering Point Migration
82180151	Granted	8468308	1/20/2004	6/18/2013	10/760659	US	System And Method For Non-migratory Requests In A Cache Coherency Protocol
82180157	Granted	7620696	1/20/2004	11/17/2009	10/761047	US	System And Method For Conflict Responses In A Cache Coherency Protocol
82180160	Granted	7177987	1/20/2004	2/13/2007	10/760436	US	System And Method For Responses Between Different Cache Coherency Protocols
82180202	Granted	7363427	1/12/2004	4/22/2008	10/756446	US	Memory Controller Connection To RAM Using Buffer Interface
82180208	Granted	8612684	12/7/2007	12/17/2013	11/999834	US	Memory Controller Connection To RAM Using Buffer Interface
82180217	Granted	7484237	5/13/2004	1/27/2009	10/844342	US	METHOD AND APPARATUS FOR ROLE-BASED SECURITY POLICY MANAGEMENT
82180394	Granted	7492979	9/27/2004	2/17/2009	10/951916	US	Photonic Crystal Laser Sensors And Methods
82180403	Granted	7289221	9/27/2004	10/30/2007	10/951918	US	Mach Zehnder Photonic Crystal Sensors And Methods
82180418	Granted	7240165	1/15/2004	7/3/2007	10/758473	US	System And Method For Providing Parallel Data Requests
82180532	Granted	7310762	1/12/2004	12/18/2007	10/756439	US	Detection Of Errors
82180541	Granted	7461321	2/11/2005	12/2/2008	11/056472	US	Error Detection
82180583	Granted	7457888	1/12/2004	11/25/2008	10/756448	US	DATA DELIVERY BASED ON A SELECT DATA DELIVERY PERFORMANCE PARAMETER IN A DATA PROCESSING SYSTEM
82180589	Granted	7277994	9/23/2004	10/2/2007	10/947673	US	Communication In Partitioned Computer Systems
82180646	Granted	7624213	2/11/2005	11/24/2009	11/056471	US	Passing Identification Information
82180766	Granted	7098679	1/7/2004	8/29/2006	10/753142	US	Circuit Tester Interface
82180775	Granted	7447222	11/12/2003	11/4/2008	10/706653	US	Automated Path Tracing Through Switching Mesh
82180787	Granted	7284087	11/22/2004	10/16/2007	10/994991	US	Method And Apparatus For Increasing Sustainable Bandwidth In A Multiple Disk Drive Storage System
82180790	Granted	8316234	10/28/2003	11/20/2012	10/695198	US	ENCODED ATTRIBUTE MATCHING ON COMMUNICATION DEVICES
82180850	Granted	8370478	9/7/2004	2/5/2013	10/935631	US	Testing A Data Communication Architecture
82180919	Granted	7613958	1/12/2004	11/3/2009	10/756529	US	ERROR DETECTION IN A SYSTEM HAVING COUPLED CHANNELS
82180958	Granted	8898246	7/29/2004	11/25/2014	10/902341	US	Communication Among Partitioned Devices

PATENT
REEL: 038498 FRAME: 0389

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82180967	Granted	7577890	1/21/2005	8/18/2009	11/040380	US	Systems And Methods For Mitigating Latency Associated With Error Detection And Correction
82180973	Granted	7480755	12/8/2004	1/20/2009	11/006964	US	Trap Mode Register
82181105	Granted	7672929	12/22/2004	3/2/2010	11/024584	US	Database Modification History
82181165	Granted	7643029	2/6/2004	1/5/2010	10/774315	US	Method And System For Automated Visual Comparison Based On User Drilldown Sequences
82181219	Granted	7370300	11/9/2004	5/6/2008	10/984245	US	Systems And Methods Of Simulating Signal Coupling
82181273	Granted	7464280	6/22/2005	12/9/2008	11/158430	US	Power Module For A Plurality Of Processors
82181294	Granted	7187380	10/30/2003	3/6/2007	10/701470	US	Telecommunications Graphical Service Program
82181399	Granted	7805563	4/28/2005	9/28/2010	11/117256	US	Tape Drive Apparatus
82181540	Granted	8103651	4/13/2004	1/24/2012	10/823470	US	Auto-updating Reader Program For Document Files
82181543	Granted	8650500	3/5/2004	2/11/2014	10/794971	US	Copy-and-Paste Functionality For Network Reconfiguration
82181606	Granted	7809991	1/11/2005	10/5/2010	11/033226	US	System And Method To Qualify Data Capture
82181729	Granted	7345381	1/25/2005	3/18/2008	11/042691	US	Converter To Provide An Output Voltage For Plural Input Voltages
82181792	Granted	7647490	2/11/2004	1/12/2010	10/777438	US	Method And Apparatus For Providing Updated System Locality Information During Runtime
82181891	Granted	7380080	1/10/2005	5/27/2008	11/032769	US	CALCULATING UNNEEDED DATA STORAGE CREDITS FOR A DATA TRANSMISSION TO A PAIR OF STORAGE DEVICES
82181897	Granted	8924662	4/9/2008	12/30/2014	12/100013	US	CREDIT-BASED STORAGE DEVICE FLOW CONTROL (as amended)
82181918	Granted	7496087	7/23/2004	2/24/2009	10/573407	US	Methods And Apparatus For Controlling Signalling Gateways
82181951	Granted	7383409	1/13/2004	6/3/2008	10/756638	US	Cache Systems And Methods For Employing Speculative Fills
82182035	Granted	7409503	1/13/2004	8/5/2008	10/756644	US	REGISTER FILE SYSTEMS AND METHODS FOR EMPLOYING SPECULATIVE FILLS
82182038	Granted	7360069	1/13/2004	4/15/2008	10/756639	US	Systems And Methods For Executing Across At Least One Memory Barrier Employing Speculative Fills
82182041	Granted	7409500	1/13/2004	8/5/2008	10/755938	US	Systems And Methods For Employing Speculative Fills
82182224	Granted	7065620	9/8/2003	6/20/2006	10/657475	US	Systems And Methods For Backing Up Data
82182275	Granted	7348799	1/11/2005	3/25/2008	11/032949	US	System And Method For Generating A Trigger Signal
82182284	Granted	7752016	1/11/2005	7/6/2010	11/032743	US	System And Method For Data Analysis
82182344	Granted	7859847	12/29/2004	12/28/2010	11/027337	US	Spring Adapted To Hold Electronic Device In A Frame
82182395	Granted	7382880	1/26/2004	6/3/2008	10/764966	US	Method And Apparatus For Initializing Multiple Security Modules
82182398	Granted	7930503	1/26/2004	4/19/2011	10/764918	US	Method And Apparatus For Operating Multiple Security Modules
82182404	Granted	7404178	2/18/2004	7/22/2008	10/780967	US	Rom-embedded Debugging Of Computer

PATENT
REEL: 038498 FRAME: 0390

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82182476	Granted	7188203	11/22/2004	3/6/2007	10/994993	US	Method And Apparatus For Dynamic Suppression Of Spurious Interrupts
82182479	Granted	7334028	11/25/2003	2/19/2008	10/722337	US	Tiered Multi-source Software Support Using Automated Diagnostic-data Transfers
82182518	Granted	8131830	4/19/2004	3/6/2012	10/828078	US	System And Method For Providing Support Sevices Using Administrative Rights On A Client Computer
82182596	Granted	8677017	1/30/2004	3/18/2014	10/767075	US	Determining Location Information For A Node In A Network Using At Least One Local Landmark Node
82182665	Granted	8060650	10/27/2004	11/15/2011	10/974459	US	Diagnosing A Path In A Storage Network
82182839	Granted	6940778	10/29/2003	9/6/2005	10/697679	US	System And Method For Reducing Leakage In Memory Cells Using Wordline Control
82182851	Granted	8120876	7/30/2004	2/21/2012	10/902702	US	MEDIUM FOR USE IN A TAPE DRIVE APPARATUS HAVING IDENTIFICATION SEGMENT AND A SEGMENT IDENTIFICATION PATTERN
82182914	Granted	7866959	1/24/2005	1/11/2011	11/042917	US	Fan Clutch For An Electronics Cooling Fan
82182968	Granted	7830894	7/29/2004	11/9/2010	10/901379	US	Communications
82183088	Granted	7613950	2/27/2004	11/3/2009	10/789733	US	Detecting Floating Point Hardware Failures
82183154	Granted	7606995	7/23/2004	10/20/2009	10/898590	US	ALLOCATING RESOURCES TO PARTITIONS IN A PARTITIONABLE COMPUTER
82183163	Granted	8112611	7/27/2009	2/7/2012	12/510184	US	Allocating Resources To Partitions In A Partionable Computer
82183202	Granted	6867976	10/21/2003	3/15/2005	10/690450	US	Pin Retention For Thermal Transfer Interfaces, And Associated Methods
82183208	Granted	7310738	2/9/2005	12/18/2007	11/054588	US	MULTIFUNCTIONAL CONTROL OF COOLING SYSTEMS FOR COMPUTERS
82183277	Granted	7269018	9/3/2004	9/11/2007	10/934926	US	Method And Apparatus For Attaching Multiple Heat Sinks To Multiple Non-coplanar Components
82183328	Granted	7149831	9/27/2004	12/12/2006	10/950994	US	Batch Processing Of Interrupts
82183388	Granted	7292573	3/31/2004	11/6/2007	10/813766	US	Methods And Apparatus For Selection Of Mirrored Traffic
82183457	Granted	7616440	4/19/2004	11/10/2009	10/827965	US	Fan Unit And Methods Of Forming Same
82183460	Granted	7855882	12/24/2008	12/21/2010	12/344111	US	Fan Unit And Methods Of Forming Same
82183889	Granted	7664994	9/8/2004	2/16/2010	10/935882	US	High-availability Cluster Node Removal And Communication
82183901	Granted	7257514	4/6/2005	8/14/2007	11/099851	US	COMPUTER SUPPORT SERVICE WITH SOLUTION FUNCTION UPDATES AS A FUNCTION OF PRE-DELIVERY EXPERT CHANGES TO AUTOMATICALLY GENERATED SOLUTIONS

PATENT
REEL: 038498 FRAME: 0391

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82183907	Granted	7580906	7/31/2007	8/25/2009	11/831508	US	AN AUTOMATED ADAPTIVE COMPUTER SUPPORT SYSTEM GENERATING PROBLEM SOLUTIONS HAVING CONFIDENCE LEVELS USED TO DETERMINE WHETHER HUMAN EXPERT INTERVENTION IS REQUIRED
82184198	Granted	8242380	4/16/2008	8/14/2012	12/148017	US	Printed Circuit Board Substrate And Method For Constructing Same
82184204	Granted	7346824	12/23/2004	3/18/2008	11/022023	US	Match Circuit For Performing Pattern Recognition In A Performance Counter
82184276	Granted	7382847	7/23/2004	6/3/2008	10/898404	US	Programmable SYNC Pulse Generator
82184282	Granted	7340631	7/23/2004	3/4/2008	10/897729	US	Drift-tolerant SYNC Pulse Circuit In A SYNC Pulse Generator
82184327	Granted	7756614	2/27/2004	7/13/2010	10/789669	US	Mobile Device Control System
82184342	Granted	8503429	3/15/2005	8/6/2013	10/592394	US	Session Initiation Protocol (SIP)
82184351	Granted	7404204	2/6/2004	7/22/2008	10/773973	US	System And Method For Authentication Via A Single Sign-on Server
82184471	Granted	7436917	7/29/2004	10/14/2008	10/901773	US	Controller For Clock Synchronizer
82184513	Granted	7600169	11/12/2004	10/6/2009	10/987025	US	Systems And Methods Of Test Case Generation With Feedback
82184636	Granted	8140694	3/15/2004	3/20/2012	10/800828	US	Method And Apparatus For Effecting Secure Communications
82184699	Granted	7382734	5/20/2004	6/3/2008	10/850226	US	Directing A Path Verification Request Along A Specific Path To A Mesh Network Switch To Test Operability Of The Specific Path
82184702	Granted	7203849	12/12/2003	4/10/2007	10/734665	US	Method And System For Distributing Power To Networked Devices
82184705	Granted	7921306	2/16/2007	4/5/2011	11/707682	US	Method And System For Distributing Power To Networked Devices
82184774	Granted	7246181	9/14/2004	7/17/2007	10/941583	US	DEVICE AND METHOD FOR IDENTIFYING A COMMUNICATION INTERFACE THAT PERFORMS AN OPERATING PARAMETER CLOSER TO A DESIRED PERFORMANCE LEVEL THAN ANOTHER COMMUNICATION INTERFACE PERFORMS THE OPERATING PARAMETER
82184849	Granted	7315456	8/29/2005	1/1/2008	11/214075	US	Configurable IO Subsystem
82184954	Granted	7363479	4/26/2005	4/22/2008	11/115863	US	Methods And Apparatus For Provisioning Servers To Clients
82185140	Granted	7349176	4/29/2005	3/25/2008	11/119146	US	TAPE GUIDE SYSTEM FOR A MAGNETIC TAPE TRANSFER APPARATUS
82185164	Granted	7372661	4/29/2005	5/13/2008	11/118879	US	Tape Guide System For Engaging Different Tape Widths
82185326	Granted	7727820	4/30/2004	6/1/2010	10/837416	US	Misalignment-tolerant Methods For Fabricating Multiplexing/demultiplexing Architectures
82185407	Granted	7326860	6/5/2006	2/5/2008	11/446669	US	Routing Vias In A Substrate From Bypass Capacitor Pads
82185410	Granted	7327583	9/13/2004	2/5/2008	10/939654	US	Routing Power And Ground Vias In A Substrate

PATENT
REEL: 038498 FRAME: 0392

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82185464	Published		12/21/2004		11/020058	US	Method To Dynamically View And Update Adaptive Process Document
82185467	Granted	9152785	1/30/2004	10/6/2015	10/769594	US	Providing A Flexible Protection Model In A Computer System By Decoupling Protection From Computer Privilege Level
82185581	Granted	7363536	7/30/2004	4/22/2008	10/903218	US	Delivery Of An Interruption To An Operating System
82185824	Granted	7342900	5/19/2004	3/11/2008	10/849999	US	Apparatus And Method For Estimating Device Availability
82185827	Granted	7086603	2/6/2004	8/8/2006	10/772318	US	Data Collection System Having A Data Collector
82185950	Granted	7853825	7/26/2006	12/14/2010	11/492842	US	Methods And Apparatus For Recovering From Fatal Errors In A System
82185953	Granted	7380146	4/22/2005	5/27/2008	11/112120	US	Power Management System
82185962	Granted	7596726	10/31/2005	9/29/2009	11/263431	US	Method And Apparatus For Selecting A Primary Resource In A Redundant Subsystem
82186016	Granted	8095959	5/27/2004	1/10/2012	10/855579	US	A Method And System For Integrating Policies Across Systems
82186076	Granted	7120022	3/24/2004	10/10/2006	10/808111	US	Loop Thermosyphon With Wicking Structure And Semiconductor Die As Evaporator
82186085	Granted	7106550	1/27/2005	9/12/2006	11/044809	US	Data Storage Method And Apparatus Employing A Tape Cartridge Having A Cartridge Memory
82186139	Granted	8799706	1/25/2005	8/5/2014	11/042985	US	Method And System Of Exchanging Information Between Processors
82186154	Granted	7202868	3/31/2004	4/10/2007	10/814403	US	SYSTEM AND METHOD FOR VISUAL RECOGNITION OF PATHS AND PATTERNS
82186214	Granted	7274526	7/19/2005	9/25/2007	11/184430	US	Tape Drive Apparatus
82186445	Allowed		7/6/2004		10/883851	US	Method And System For Generating Ranges Of Internet Protocol Addresses
82186460	Granted	7853880	7/28/2004	12/14/2010	10/900889	US	Displaying Network Properties In A Graphical User Interface
82186472	Granted	7350088	3/8/2005	3/25/2008	11/075409	US	Power Management System For UPS Attached To External Devices
82186532	Granted	7516212	1/21/2004	4/7/2009	10/761469	US	Device Status Identification
82186535	Granted	8176503	1/27/2004	5/8/2012	10/765304	US	Device Driver Selection
82186757	Granted	7519822	3/10/2004	4/14/2009	10/798187	US	Method And Apparatus For Processing Descriptive Statements
82187018	Granted	8233461	8/19/2004	7/31/2012	10/922631	US	Complementing Network Discovery With Physical Discovery
82187387	Granted	7405932	7/19/2004	7/29/2008	10/894215	US	System And Method For Cooling Electronic Devices
82187447	Granted	7143389	7/28/2004	11/28/2006	11/089581	US	Systems And Methods For Generating Node Level Bypass Capacitor Models

PATENT
REEL: 038498 FRAME: 0393

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82187453	Granted	7441100	2/27/2004	10/21/2008	10/789732	US	Processor Synchronization In A Multi-processor Computer System
82187522	Granted	7233497	10/6/2004	6/19/2007	10/960160	US	Surface Mount Heat Sink
82187633	To Be Filed					US	Handling Oversubscribed Mesh Ports With Re-tagging
82187636	Granted	6965718	2/20/2004	11/15/2005	10/783611	US	Apparatus And Method For Supplying Power Over An Optical Link
82187639	Granted	7376089	3/29/2004	5/20/2008	10/812261	US	Multiple-instance Meshing
82187642	Granted	7881307	4/25/2008	2/1/2011	12/150184	US	Multiple-instance Meshing
82187648	Granted	7817157	8/23/2005	10/19/2010	11/209943	US	Method And Apparatus For Capturing Slices Of Video Data
82187759	Granted	7885223	8/31/2005	40582	11/660947	US	COMMUNICATIONS INFRASTRUCTURE FOR CONTENT DELIVERY USING EDGE SERVERS
82187822	Granted	D518827	7/19/2004	4/11/2006	29/209597	US	Computer Having A Drive Carrier
82187834	Granted	D517560	7/21/2004	3/21/2006	29/209868	US	Computer Having A Drive Carrier
82187849	Granted	7283677	8/31/2004	10/16/2007	10/931647	US	Measuring Sub-wavelength Displacements
82187903	Granted	7386537	7/23/2004	6/10/2008	10/898128	US	Method And System For Determining Size Of A Data Center
82187972	Granted	7966402	6/28/2005	6/21/2011	11/168129	US	A SWITCH TO SELECTIVELY COUPLE ANY OF A PLURALITY OF VIDEO MODULES TO ANY OF A PLURALITY OF BLADES
82188014	Granted	7313575	6/14/2004	12/25/2007	10/868434	US	Data Services Handler
82188029	Granted	7940911	4/28/2005	5/10/2011	11/119397	US	Method And Apparatus For Providing A Specialized Resource Function In A Telephone Network
82188077	Granted	8230252	7/20/2004	7/24/2012	10/894784	US	Time Of Day Response
82188086	Granted	7890706	11/16/2004	2/15/2011	10/990151	US	Delegated Write For Race Avoidance In A Processor
82188092	Granted	7929421	10/18/2004	4/19/2011	10/967826	US	Application Driven Router Redundancy Protocol
82188095	Published		2/22/2005		11/064140	US	Interpreter Engine
82188098	Granted	7869382	12/6/2004	1/11/2011	11/006427	US	Network Management Assisted Discovery
82188137	Published		6/8/2005		11/597674	US	Pathname Translation Method And System
82188152	Granted	7607120	4/20/2004	40106	10/827528	US	METHOD AND APPARATUS FOR CREATING DATA TRANSFORMATION ROUTINES FOR BINARY DATA
82188158	Granted	7594221	4/20/2004	9/22/2009	10/827523	US	Method And Apparatus For Translating Binary Code
82188266	Granted	7702725	7/2/2004	4/20/2010	10/884092	US	Digital Object Repositories, Models, Protocol, Apparatus, Methods And Software And Data Structures, Relating Thereto
82188284	Granted	7631251	2/16/2005	12/8/2009	11/059193	US	Method And Apparatus For Calculating Checksums
82188347	Granted	7683435	4/30/2004	3/23/2010	10/836145	US	Misalignment-tolerant Multiplexing/demultiplexing Architectures
82188404	Granted	7420938	6/10/2004	9/2/2008	10/866346	US	Finding Duplex Mismatches In Copper Based Networks
82188443	Granted	8024736	1/28/2005	9/20/2011	11/046334	US	System For Controlling A Distribution Of Unutilized Computer Resources
82188446	Granted	7644161	1/28/2005	1/5/2010	11/046335	US	TOPOLOGY FOR A HIERARCHY OF CONTROL PLUG-INS USED IN A CONTROL SYSTEM

PATENT
REEL: 038498 FRAME: 0394

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82188449	Granted	8826287	1/28/2005	9/2/2014	11/046333	US	System For Adjusting Computer Resources Allocated For Executing An Application Using A Control Plug-in
82188452	Granted	7774457	3/25/2005	8/10/2010	11/090714	US	RESOURCE EVALUATION FOR A BATCH JOB AND AN INTERACTIVE SESSION CONCURRENTLY EXECUTED IN A GRID COMPUTING ENVIRONMENT
82188455	Granted	7908605	1/28/2005	3/15/2011	11/046332	US	Hierarchal Control System For Controlling The Allocation Of Computer Resources
82188509	Granted	8275951	38148	41177	10/865539	US	Local Bitmaps For An Array Of Redundant Storage Devices
82188587	Granted	7428550	8/27/2004	9/23/2008	10/928408	US	SYSTEMS AND METHODS FOR ESTIMATING THE NUMBER OF UNIQUE ATTRIBUTES IN A DATABASE
82188632	Granted	7038188	4/29/2004	5/2/2006	10/836012	US	Non-demolition Photon Detector That Preserves Input State Characteristics
82188653	Granted	7274851	10/18/2005	9/25/2007	11/252660	US	Fiber Optic Module
82188767	Allowed		7/19/2006		11/490517	US	Remote Device Access
82188827	Granted	7644318	11/9/2004	1/5/2010	10/984282	US	Method And System For A Failover Procedure With A Storage System
82188833	Granted	7512705	12/1/2004	3/31/2009	11/000396	US	Truncating Data Units
82188896	Granted	7932906	9/15/2004	4/26/2011	10/941114	US	CONSTRUCTING SUBSTANTIALLY EQUAL-WIDTH PIXEL BAR CHARTS TO ENABLE VISUAL DATA ANALYSIS
82189013	Granted	7730452	11/1/2005	6/1/2010	11/264799	US	Testing A Component Of A Distributed System
82189019	Granted	7577832	12/14/2004	8/18/2009	11/012991	US	Apparatus And Method For Booting A System
82189022	Granted	8200955	6/11/2009	6/12/2012	12/482965	US	Apparatus And Method For Booting A System
82189025	Granted	7428562	11/26/2004	9/23/2008	10/998208	US	Self-authenticating Quantum Random Number Generator
82189034	Granted	7607123	9/21/2004	10/20/2009	10/946490	US	Systems And Methods For Validating Debug Information For Optimized Code
82189076	Granted	8654945	7/19/2006	2/18/2014	11/490493	US	Communication System And Method
82189088	Granted	7797727	1/31/2005	9/14/2010	11/047015	US	Launching An Application In A Restricted User Account
82189193	Granted	7443711	12/16/2004	10/28/2008	11/014554	US	Non-volatile Programmable Impedance Nanoscale Devices
82189196	Granted	7443711	11/9/2009	40974	90/009633	US	Non-volatile Programmable Impedance Nanoscale Devices
82189205	Granted	7340356	12/13/2004	3/4/2008	11/010597	US	Method And System For Reading The Resistance State Of Junctions In Crossbar Memory
82189256	Granted	7308605	7/20/2004	39427	10/894825	US	Latent Error Detection
82189265	Granted	7469268	8/3/2004	12/23/2008	10/910679	US	Managing Data Received From Processes Of A Distributed Computing Arrangement
82189274	Granted	8060599	3/16/2004	11/15/2011	10/801793	US	System And Method For Determining A Streaming Media Server Configuration For Supporting Expected Workload In Compliance With, Etc.
82189385	Published		1/28/2005		11/046476	US	Thermal And Power Management Apparatus
82189400	Granted	7752623	9/16/2004	7/6/2010	10/942298	US	System And Method For Allocating Resources By Examining A System Characteristic

PATENT
REEL: 038498 FRAME: 0395

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82189403	Granted	7712102	7/30/2004	5/4/2010	10/902763	US	SYSTEM AND METHOD FOR DYNAMICALLY CONFIGURING A PLURALITY OF LOAD BALANCERS IN RESPONSE TO THE ANALYZED PERFORMANCE DATA
82189634	Granted	8087025	6/29/2005	12/27/2011	11/170219	US	Workload Placement Among Resource-on-demand Systems
82189640	Granted	8104038	6/29/2005	1/24/2012	11/170590	US	Matching Descriptions Of Resources With Workload Requirements
82189718	Granted	7339490	6/29/2004	3/4/2008	10/880869	US	MODULAR SENSOR ASSEMBLY
82189721	Granted	7257515	3/3/2004	8/14/2007	10/792557	US	Sliding Window For Alert Generation
82189757	Granted	7765531	10/6/2004	7/27/2010	10/960708	US	Systems And Methods For Handling Multiple Static Query Modules For Distinct Environments
82189775	Granted	6982877	2/20/2004	1/3/2006	10/783833	US	Heat Sink Having Compliant Interface To Span Multiple Components
82189781	Granted	6668308	6/8/2001	12/23/2003	09/877793	US	Scalable Architecture Based On Single-chip Multiprocessing
82189784	Granted	6988170	10/24/2003	1/17/2006	10/693388	US	SCALABLE ARCHITECTURE BASED ON SINGLE-CHIP MULTIPROCESSING
82189829	Granted	7779368	10/30/2004	8/17/2010	10/978171	US	Systems And Methods For Presenting Managed Data
82189943	Granted	8214601	7/30/2004	7/3/2012	10/909057	US	Purging Without Write-back Of Cache Lines Containing Spent Data
82190006	Granted	7249718	7/20/2004	39294	10/894290	US	Cooling System With A Variable Maximum Operation Level
82190012	Granted	7057509	6/29/2004	6/6/2006	10/881975	US	Monitoring An Object With Identification Data And Tracking Data
82190207	Granted	8443171	7/30/2004	5/14/2013	10/903155	US	Run-time Updating Of Prediction Hint Instructions
82190270	Granted	7281116	7/30/2004	10/9/2007	10/903200	US	Multiprocessor System Having Plural Memory Locations For Respectively Storing Tlb-shootdown Data For Plural Processor Nodes
82190321	Granted	7332983	10/31/2005	2/19/2008	11/263339	US	Tunable Delay Line
82190330	Granted	7142125	1/24/2005	11/28/2006	11/042910	US	Fan Monitoring For Failure Prediction
82190378	Granted	7437606	8/23/2004	10/14/2008	10/924513	US	Method Of Checkpointing Parallel Processes In Execution Within Plurality Of Process Domains
82190393	Granted	7441075	3/17/2005	10/21/2008	11/082536	US	DATA STORAGE METHOD AND APPARATUS EMPLOYING A TAPE CARTRIDGE FOR STORING WORM DATA
82190402	Granted	7280303	3/17/2005	10/9/2007	11/082614	US	Data Storage Method And Apparatus To Detect If Worm Data Has Been Tampered With
82190453	Granted	7626778	10/6/2005	12/1/2009	11/245331	US	Tape Drive Apparatus
82190462	Granted	7324297	9/27/2005	1/29/2008	11/236052	US	Data Storage Apparatus And Method
82190471	Granted	7778715	1/31/2005	8/17/2010	11/047093	US	Methods And Systems For A Prediction Model
82190639	Granted	7379255	1/17/2006	5/27/2008	11/332934	US	Data Structure, Data Storage Apparatus And Method
82190645	Granted	7661095	4/14/2005	2/9/2010	11/109019	US	System And Method To Build A Callgraph For Functions With Multiple Entry Points
82190657	Granted	7743321	10/28/2005	6/22/2010	11/260569	US	METHOD AND APPARATUS FOR PROCESSING DATA

PATENT
REEL: 038498 FRAME: 0396

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82190888	Granted	7698402	6/30/2004	4/13/2010	10/882597	US	Method And Apparatus For Enhanced Design Of Multi-tier Systems
82190891	Granted	9053001	2/24/2010	6/9/2015	12/711680	US	Method And Apparatus For Enhanced Design Of Multi-tier Systems
82190894	Granted	7499286	8/31/2006	39875	11/513807	US	Mounting Adapter For Electronic Modules
82190948	Granted	7702928	4/8/2005	4/20/2010	11/102220	US	Memory Module With On-board Power-consumption Monitoring
82190954	Granted	7523332	4/29/2005	4/21/2009	11/118654	US	Interface Module With On-board Power-consumption Monitoring
82190960	Granted	7613935	7/29/2005	11/3/2009	11/192735	US	Power Monitoring For Processor Module
82190966	Granted	7536573	7/29/2005	5/19/2009	11/193211	US	Power Budgeting For Computers
82191014	Granted	8578441	7/22/2004	11/5/2013	10/896676	US	Enforcing Network Security Policies With Packet Labels
82191407	Granted	8374175	4/27/2005	2/12/2013	11/116008	US	System And Method For Remote Direct Memory Access Over A Network Switch Fabric
82191440	Granted	7701602	2/10/2005	4/20/2010	11/053864	US	Mobile Device-based Printing System And Method
82191446	Granted	8462367	2/10/2005	6/11/2013	11/054551	US	Printer Voice Portal
82191455	Granted	7056204	1/25/2005	6/6/2006	11/042421	US	Air Mover
82191503	Granted	8199678	7/25/2006	6/12/2012	11/492197	US	Graphical Arrangement Of IT Network Components
82191587	Granted	7289321	11/16/2004	10/30/2007	10/989923	US	VENTILATED CASING FOR AN ELECTRONIC DEVICE
82191647	Granted	7499923	3/4/2004	3/3/2009	10/791897	US	DOCUMENT CLUSTERING METHOD AND APPARATUS BASED ON COMMON INFORMATION OF DOCUMENTS
82191752	Granted	7203789	5/10/2004	4/10/2007	10/842762	US	Architecture And Methods For Computing With Reconfigurable Resistor Crossbars
82191767	Granted	7719855	8/31/2006	5/18/2010	11/513849	US	Spacing Device For Modular System
82191815	Granted	7647787	4/22/2004	1/19/2010	10/830503	US	Upgradeable, Modular Data Center Cooling Apparatus
82191836	Granted	7266536	9/2/2004	9/4/2007	10/932386	US	CALIBRATED CLASSIFIERS WITH THRESHOLD COMPARISONS
82191839	Granted	7134289	12/4/2004	11/14/2006	11/005283	US	Multi-state Spray Cooling System
82191881	Granted	7533194	12/13/2004	5/12/2009	11/011622	US	MULTI-MODE PORT IN A NETWORK DEVICE FOR SERIAL AND NETWORK COMMUNICATION
82191899	Granted	8335785	9/28/2004	12/18/2012	10/952512	US	Ranking Results For Network Search Query
82191944	Granted	7330120	4/29/2005	2/12/2008	11/117994	US	Remote Measurement Of Motion Employing RFID
82192013	Granted	7298272	4/29/2005	11/20/2007	11/118021	US	Remote Detection Employing RFID
82192022	Granted	7400252	6/30/2005	7/15/2008	11/170921	US	Wireless Monitoring Of Component Compatibility In An Electronics System
82192031	Granted	7607014	6/30/2005	10/20/2009	11/171928	US	Authenticating Maintenance Access To An Electronics Unit Via Wireless Communication
82192259	Granted	8149846	11/9/2006	4/3/2012	11/558082	US	DATA PROCESSING SYSTEM AND METHOD
82192337	Granted	7694064	12/29/2004	4/6/2010	11/024575	US	Multiple Cell Computer Systems And Methods

PATENT
REEL: 038498 FRAME: 0397

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82192397	Granted	7325075	3/15/2004	1/29/2008	10/801468	US	Methods For Address And Name Discovery For Ethernet Entities
82192763	Granted	7658630	4/18/2005	2/9/2010	11/108338	US	System And Method For Connecting Electronic Components
82192781	Granted	8812781	4/19/2005	8/19/2014	11/109353	US	External State Cache For Computer Processor
82192832	Granted	7363288	4/30/2004	4/22/2008	10/837410	US	Method Of Checkpointing And Restarting Processes Which Share Open File
82192838	Published		8/5/2005		11/996588	US	System, Method And Apparatus For Cryptography Key Management For Mobile Devices
82193075	Granted	7953843	6/14/2004	5/31/2011	10/867392	US	System And Method For Evaluating A Heterogeneous Cluster For Supporting Expected Workload In Compliance With At Least One Service Parameter
82193093	Granted	7707575	9/20/2004	4/27/2010	10/944966	US	SYSTEM AND METHOD FOR SELECTING A PORTFOLIO OF RESOURCES IN A HETEROGENEOUS DATA CENTER
82193129	Granted	7389023	3/15/2005	6/17/2008	11/082024	US	Method And Apparatus For Forming A Photonic Crystal
82193273	Granted	7234060	7/11/2000	6/19/2007	09/614487	US	Generation And Use Of Digital Signatures
82193375	Granted	7512769	10/6/2004	3/31/2009	10/959714	US	Process Migration
82193378	Granted	7031870	5/28/2004	4/18/2006	10/855400	US	Data Center Evaluation Using An Air Re-circulation Index
82193387	Granted	7296135	10/5/2005	11/13/2007	11/243716	US	Data Misalignment Detection And Correction In A Computer System Utilizing A Mass Storage Subsystem
82193402	Granted	8694423	5/21/2004	4/8/2014	10/851619	US	Systems And Methods For Brokering Data In A Transactional Gateway
82193405	Granted	7747500	11/1/2004	6/29/2010	10/978895	US	Managing And Evaluating Procurement Risk
82193456	Granted	8175852	2/11/2005	5/8/2012	11/057328	US	Method Of, And System For, Process-driven Analysis Of Operations
82193519	Granted	7552434	4/30/2004	6/23/2009	10/837420	US	METHOD OF PERFORMING KERNEL TASK UPON INITIAL EXECUTION OF PROCESS AT USER LEVEL
82193780	Granted	7284389	1/21/2005	10/23/2007	11/040403	US	Two-fluid Spray Cooling System
82194083	Granted	7382613	5/19/2005	6/3/2008	11/132922	US	Computer System With External Air Mover
82194212	Granted	7599761	1/19/2005	10/6/2009	11/038723	US	Cooling Assist Module
82194215	Granted	8655501	8/13/2009	2/18/2014	12/540479	US	Cooling Assist Module
82194314	Granted	7471638	10/8/2004	12/30/2008	10/961265	US	Testing For A Misconnection Between First And Second Networks
82194401	Granted	8260730	3/14/2005	9/4/2012	11/080098	US	A Method Of, And System For, Classification Count Adjustment
82194509	Granted	8845404	2/14/2006	9/30/2014	11/353557	US	Ventilation Tile With Collapsible Damper
82194587	Granted	8139507	9/15/2004	3/20/2012	10/941433	US	NETWORK GRAPH FOR ALTERNATE ROUTES
82194692	Granted	7590738	10/27/2004	9/15/2009	10/975278	US	Method And System For Processing Concurrent Events In A Provisional Network
82194716	Granted	7650386	7/29/2004	1/19/2010	10/902362	US	Communication Among Partitioned Devices

PATENT
REEL: 038498 FRAME: 0398

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82194776	Granted	7505399	8/13/2004	3/17/2009	10/917677	US	Receive Load Balancing On Multiple Network Adapters
82194818	Granted	7765552	9/17/2004	7/27/2010	10/944227	US	System And Method For Allocating Computing Resources For A Grid Virtual System
82194962	Granted	8332611	9/29/2005	12/11/2012	11/237865	US	Method And System For Managing Memory
82195013	Granted	7298946	12/22/2004	11/20/2007	11/020582	US	Multi-fiber Cable For Efficient Manageability Of Optical System
82195025	Granted	7734474	4/23/2004	6/8/2010	10/830218	US	Display Configuration
82195124	Granted	8713278	4/25/2005	4/29/2014	11/113831	US	SYSTEM AND METHOD FOR STRANDED FILE OPENS DURING DISK COMPRESSION UTILITY REQUESTS
82195373	Granted	7313749	6/29/2004	12/25/2007	10/879643	US	System And Method For Applying Error Correction Code (ECC) Erasure Mode And Clearing Recorded Information From A Page Deallocation Table
82195382	Granted	8627213	8/10/2004	1/7/2014	10/915939	US	Chat Room System
82195691	Granted	7652589	2/4/2005	40204	11/051697	US	Selecting A Function Of Components Based On Orientation
82195712	Granted	7496106	7/12/2005	2/24/2009	11/181011	US	Methods And Apparatus For Providing Signalling Gateways With Multi-network Support
82195832	Granted	7895854	6/1/2005	3/1/2011	11/142558	US	Refrigeration System With Parallel Evaporators And Variable Speed Compressor
82195835	Granted	7315448	6/1/2005	1/1/2008	11/142557	US	Air-cooled Heat Generating Device Airflow Control System
82195838	Granted	7350132	4/26/2005	3/25/2008	11/115887	US	Nanoscale Interconnection Interface
82195961	Granted	8040903	2/1/2005	10/18/2011	11/048522	US	Automated Configuration Of Point-to-point Load Balancing Between Teamed Network Resources Of Peer Devices
82196078	Granted	7307437	3/24/2005	12/11/2007	11/089379	US	Arrangement With Conductive Pad Embedment
82196147	Granted	7262495	10/7/2004	8/28/2007	10/960827	US	3D Interconnect With Protruding Contacts
82196204	Published		2/24/2005		11/065690	US	Data Retention System With A Plurality Of Access Protocols
82196318	Granted	7444450	4/28/2005	10/28/2008	11/117962	US	Method And System For Detecting Excessive Interrupt Processing For A Processor
82196321	Granted	7383471	12/28/2004	6/3/2008	11/023895	US	Diagnostic Memory Dumping
82196375	Granted	7493620	6/18/2004	2/17/2009	10/871951	US	Transfer Of Waiting Interrupts
82196399	Granted	9137113	1/20/2006	9/15/2015	11/335877	US	System And Method For Dynamically Allocating Resources
82196402	Granted	7689391	5/20/2005	3/30/2010	11/133887	US	Data Structure Relating A Device Characteristic To A Device Position In A Support Structure
82196435	Granted	8826288	4/19/2005	9/2/2014	11/109352	US	Computing With Both Lock-step And Free Step Processor Modes
82196630	Granted	7386688	7/29/2004	6/10/2008	10/902340	US	Communication Among Partitioned Devices
82196699	Granted	8930684	10/26/2005	1/6/2015	11/259843	US	Adding a runtime service for firmware-based images for a device not known to an operating system
82196708	Granted	8230204	6/23/2005	7/24/2012	11/159649	US	Migration Of System Images

PATENT
REEL: 038498 FRAME: 0399

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82196951	Granted	7590885	4/26/2005	9/15/2009	11/114319	US	Method And System Of Copying Memory From A Source Processor To A Target Processor By Duplicating Memory Writes
82196960	Granted	7933966	4/26/2005	4/26/2011	11/114318	US	Method And System Of Copying A Memory Area Between Processor Elements For Lock-step Execution
82197074	Granted	7908254	6/10/2005	3/15/2011	11/149509	US	Identifying Characteristics In Sets Of Organized Items
82197077	Granted	7315428	10/28/2004	1/1/2008	10/975518	US	MAGNETIC MEDIA WRITE SIGNAL FILTER
82197125	Granted	9063898	11/23/2004	6/23/2015	10/997020	US	Method Of Restoring Backup Data
82197128	Granted	8335770	2/3/2005	12/18/2012	11/051200	US	Method Of Restoring Data
82197131	Granted	7827361	10/21/2004	11/2/2010	10/970888	US	Method Of Controlling Access To Computing Resource Within Shared Computing Environment
82197248	Granted	7467145	4/15/2005	12/16/2008	11/107285	US	System And Method For Analyzing Processes
82197251	Granted	7827499	10/29/2004	11/2/2010	10/977463	US	HIERARCHICAL DATASET DASHBOARD VIEW
82197254	Granted	7694305	10/21/2004	4/6/2010	10/972232	US	Method Of Controlling Access To Computing Resource Within Shared Computing Environment
82197314	Granted	7480836	4/25/2005	1/20/2009	11/113661	US	Monitoring Error-handler Vector In Architected Memory
82197320	Granted	8930400	11/22/2004	1/6/2015	10/994834	US	A SYSTEM AND METHOD FOR DISCOVERING KNOWLEDGE COMMUNITIES
82197323	Granted	8781845	3/27/2006	7/15/2014	11/390225	US	Service Configuration Management System And Method
82197389	Granted	8495266	12/10/2004	7/23/2013	11/009214	US	Distributed Lock
82197440	Granted	7471623	11/23/2004	12/30/2008	10/998239	US	Systems And Methods For A Unified Computer System Fabric
82197746	Granted	8046759	8/26/2005	10/25/2011	11/213614	US	RESOURCE ALLOCATION METHOD AND SYSTEM
82197755	Granted	7947485	6/3/2005	5/24/2011	11/144586	US	Method And Apparatus For Molecular Analysis Using Nanoelectronic Circuits
82197758	Granted	7620978	7/29/2005	11/17/2009	11/193707	US	Securely Propagating Authentication In An Ensemble Of Devices Using Single Sign-on
82197761	Granted	7307271	11/5/2004	12/11/2007	10/982051	US	Nanowire Interconnection And Nano-scale Device Applications
82197773	Granted	7941569	2/24/2005	5/10/2011	11/884874	US	Input/output Tracing In A Protocol Offload System
82197878	Granted	8116764	5/18/2005	40953	11/131311	US	Controlling Access To Communication Services
82197896	Granted	7925841	9/10/2004	4/12/2011	10/939047	US	Managing Shared Memory Usage Within A Memory Resource Group Infrastructure
82197935	Granted	7937404	2/4/2005	5/3/2011	11/883231	US	Data Processing System And Method
82197998	Granted	7437334	12/3/2004	10/14/2008	11/004318	US	Preparing Data For Machine Learning
82198001	Published		2/28/2005		11/067852	US	System And Method For Scheduling Executables
82198010	Granted	7810341	11/14/2005	10/12/2010	11/273274	US	Redundant Upgradeable, Modular Data Center Cooling Apparatus
82198016	Granted	7398428	9/7/2004	7/8/2008	10/935550	US	Diagnostic Tool With Ethernet Capability
82198019	Granted	7840725	9/28/2004	11/23/2010	10/953207	US	Capture Of Data In A Computer Network

PATENT
REEL: 038498 FRAME: 0400

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82198079	Granted	7539931	4/8/2005	5/26/2009	11/102530	US	Storage Element For Mitigating Soft Errors In Logic
82198130	Granted	8713550	3/11/2005	4/29/2014	11/885784	US	Methods, Devices And Software Applications For Facilitating A Development Of A Computer Program
82198400	Granted	8812501	7/24/2006	8/19/2014	11/491362	US	A Method Or Apparatus For Selecting A Cluster In A Group Of Nodes
82198439	Granted	7502958	10/25/2004	3/10/2009	10/973076	US	System And Method For Providing Firmware Recoverable Lockstep Protection
82198445	Granted	7308566	10/25/2004	12/11/2007	10/973004	US	System And Method For Configuring Lockstep Mode Of A Processor Module
82198448	Granted	7627781	10/25/2004	12/1/2009	10/973077	US	System And Method For Establishing A Spare Processor For Recovering From Loss Of Lockstep In A Boot Processor
82198505	Granted	7356733	10/25/2004	4/8/2008	10/972888	US	System And Method For System Firmware Causing An Operating System To Idle A Processor
82198514	Granted	7624302	10/25/2004	11/24/2009	10/972588	US	System And Method For Switching The Role Of Boot Processor To A Spare Processor Responsive To Detection Of Loss Of Lockstep In A Boot Processor
82198517	Granted	7366948	10/25/2004	4/29/2008	10/972796	US	System And Method For Maintaining In A Multi-processor System A Spare Processor That Is In Lockstep For Use In Recovering From Loss Of Lockstep For Another Processor
82198562	Granted	7251588	6/22/2005	7/31/2007	11/158868	US	System For Metric Introspection In Monitoring Sources
82198568	Granted	8978741	2/17/2006	3/17/2015	11/357531	US	Device For Reducing Temperature Variations In Plenums
82198889	Granted	8788639	5/13/2005	7/22/2014	11/129550	US	Method And Apparatus For Centrally Configuring Network Devices
82198934	Granted	7539829	4/11/2006	5/26/2009	11/402762	US	Methods And Apparatuses For Controlling Access To At Least One Storage Device In A Tape Library
82199267	Granted	8032114	1/7/2005	10/4/2011	11/033355	US	Service Access Request Authorization
82199306	Granted	7877740	6/13/2005	1/25/2011	11/152466	US	Handling Caught Exceptions
82199318	Granted	7634773	11/24/2004	12/15/2009	10/997571	US	Method And Apparatus For Thread Scheduling On Multiple Processors
82199321	Granted	7822982	6/16/2005	10/26/2010	11/154798	US	Method And Apparatus For Automatic And Secure Distribution Of A Symmetric Key Security Credential In A Utility Computing Environment
82199330	Granted	8140878	1/27/2005	3/20/2012	11/045965	US	Power Conservation Technique For Blade Computer Systems
82199369	Granted	7581242	4/30/2005	8/25/2009	11/117797	US	Authenticating Products
82199375	Granted	7797505	4/25/2005	9/14/2010	11/113461	US	Program Stack Handling
82199510	Granted	7307902	8/30/2005	12/11/2007	11/214697	US	Memory Correction System And Method
82199516	Granted	7599235	11/2/2007	10/6/2009	11/982532	US	Memory Correction System And Method
82199621	Granted	7894455	3/30/2005	2/22/2011	11/093714	US	SYSTEMS AND METHODS FOR A SIGNALLING GATEWAY FOR CONNECTING NETWORKS

PATENT
REEL: 038498 FRAME: 0401

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82199645	Granted	8271574	12/22/2004	9/18/2012	11/019867	US	Content Sharing And Collaboration
82199765	Granted	7694107	8/18/2005	4/6/2010	11/207047	US	DYNAMIC PERFORMANCE RATIO PROPORTIONATE DISTRIBUTION OF THREADS WITH
82199879	Granted	7406053	12/13/2004	7/29/2008	11/011938	US	METHODS AND SYSTEMS FOR CONTROLLING THE NUMBER OF COMPUTATIONS INVOLVED IN COMPUTING THE ALLOCATION OF RESOURCES GIVEN RESOURCE CONSTRAINTS
82199882	Granted	8301938	3/21/2005	41212	11/085429	US	Managing Memory Health
82199885	Granted	7480110	4/13/2005	1/20/2009	11/106246	US	Medium Dependent Write Equalization
82199888	Granted	7251090	4/13/2005	7/31/2007	11/106177	US	Pattern Dependent Write Equalization
82200005	Granted	7380723	11/1/2005	6/3/2008	11/264200	US	Monitoring Object Movement
82200008	Granted	8001353	6/10/2005	8/16/2011	11/150664	US	Apparatus And Method For Configuring Memory Blocks
82200068	Granted	7242215	10/27/2004	7/10/2007	10/974660	US	Nanoscale Latches And Impedance-encoded Logic For Use In Nanoscale State Machines, Nanoscale Pipelines, And In Other Nanoscale Electronic Circuits
82200125	Granted	8054829	7/24/2006	11/8/2011	11/491801	US	Communication System And Method
82200386	Granted	7530064	9/21/2004	5/5/2009	10/945613	US	Method And Apparatus For Automated Registry Clean-up
82200560	Granted	7969994	7/29/2005	6/28/2011	11/192534	US	Method And Apparatus For Multiple Connections To Group Of Switches
82200563	Granted	7768932	4/13/2005	8/3/2010	11/105042	US	Method For Analyzing A System In A Network
82200566	Granted	8306023	12/20/2004	11/6/2012	11/018061	US	Smuggling And Recovery Of Non-packet Information
82200704	Granted	8666957	7/26/2006	3/4/2014	11/493238	US	A Method Or Apparatus For Locking Shared Data
82200929	Granted	7313924	10/8/2004	1/1/2008	10/960573	US	Correlation Of Vent Tiles And Racks
82200932	Granted	8208477	8/24/2005	6/26/2012	11/210443	US	Data-dependent Overlay Network
82201010	Granted	7544591	1/18/2007	6/9/2009	11/624682	US	METHOD OF CREATING ISOLATED ELECTRODES IN A NANOWIRE-BASED DEVICE
82201142	Granted	7730731	11/1/2005	6/8/2010	11/264773	US	REFRIGERATION SYSTEM WITH SERIAL EVAPORATORS
82201253	Granted	8836717	10/27/2005	9/16/2014	11/260967	US	System, Method And Utility To Format Images Retreived From A Device
82201331	Granted	8015564	4/27/2005	9/6/2011	11/116687	US	Method Of Dispatching Tasks In Multi-proccesor Computing Environment
82201385	Granted	7342786	10/25/2005	3/11/2008	11/258849	US	Air Duct With Airtight Seal
82201439	Granted	8892582	3/3/2005	11/18/2014	11/885409	US	METHOD AND SYSTEM FOR IDENTIFYING OBJECTS OF SERVICE
82201448	Granted	8074057	3/8/2005	12/6/2011	11/074451	US	Systems And Methods For Controlling Instruction Throughput
82201619	Granted	8782186	7/31/2006	7/15/2014	11/496144	US	Systems And Methods For Addressing Managed Elements
82201745	Granted	7710898	1/31/2005	5/4/2010	11/048253	US	METHOD AND APPARATUS FOR AUTOMATIC VERIFICATION OF A ZONE CONFIGURATION OF A PLURALITY OF NETWORK SWITCHES

PATENT
REEL: 038498 FRAME: 0402

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82201751	Granted	7567438	6/14/2005	7/28/2009	11/151763	US	Heat Sink With Precompressed Bias Member
82201817	Published		11/5/2004		10/981654	US	Event Bookmarking
82201877	Granted	7308163	5/10/2005	12/11/2007	11/125135	US	Photonic Crystal System And Method Of Controlling/detecting Direction Of Radiation Propagation Using Photonic Crystal System
82201886	Granted	7741638	11/23/2005	6/22/2010	11/287113	US	Control Layer For A Nanoscale Electronic Switching Device
82201931	Granted	7609089	6/4/2008	10/27/2009	12/156877	US	FPGA ARCHITECTURE AT CONVENTONAL AND SUBMICRON SCALES
82201934	Granted	7545999	11/1/2005	6/9/2009	11/264206	US	Photonic Configuration
82201952	Granted	7289690	4/15/2005	10/30/2007	11/107098	US	Photonic Crystal Device For Fluid Sensing
82202000	Granted	7624313	3/28/2005	11/24/2009	11/092028	US	TCAM BIST With Redundancy
82202003	Granted	8046642	9/29/2009	10/25/2011	12/569397	US	TCAM BIST With Redundancy
82202012	Granted	7657787	4/11/2006	2/2/2010	11/401615	US	Method Of Restoring Communication State Of Process
82202078	Granted	7266744	12/14/2004	9/4/2007	11/011232	US	Application Specific Integrated Circuit With Internal Testing
82202198	Granted	7373553	11/8/2004	5/13/2008	10/984720	US	Computer Support Network With Customer Portal To Monitor Incident-handling Status By Vendor's Computer Service System
82202240	Granted	9003168	2/17/2005	4/7/2015	11/061696	US	Conjoined-core Chip Multiprocessor Shared Resource System
82202372	Granted	7350010	10/28/2005	3/25/2008	11/261374	US	METHOD AND AN APPARATUS FOR SWITCHING ROOT CELLS FOR A COMPUTER SYSTEM WITHOUT REQUIRING THE COMPUTER SYSTEM TO BE RE-BOOTED
82202387	Granted	7558649	5/3/2006	7/7/2009	11/416763	US	Method For Predicting Airflow Rates
82202498	Granted	7831635	8/26/2005	11/9/2010	11/212960	US	Collecting Information At A Remote Site
82202615	Granted	8631391	1/24/2005	1/14/2014	11/041653	US	A Method And A System For Process Discovery
82202618	Granted	7797184	10/6/2004	9/14/2010	10/959861	US	Methods And Systems For Cumulative Attribute Forecasting Using A PDF Of A Current-to-future Value Ratio
82202630	Granted	7529790	1/27/2005	5/5/2009	11/045558	US	SYSTEM AND METHOD OF DATA ANALYSIS
82202636	Published		3/18/2005		11/083576	US	Method And Apparatus For Product Management
82202639	Granted	8209201	12/8/2005	6/26/2012	11/297520	US	System And Method For Correlating Configurations
82202642	Granted	8533016	1/30/2005	9/10/2013	11/048301	US	System And Method For Selecting A Portfolio
82202645	Granted	8180664	12/1/2004	5/15/2012	11/001453	US	Method And Systems For Forecasting With Model-based PDF Estimates
82202690	Granted	7714876	3/10/2005	5/11/2010	11/076700	US	METHOD AND SYSTEM FOR CREATING VISUALIZATIONS
82202693	Granted	7460470	3/18/2005	12/2/2008	11/084600	US	SYSTEMS AND METHODS OF PRIORITY FAILOVER DETERMINATION
82202708	Granted	7870256	10/12/2005	1/11/2011	11/248932	US	Remote Desktop Performance Model For Assigning Resources
82202756	Granted	7370157	5/24/2005	5/6/2008	11/135706	US	Systems And Methods Of Sharing Removable Media Storage Devices In Multi-partitioned Systems

PATENT
REEL: 038498 FRAME: 0403

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82202873	Granted	8223770	8/3/2005	7/17/2012	11/575382	US	Network Virtualization
82202894	Granted	8799490	8/26/2005	8/5/2014	11/213363	US	Automated Application Server (AS) Permissions Provisioning
82202996	Granted	7773385	7/27/2005	8/10/2010	11/191368	US	COMPUTER SERVER RECEIVING A PLURALITY OF DIFFERENT POWER SUPPLY MODULES
82203005	Granted	8213411	8/26/2005	7/3/2012	11/212246	US	Charging Database With Class Of Service (COS)
82203017	Granted	7853934	6/23/2005	40526	11/165004	US	Hot-swapping A Dynamic Code Generator
82203020	Granted	7531918	3/30/2005	5/12/2009	11/093934	US	Hot Insertion And Extraction Of Power Supply Module
82203080	Granted	7613705	8/26/2005	11/3/2009	11/213361	US	Initial Filter Criteria (IFC) Database With Class Of Service (COS)
82203119	Granted	8068432	11/12/2004	11/29/2011	10/986966	US	Priority-based Network Fault Analysis
82203179	Granted	7827305	6/22/2005	11/2/2010	11/159454	US	Determination Of A State Of Flow Through Or A Cut Of A Parameterized Network
82203194	Granted	7958507	6/16/2005	6/7/2011	11/154305	US	JOB SCHEDULING SYSTEM AND METHOD
82203200	Granted	7653406	3/23/2006	1/26/2010	11/388371	US	ENABLING A PARTICIPANT OF A COMMUNICATION SESSION TO INITIATE A COMMUNICATION ACCORDING TO ANOTHER COMMUNICATION SERVICE
82203242	Granted	7380175	4/12/2005	5/27/2008	11/103519	US	Supercomputing
82203329	Granted	7783618	8/26/2005	8/24/2010	11/213357	US	Application Server (AS) Database With Class Of Service (COS)
82203494	Granted	8213429	8/3/2005	7/3/2012	11/575395	US	Virtual Network Interface
82203497	Granted	7307732	5/31/2005	12/11/2007	11/141286	US	Photonic Crystal Interferometer
82203680	Granted	8904000	1/13/2006	12/2/2014	11/331946	US	Provision Of Services Over A Common Delivery Platform Such As A Mobile Telephony Network
82203701	Published		8/23/2005		11/209579	US	REMOTE COMPUTER MANAGEMENT
82203743	Granted	7548969	7/27/2005	6/16/2009	11/190319	US	COMPUTER SYSTEM POLLING WITH ADJUSTABLE INTERVALS BASED ON RULES AND SERVER STATES
82203764	Allowed		4/15/2005		11/908498	US	System And Method Of Creating And Displaying Messages
82203827	Granted	7123172	7/29/2005	10/17/2006	11/192559	US	Method And System For Determining An Optimal Or Near Optimal Set Of Contexts By Constructing A Multi-directional Context Tree
82203830	Granted	8085888	10/13/2006	12/27/2011	11/580453	US	Method And System For Determining An Optimal Or Near Optimal Set Of Contexts By Constructing A Multi-directional Context Tree
82203953	Granted	7443063	10/11/2005	10/28/2008	11/247581	US	Cooling Fan With Motor Cooler
82203956	Granted	7976291	9/16/2008	40736	12/211659	US	Motor Cooler
82204070	Granted	7554228	5/25/2005	6/30/2009	11/137073	US	Cooling Fan With An Outer Rotor Motor
82204133	Granted	7326032	10/31/2005	2/5/2008	11/263131	US	Cooling Fan With Adjustable Tip Clearance
82204136	Granted	7433935	4/29/2005	10/7/2008	11/118244	US	Self-adapting Plug-in Service
82204262	Granted	8375360	11/22/2006	2/12/2013	11/603646	US	PROVISION OF SERVICES OVER A COMMON DELIVERY PLATFORM SUCH AS A MOBILE TELEPHONY NETWORK

PATENT
REEL: 038498 FRAME: 0404

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82204316	Published		4/21/2006		11/409351	US	Automatic Isolation Of Misbehaving Processes On A Computer System
82204325	Published		1/27/2005		11/045230	US	Disk Array Encryption Element
82204493	Granted	7752624	12/21/2004	7/6/2010	11/018684	US	System And Method For Associating Workload Management Definitions With Computing Containers
82204499	Granted	7979862	12/21/2004	7/12/2011	11/019070	US	System And Method For Replacing An Inoperable Master Workload Management Process
82204508	Granted	7458066	2/28/2005	11/25/2008	11/068659	US	Computer System And Method For Transferring Executables Between Partitions
82204517	Granted	7895012	5/3/2005	2/22/2011	11/121279	US	SYSTEMS AND METHODS FOR ORGANIZING AND STORING DATA
82204562	Granted	8295448	3/12/2007	10/23/2012	11/716991	US	Communication System And Method
82204637	Published		10/26/2006		11/553304	US	Network Administration Systems And Methods
82204691	Granted	8997102	6/3/2005	3/31/2015	11/144453	US	PRIORITIZATION OF PROCESSES FOR DEACTIVATING PROCESSES TO REDUCE MEMORY PRESSURE CONDITION (AS AMENDED)
82204703	Granted	7831768	10/30/2007	11/9/2010	11/928237	US	Method And Apparatus For Writing Data To A Disk Array
82204757	Granted	7710428	10/27/2005	5/4/2010	11/261169	US	Method And Apparatus For Filtering The Display Of Vectors In A Vector Image
82204805	Granted	7461273	5/16/2005	12/2/2008	11/129988	US	Power Distribution Among Servers
82204808	Granted	8155118	8/19/2005	4/10/2012	11/208330	US	Mirroring Of A Random Subset Of Network Traffic
82204811	Granted	8050185	8/24/2005	11/1/2011	11/211198	US	Sampling Of Network Traffic Based On Cam Lookup
82204871	Granted	8549134	2/11/2005	10/1/2013	11/055593	US	Network Event Indicator System
82204874	Granted	7873795	3/22/2005	1/18/2011	11/085547	US	Multi-process Support In A Shared Register
82204877	Granted	7376771	4/13/2005	5/20/2008	11/104547	US	Generic Interface For Operating Modes Of Modules
82204928	Granted	7941804	10/31/2005	5/10/2011	11/263140	US	ALLOCATING RESOURCES AMONG TIERED PARTITIONS OF DIFFERENT TYPES
82205015	Published		10/19/2005		11/665907	US	Telecommunications
82205120	Granted	7627859	4/4/2005	40148	11/098301	US	Method For Configuring Non-script Language Library Files To Be Run As Scripts
82205201	Granted	7397666	10/25/2006	7/8/2008	11/552963	US	Wedge Lock
82205264	Granted	7925650	7/27/2006	40645	11/495847	US	Image Management Methods, Image Management Systems, And Articles Of Manufacture
82205369	Granted	8250276	10/10/2007	8/21/2012	11/870151	US	Online Deletion Of Devices
82205375	Granted	8225301	3/16/2005	7/17/2012	11/081465	US	Software Licensing Management
82205429	Granted	7825512	9/12/2005	11/2/2010	11/224919	US	Electronic Package With Compliant Electrically-conductive Ball Interconnect
82205438	Granted	9069666	3/15/2006	6/30/2015	11/377755	US	Systems And Methods For Controlling Error Reporting And Resolution
82205489	Granted	7886055	4/28/2005	2/8/2011	11/117197	US	Allocating Resources In A System Having Multiple Tiers

PATENT
REEL: 038498 FRAME: 0405

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82205564	Granted	8412826	3/21/2005	4/2/2013	11/085377	US	MESSAGE EXCHANGE BETWEEN SOFTWARE COMPONENTS
82205873	Granted	7596618	12/7/2004	9/29/2009	11/006061	US	Splitting A Workload Of A Node
82205942	Granted	7984241	7/26/2006	7/19/2011	11/492841	US	Controlling Processor Access To Cache Memory
82205999	Granted	8392668	4/4/2005	41338	11/099017	US	Distributed-state-information-based Distributed Computing Systems And Methods And Protocols For Managing Distributed State Information
82206071	Granted	7760742	3/15/2005	40379	11/081470	US	SYSTEMS AND METHODS OF USING PSEUDO-ROUTES FOR DATA TRANSMISSIONS
82206074	Granted	7516364	10/31/2005	4/7/2009	11/263188	US	Method For Testing Network Devices Using Breakpointing
82206077	Published		2/4/2005		11/051572	US	Mesh Mirroring With Path Tags
82206113	Granted	7624177	5/25/2005	11/24/2009	11/137885	US	Syslog Message Handling
82206116	Granted	7873608	5/25/2005	1/18/2011	11/138530	US	Pattern Matching Algorithm To Determine Valid Syslog Messages
82206119	Granted	7839936	5/5/2005	11/23/2010	11/123483	US	Method And System For Determining A Number Of Data Packets Required To Transport A Data Block
82206122	Granted	8799444	3/18/2005	41856	11/084310	US	Automated Host Discovery And Path Tracing By Network Management Server
82206185	Granted	7959419	6/1/2005	6/14/2011	11/143356	US	REMOVABLE FAN FOR ELECTRONIC DEVICES
82206191	Granted	8245109	3/31/2006	8/14/2012	11/394949	US	Error Checking And Correction (ECC) System And Method
82206194	Granted	7624323	10/31/2006	11/24/2009	11/590047	US	Method And Apparatus For Testing An IC Device Based On Relative Timing Of Test Signals
82206200	Granted	7756976	3/18/2005	7/13/2010	11/084440	US	SYSTEMS AND METHODS FOR DENYING ROGUE DHCP SERVICES
82206236	Granted	8108865	7/13/2007	1/31/2012	11/777480	US	ACQUIRING MUTEXES BY A FORKING THREAD (amended)
82206248	Granted	7840833	1/29/2008	11/23/2010	12/022067	US	Managing A Node Cluster
82206254	Granted	7668703	6/7/2005	2/23/2010	11/147096	US	Determining Required Capacity For A Resource
82206257	Granted	7925757	7/25/2006	4/12/2011	11/492739	US	Determining A Portion Of Required Capacity Attributed To Applications In Multiple Classes Of Service
82206266	Granted	8103486	10/12/2006	1/24/2012	11/546632	US	Determining Required Capacity For A Resource
82206317	Granted	7480923	4/28/2005	1/20/2009	11/117037	US	Drive Bezels For Computer Storage Systems
82206389	Granted	8656269	3/27/2006	41688	11/389747	US	Providing A Functionality By Loading Logic Into A Document
82206425	Granted	7340620	5/10/2005	3/4/2008	11/126479	US	RAPID LOAD REDUCTION FOR POWER-OVER-LAN SYSTEM USING LOWER AND HIGHER PRIORITY STATES FOR PORTS
82206428	Granted	8151014	10/3/2005	4/3/2012	11/242089	US	Raid Performance Using Command Descriptor Block Pointer Forwarding Technique
82206494	Granted	7673305	10/23/2006	3/2/2010	11/585017	US	System And Method Of Expediting Certain Jobs In A Computer Processing System
82206563	Granted	8126856	5/26/2005	2/28/2012	11/138020	US	File Access Management System
82206632	Granted	7711914	6/28/2005	5/4/2010	11/169235	US	Debugging Using Virtual Watchpoints

PATENT
REEL: 038498 FRAME: 0406

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0407

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82206701	Granted	8908708	10/28/2005	12/9/2014	11/262434	US	A Secure Method And Apparatus For Enabling The Provisioning Of A Shared Service In A Utility Computing Environment
82206740	Granted	8364874	1/17/2006	1/29/2013	11/332956	US	Prioritized Polling For Virtual Network Interfaces
82206743	Allowed		3/30/2005		11/096577	US	Database Extension Structure
82206746	Granted	8386520	3/30/2005	2/26/2013	11/096576	US	Database Security Structure
82206749	Granted	8488472	2/22/2006	7/16/2013	11/359645	US	Automated Cable Identification And Verification System
82206758	Granted	7779218	7/29/2005	8/17/2010	11/192806	US	DATA RESYNCHRONIZATION IN A REMOTE MIRRORING APPLICATION
82206860	Granted	7962656	1/3/2006	6/14/2011	11/324518	US	Command Encoding Of Data To Enable High-level Functions In Computer Networks
82206881	Granted	7323920	6/13/2005	1/29/2008	11/152274	US	Soft-error Rate Improvement In A Latch Using Low-pass Filtering
82206989	Granted	8020038	9/28/2006	9/13/2011	11/529145	US	System And Method For Adjusting Operating Points Of A Processor Based On Detected Processor Errors
82206992	Granted	8209492	6/14/2005	41086	11/152305	US	Systems And Methods Of Accessing Common Registers In A Multi-core Processor
82206998	Granted	7415580	8/1/2005	8/19/2008	11/194372	US	System For Determining The Position Of An Element In Memory
82207010	Published		1/19/2006		11/795144	US	TRANSACTION PROXY IN A TELECOMMUNICATIONS OR MESSAGING SYSTEM AND RELATED METHODS
82207067	Granted	8990547	8/23/2005	3/24/2015	11/209555	US	Systems And Methods For Re-ordering Instructions
82207073	Granted	8219780	9/16/2005	7/10/2012	11/228058	US	Mitigating Context Switch Cache Miss Penalty
82207133	Granted	8346740	7/22/2005	1/1/2013	11/187149	US	File Cache Management System
82207304	Granted	7719836	5/27/2009	5/18/2010	12/472764	US	Cooling Fan Module
82207385	Granted	7783140	6/9/2005	8/24/2010	11/148583	US	Optically Coupled Integrated Circuit Layers
82207610	Granted	7640760	3/25/2005	1/5/2010	11/089608	US	Temperature Control Using A Sensor Network
82207634	Granted	8051156	7/28/2006	11/1/2011	11/495360	US	Managing Power And Performance
82207676	Granted	7536567	11/18/2005	5/19/2009	11/283356	US	Bios-based Systems And Methods Of Processor Power Management
82207685	Granted	8054976	6/16/2006	11/8/2011	11/454624	US	Quantum Key Distribution Apparatus & Method
82207817	Granted	7548540	7/17/2006	6/16/2009	11/487313	US	Dynamic Discovery Of ISO Layer-2 Topology
82207886	Granted	8024737	4/24/2006	9/20/2011	11/410471	US	Method And A System That Enables The Calculation Of Resource Requirements For A Composite Appliction
82207985	Granted	7877803	6/27/2005	1/25/2011	11/167346	US	Automated Immune Response For A Computer
82208054	Granted	7926042	10/31/2005	4/12/2011	11/264651	US	System And Method For Dynamic Instrumentation
82208069	Granted	8126427	4/10/2006	2/28/2012	11/911846	US	Method And Apparatus For Supplying Billing Information To A Communication Device
82208111	Allowed		1/23/2006		11/337457	US	Probabilistic Correlation Of System Events With Program Instructions

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82208249	Granted	7545242	11/1/2005	6/9/2009	11/264410	US	Distributing Clock Signals Using Metamaterial-based Waveguides
82208312	Granted	7359587	11/1/2005	4/15/2008	11/264210	US	Photonic Interconnections That Include Optical Transmission Paths For Transmitting Optical Signals
82208315	Granted	7639912	1/31/2007	12/29/2009	11/701159	US	Apparatus And Method For Subterranean Distribution Of Optical Signals
82208387	Granted	8783051	4/1/2008	7/22/2014	12/060804	US	Data Processing System Storage Unit, Data Processing System Cooling Apparatus And Data Processing System
82208507	Granted	7765528	9/21/2005	7/27/2010	11/232330	US	Identifying Sources Of Memory Retention
82208510	Granted	7512600	6/10/2005	39903	11/150803	US	Use Of Multi-join Operator And Rules As Framework For Join Tree Processing In Database Systems
82208555	Granted	7742310	9/29/2006	6/22/2010	11/541084	US	Sequencer
82208570	Granted	8145627	6/10/2005	3/27/2012	11/150388	US	Use Of Connectivity Analysis To Assist Rule-based Optimizers
82208609	Granted	7788664	11/8/2005	8/31/2010	11/270113	US	METHOD OF VIRTUALIZING COUNTER IN COMPUTER SYSTEM
82208612	Granted	8209681	11/8/2005	6/26/2012	11/270089	US	Method Of Sampling Hardware Events In Computer System
82208633	Granted	7186150	10/27/2005	3/6/2007	11/261728	US	Split Key In A Press-fit Connector
82208687	Granted	8170034	3/1/2005	5/1/2012	11/817611	US	Packet Forwarding System And Packet Forwarding Device
82208813	Granted	7285947	8/31/2005	10/23/2007	11/216732	US	Power Metering Using Current-indicative Signal
82208873	Granted	7904686	5/13/2008	3/8/2011	12/152595	US	Data Security For Use With A File System
82208882	Granted	7814078	6/20/2005	40463	11/156955	US	Identification Of Files With Similar Content
82208885	Granted	8423396	4/28/2005	4/16/2013	11/116862	US	A System And Method For Process Discovery
82208888	Granted	7809781	4/29/2005	10/5/2010	11/118832	US	DETERMINING A TIME POINT CORRESPONDING TO CHANGE IN DATA VALUES BASED ON FITTING WITH RESPECT TO PLURAL AGGREGATE VALUE SETS
82208921	Granted	7593904	6/30/2005	9/22/2009	11/172187	US	EFFECTING ACTION TO ADDRESS AN ISSUE ASSOCIATED WITH A CATEGORY BASED ON INFORMATION THAT ENABLES RANKING OF CATEGORIES
82208927	Granted	7437338	3/21/2006	10/14/2008	11/386005	US	PROVIDING INFORMATION REGARDING A TREND BASED ON OUTPUT OF A CATEGORIZER
82208930	Application		2/28/2006		11/364108	US	Identifying An Emerging Or New Category
82208933	Granted	7668789	3/30/2006	2/23/2010	11/393487	US	Comparing Distributions Of Cases Over Groups Of Categories
82208942	Granted	8898141	12/9/2005	11/25/2014	11/298415	US	System And Method For Information Management
82209056	Granted	7756994	3/10/2005	7/13/2010	10/549139	US	CONSISTENT INFORMATION MANAGEMENT AMONG SERVER DEVICES
82209242	Granted	7461216	2/23/2006	12/2/2008	11/359501	US	Memory Controller
82209311	Granted	7806489	8/5/2005	10/5/2010	11/198792	US	Latch Systems For A Drive Cage Assembly
82209365	Granted	7816975	9/20/2005	10/19/2010	11/230786	US	Circuit And Method For Bias Voltage Generation

PATENT
REEL: 038498 FRAME: 0408

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82209422	Granted	7478255	12/13/2005	1/13/2009	11/304370	US	Clock Distribution In Multi-cell Computing Systems
82209449	Granted	7720377	1/23/2006	5/18/2010	11/337328	US	Compute Clusters Employing Photonic Interconnections For Transmitting Optical Signals Between Compute Cluster Nodes
82209563	Granted	D541286	8/3/2005	4/24/2007	29/235645	US	Computer Having Release Handles
82209566	Granted	7492329	10/12/2006	39861	11/580338	US	Composite Material With Chirped Resonant Cells
82209608	Granted	7466544	1/25/2008	12/16/2008	12/019745	US	Latching Mechanism
82209611	Granted	7554815	5/31/2006	6/30/2009	11/445074	US	Resilient Clip For Circuit Board
82209620	Granted	7653833	10/31/2006	1/26/2010	11/590321	US	Terminating A Non-clustered Workload In Response To A Failure Of A System With A Clustered Workload
82209671	Granted	7819307	10/27/2005	10/26/2010	11/260061	US	METHOD AND SYSTEM FOR MANAGING MONETARY VALUE ON A MOBILE DEVICE
82209740	Granted	7818746	3/30/2005	10/19/2010	11/093453	US	SYSTEM AND METHOD FOR BENCHMARKING USING A MULTI-THREADED LOAD GENERATOR
82209743	Granted	D540805	8/3/2005	4/17/2007	29/235640	US	Computer Having A Pull-tab
82209749	Granted	8713667	7/8/2005	4/29/2014	11/177715	US	Policy Based Cryptographic Application Programming Interface In Secure Memory
82209761	Granted	7602789	10/23/2006	10/13/2009	11/585034	US	Low Overhead Method To Detect New Connection Rate For Network Traffic
82209869	Granted	7624234	8/31/2006	11/24/2009	11/514549	US	Directory Caches, And Methods For Operation Thereof
82209878	Granted	D544866	8/3/2005	6/19/2007	29/235639	US	Front Security Knob For A Computer Memory Module (as Amended 3/7/07 On NOA)
82209881	Granted	7869367	11/30/2005	1/11/2011	11/291200	US	Methods And Systems For Checking Expected Network Traffic
82209884	Granted	D540329	8/3/2005	4/10/2007	29/235637	US	Computer Device Having A Front Bezel For A Memory Mudule Receptacle
82209887	Granted	D541285	8/3/2005	4/24/2007	29/235642	US	Computer Processor Module Having A Front Release Mechanism
82209998	Granted	8949404	5/24/2005	2/3/2015	11/135761	US	Acquiring Graphical Operating System Post-failure Screen
82210004	Granted	8000462	8/12/2005	8/16/2011	11/203362	US	Screening Of Calls In A Packet-based Network
82210196	Granted	8458336	4/25/2006	6/4/2013	11/411997	US	STATE MACHINE EVENT RESTORATION (As Amended)
82210232	Granted	7636643	6/29/2006	12/22/2009	11/480033	US	GAUGE HAVING A DYNAMICALLY UPDATED INDICIA OF A VALUE'S NORMAL RANGE, AND METHODS AND MEANS TO FACILITATE THE DISPLAY AND UPDATE OF SAME
82210235	Granted	7640503	10/31/2006	12/29/2009	11/590162	US	Graphic Representation Of Computer Reconfigurations
82210499	Granted	7859997	5/26/2005	12/28/2010	11/139168	US	Packet Handling On A Network Device
82210511	Granted	7594090	7/18/2005	40078	11/184295	US	Efficient Data Storage
82210574	Granted	7650471	1/6/2006	1/19/2010	11/326919	US	Head Of Queue Cache For Communication Interfaces
82210622	Published		11/22/2005		11/285849	US	Method And Apparatus For Monitoring Software Usage

PATENT
REEL: 038498 FRAME: 0409

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82210694	Granted	8914665	7/6/2006	12/16/2014	11/480917	US	READING OR STORING BOOT DATA IN AUXILIARY MEMORY OF A TAPE CARTRIDGE
82210865	Granted	7966608	7/26/2006	6/21/2011	11/493426	US	METHOD AND APPARATUS FOR PROVIDING A COMPILER INTERFACE
82210868	Granted	8595612	10/26/2006	11/26/2013	11/586872	US	Display Of Web Page With Available Data
82210871	Granted	7251092	7/25/2005	7/31/2007	11/188558	US	Data Transfer Apparatus And Method For Transferring Data
82210874	Granted	8484583	10/26/2005	7/9/2013	11/259215	US	Operator Control Panel Having A Replaceable Default Screen
82210880	Granted	7756676	11/14/2005	7/13/2010	11/273696	US	Detecting Data Change Based On Adjusted Data Values
82210931	Granted	7917712	9/30/2005	3/29/2011	11/240120	US	Method And System For Governing Access To Storage Device On San
82210937	Granted	8214638	9/26/2006	7/3/2012	11/535470	US	Using Multiple Certificates To Distribute Public Keys
82210943	Granted	8516226	1/23/2006	8/20/2013	11/337425	US	EXECUTING A PREFETCHING POLICY RESPONSIVE TO ENTRY INTO AN EXECUTION PHASE OF AN APPLICATION (as amended)
82211060	Published		10/25/2005		12/091172	US	Memory Access Control
82211072	Granted	8103861	2/3/2006	1/24/2012	11/346736	US	Method And System Of Presenting An Interrupt Request To Processors Executing In Lock Step
82211177	Granted	8880489	8/4/2005	11/4/2014	11/198806	US	Discovery Across Multiple Registries
82211180	Granted	7227379	7/27/2005	6/5/2007	11/192197	US	Nanoscale Latch-array Processing Engines
82211183	Granted	7783509	3/10/2006	8/24/2010	11/373592	US	DETERMINING THAT A CHANGE HAS OCCURED IN RESPONSE TO DETECTING A BURST OF ACTIVITY
82211186	Granted	7519857	6/16/2006	4/14/2009	11/424551	US	METHOD, APPRATUS, AND SYSTEM FOR A SOFTWARE BASED BUSINESS CONTINUITY SOLUTION FOR A COMPUTING ENVIRONMENT
82211252	Granted	7891464	6/15/2006	2/22/2011	11/453694	US	System And Method For Noise Suppression
82211294	Granted	8392927	5/19/2005	3/5/2013	11/134681	US	System And Method For Determining A Partition Of A Consumer's Resource Access Demands Between A Plurality Of Different Classes Of Service
82211300	Granted	7849327	1/19/2005	12/7/2010	11/040261	US	A TECHNIQUE TO VIRTUALIZE PROCESSOR INPUT/OUTPUT RESOURCES
82211303	Granted	8214830	1/19/2005	7/3/2012	11/041061	US	IMPROVING PERFORMANCE IN A VIRTUALIZATION ARCHITECTURE WITH A PROCESSOR ABSTRACTION LAYER
82211315	Granted	7624425	10/28/2005	11/24/2009	11/262431	US	Method And Apparatus For Generating A Security Document For A Farm In A Utility Computing Environment
82211378	Granted	8688821	10/26/2005	4/1/2014	11/259224	US	Automatic Transmission Of Support Information From Storage Apparatus
82211492	Granted	7532119	11/8/2005	5/12/2009	11/269237	US	Multi-tiered Network For Gathering Detected Condition Information

PATENT
REEL: 038498 FRAME: 0410

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82211567	Granted	7561439	10/28/2005	7/14/2009	11/261055	US	Mounting Slot Connector On Mezzanine Board In Electronic System
82211675	Granted	8386702	10/27/2005	2/26/2013	11/261270	US	Memory Controller
82211759	Granted	D601010	3/20/2006	9/29/2009	29/256413	US	Claimshell Package
82211795	Granted	7894434	7/3/2006	2/22/2011	11/428410	US	METHOD, APPRATUS, AND SYSTEM FOR CAPTURING TRAFFIC STATISTICS BETWEEN TWO SITES OF MPLS BASED VPN
82211804	Granted	8205146	7/21/2005	6/19/2012	11/186372	US	Persistent Error Detection In Digital Memory
82211867	Published		10/28/2005		11/262097	US	Telephony And Web Services Coordination
82211921	Granted	7913308	10/31/2005	3/22/2011	11/263680	US	Secure Remote Referencing Of A Networked Object Of Service
82211933	Granted	7327571	9/6/2005	39483	11/220049	US	Thermal Load Balancing Systems And Methods
82212002	Granted	8773436	9/27/2006	7/8/2014	11/527867	US	Pixel Charts With Data Dependent Display Spaces
82212008	Granted	7761458	2/1/2006	7/20/2010	11/345834	US	Segmentation Of A Data Sequence
82212068	Granted	8248956	10/31/2005	8/21/2012	12/092101	US	METHOD OR APPARATUS FOR DISTRIBUTING ROUTING INFORMATION IN NETWORKS
82212071	Granted	7433763	4/20/2006	10/7/2008	11/407611	US	Power Management Logic That Reconfigures A Load When A Power Supply Fails
82212251	Granted	7623533	10/14/2005	11/24/2009	11/250663	US	Switch Meshing Using Multiple Directional Spanning Trees
82212305	Granted	7218996	6/26/2006	5/15/2007	11/474765	US	Method For Thermally Managing A Room
82212320	Granted	7715251	10/25/2006	5/11/2010	11/586057	US	Memory Access Strobe Configuration System And Process
82212419	Granted	7652575	10/27/2005	1/26/2010	11/262221	US	MONITORING OF PACKAGES
82212440	Granted	7971131	6/24/2005	6/28/2011	11/166895	US	System And Method For Iterative Denoising And Error Correction Decoding
82212485	Granted	7159082	10/3/2005	39084	11/242708	US	System And Method For Throttling Memory Accesses
82212491	Granted	7539881	4/15/2006	5/26/2009	11/404455	US	SYSTEM AND METHOD FOR DYNAMICALLY ADJUSTING POWER CAPS FOR ELECTRONIC COMPONENTS BASED ON POWER CONSUMPTION
82212497	Published		9/15/2005		11/227763	US	Traffic Anomaly Analysis For The Detection Of Aberrant Network Code
82212551	Granted	7502971	10/12/2005	3/10/2009	11/248692	US	Determining A Recurrent Problem Of A Computer Resource Using Signatures
82212611	Granted	9143524	7/26/2006	9/22/2015	11/494289	US	PROPAGATION OF MALICIOUS CODE THROUGH AN INFORMATION TECHNOLOGY NETWORK
82212614	Granted	7581125	9/22/2005	8/25/2009	11/232525	US	Agent For Managing Power Among Electronic Systems
82212617	Granted	7362766	6/24/2005	4/22/2008	11/166326	US	System And Method For Dynamically Controlling Weights Assigned To Consumers Competing For A Shared Resource
82212620	Granted	8612028	6/10/2005	12/17/2013	11/149991	US	System And Method For Determining Correct Sign Of Response Of An Adaptive Controller

PATENT
REEL: 038498 FRAME: 0411

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82212623	Granted	7761875	6/10/2005	7/20/2010	11/151159	US	WEIGHTED PROPORTIONAL-SHARE SCHEDULER THAT MAINTAINS FAIRNESS IN ALLOCATING SHARES OF A RESOURCE TO COMPETING CONSUMERS WHEN WEIGHTS ASSIGNED TO THE CONSUMERS CHANGE
82212680	Published		4/27/2007		11/796170	US	CREATING A DATA STRUCTURE THAT SPECIFIES RELATIONSHIPS BETWEEN NETWORKED OBJECTS
82212854	Granted	8862841	4/25/2006	10/14/2014	11/411385	US	Method And System For Scaleable, Distributed, Differential Electronic-data Backup And Archiving
82212875	Granted	8688890	12/5/2006	4/1/2014	11/635316	US	Bit Ordering For Communicating An Address On A Serial Fabric
82212881	Granted	8874806	7/26/2006	10/28/2014	11/492830	US	METHODS AND APPARATUS FOR MANAGING MULTIPATHING SOFTWARE
82212992	Granted	7694193	3/13/2007	4/6/2010	11/685395	US	SYSTEMS AND METHODS FOR IMPLEMENTING A STRIDE VALUE FOR ACCESSING MEMORY
82212995	Granted	7844868	1/27/2010	11/30/2010	12/694718	US	SYSTEM AND METHOD FOR IMPLEMENTING A STRIDE VALUE FOR MEMORY TESTING
82212998	Granted	8744987	4/19/2006	6/3/2014	11/406689	US	Count Estimation Via Machine Learning
82213166	Granted	7610468	10/26/2006	10/27/2009	11/553444	US	Modified Buddy System Memory Allocation
82213184	Granted	7966656	3/13/2007	6/21/2011	11/717153	US	METHOD OF COUPLING A SWITCHED CIRCUIT NETWORK TO AN INTERNET PROTOCOL NETWORK
82213310	Granted	7467333	9/1/2005	39798	11/218235	US	System And Method For Interposition-based Selective Simulation Of Faults For Access Requests To A Data Storage System
82213355	Granted	7406222	2/16/2006	7/29/2008	11/357587	US	Composite Evanescent Waveguides And Associated Methods
82213361	Granted	7499611	6/26/2008	3/3/2009	12/147335	US	Composite Evanescent Waveguides And Associated Methods
82213625	Granted	8218566	10/7/2005	7/10/2012	11/245667	US	Systems And Methods For Making Serial Ports Of Existing Computers Available Over A Network
82213670	Granted	7489583	9/6/2005	2/10/2009	11/221036	US	Constant-weight-code-based Addressing Of Nanoscale And Mixed Microscale/nanoscale Arrays
82213685	Granted	7912998	1/6/2006	3/22/2011	11/326918	US	DMA Access Systems And Methods
82213811	Granted	7774636	10/17/2007	8/10/2010	11/873736	US	A METHOD AND SYSTEM FOR KERNEL PANIC RECOVERY
82213817	Published		7/26/2006		11/493006	US	A METHOD OF RETRIEVING DATA FROM A DATA REPOSITORY, AND SOFTWARE AND APPARATUS RELATING THERETO
82213856	Granted	7543128	7/25/2006	6/2/2009	11/493389	US	Method And Apparatus For Repurposing Compute Resources To Implement, Or Not Implement, Storage Access Protocols
82213859	Granted	8051162	7/28/2006	11/1/2011	11/495365	US	Data Assurance In Server Consolidation

PATENT
REEL: 038498 FRAME: 0412

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82213883	Granted	7840765	10/31/2006	11/23/2010	11/591057	US	RDMA COPY-ON-WRITE
82213925	Granted	9032127	9/14/2006	5/12/2015	11/520910	US	Method Of Balancing I/O Device Interrupt Service Loading In A Computer System
82213982	Granted	8255516	4/28/2006	8/28/2012	11/413349	US	Performance-data Based Server Consolidation
82214066	Granted	7761081	12/19/2005	7/20/2010	11/311854	US	Service Provisioning
82214105	Granted	8104041	4/24/2006	40932	11/409853	US	Computer Workload Redistribution
82214129	Granted	8743432	10/5/2005	6/3/2014	11/244092	US	USB Device With Pictbridge Capability
82214168	Granted	7260666	7/26/2005	8/21/2007	11/189572	US	Supporting Multiple Methods For Device Hotplug In A Single Computer
82214174	Granted	8606894	4/27/2006	12/10/2013	11/412347	US	Server Consolidation
82214240	Granted	8880963	9/6/2005	11/4/2014	12/065664	US	Message Processing Device And Method Thereof
82214258	Granted	8521652	5/19/2006	8/27/2013	11/437383	US	Discovering Licenses In Software Files
82214297	Published		10/31/2006		11/591344	US	Automated Management Of Application-specific Tasks From The Internet Via Distributed Task Manager Agents In A Local Area Network
82214357	Granted	7561027	10/26/2006	40008	11/552983	US	SENSING DEVICE
82214363	Granted	7770056	10/17/2007	8/3/2010	11/873713	US	SYSTEM AND METHOD FOR DYNAMIC PAGE CLASSIFICATION FOR MEMORY DUMPING
82214441	Granted	8478851	1/3/2007	7/2/2013	12/160729	US	APPARATUS FOR USE WITH A GROUP COMMUNICATION NETWORK
82214498	Application		4/27/2006		11/414274	US	A System And Method For Product Portfolio Selction Based On A Product Impact Metric
82214501	Granted	8042166	10/26/2005	10/18/2011	11/259285	US	Printing via user equipment
82214567	Granted	7490108	10/19/2005	2/10/2009	11/254112	US	Data Consolidation
82214615	Granted	7894699	10/16/2006	2/22/2011	11/582207	US	Photonic-based Interconnects For Interconnecting Multiple Integrated Circuits
82214666	Granted	7843026	11/30/2005	11/30/2010	11/290685	US	Composite Material With Conductive Structures Of Random Size, Shape, Orientation, Or Location
82214672	Granted	7924413	2/29/2008	4/12/2011	12/074133	US	Nanowire-based Photonic Devices
82214690	Granted	8143682	10/31/2006	3/27/2012	11/590959	US	METHODS AND SYSTEMS FOR IMPLEMENTING LOGIC GATES WITH SPINTRONIC DEVICES LOCATED AT NANOWIRE CROSSBAR JUNCTIONS OF CROSSBAR ARRAYS
82214693	Granted	7465954	4/28/2006	12/16/2008	11/413375	US	Nanowire Devices And Systems, Light-emitting Nanowires, And Methods Of Precisely Positioning Nanoparticles
82214729	Granted	7319416	1/30/2006	1/15/2008	11/343325	US	Tunneling-resistor-junction-based Microscale/nanoscale Demultiplexer Arrays
82214867	Granted	7447022	8/9/2006	11/4/2008	11/501657	US	Rack-mount Equipment Bay Cooling Heat Exchanger
82214879	Granted	7856571	1/22/2007	12/21/2010	11/625562	US	METHOD AND SYSTEM FOR COMMUNICATION EMPLOYING DUAL SLEW RATES

PATENT
REEL: 038498 FRAME: 0413

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82214915	Granted	7183924	10/13/2005	2/27/2007	11/249544	US	Storing Configuration Information And A Service Record For An Item In An Rfid Tag
82214939	Granted	8898265	6/22/2006	11/25/2014	11/474117	US	Determining Data Flows In A Network
82215125	Granted	7969969	7/5/2007	40722	11/822353	US	Signalling Gateway
82215239	Granted	8190416	10/17/2007	5/29/2012	11/873636	US	COMPUTER NETWORK MANAGEMENT
82215293	Granted	8001407	10/31/2006	8/16/2011	11/590320	US	Server Configured For Managing Power And Performance
82215368	Granted	8576505	10/28/2005	11/5/2013	11/260994	US	Tape Drive Apparatus And Method
82215374	Granted	8028163	7/26/2006	9/27/2011	11/493005	US	A METHOD OF DIGITALLY SIGNING DATA AND A DATA REPOSITORY STORING DIGITALLY SIGNED DATA
82215485	Granted	7289289	10/27/2005	10/30/2007	11/260791	US	Recording Servo Stripes Onto A Servo Track
82215551	Granted	7609703	9/15/2006	10/27/2009	11/522151	US	GROUP COMMUNICATION SYSTEM AND METHOD
82215554	Granted	7647454	6/12/2006	1/12/2010	11/450987	US	Transactional Shared Memory System And Method Of Control
82215602	Granted	8467301	6/5/2006	6/18/2013	11/446914	US	Router Misconfiguration Diagnosis
82215740	Granted	8972345	9/27/2006	3/3/2015	11/527877	US	Modifying Data Structures In Distributed File Systems
82215746	Granted	7779960	8/18/2006	8/24/2010	11/506644	US	System And Method For Noise Suppression
82215809	Granted	8856105	4/28/2006	10/7/2014	11/413808	US	Dynamic Data Navigation
82215986	Granted	7895409	7/30/2007	2/22/2011	11/888098	US	Application Inspection Tool For Determining A Security Partition
82216004	Granted	7112069	8/18/2005	38986	11/206287	US	Attachment Plate For Directly Mating Circuit Boards
82216058	Granted	9015308	1/17/2007	4/21/2015	12/162979	US	Multilayer Distributed Processing System
82216103	Granted	7606272	1/31/2006	10/20/2009	11/343434	US	Methods And Systems For Avoiding Transmission-channel Disruptions
82216169	Granted	7676671	10/31/2006	3/9/2010	11/554761	US	SYSTEM FOR MULTI-PROFILE BOOT SELECTION OF AN EMBEDDED DEVICE
82216178	Published		9/19/2006		11/523868	US	Method And System Using One-time Pad Data To Evidence The Possession Of A Particular Attribute
82216253	Granted	7636828	10/31/2006	12/22/2009	11/590116	US	Method For Automatic Adjustment Of Timing Of Double Data Rate Interface
82216367	Granted	9038051	10/31/2006	5/19/2015	11/590077	US	Selecting Patch Solutions Based On Availability Of Information Regarding Patches Previously Installed On User System
82216424	Granted	8291334	4/30/2007	10/16/2012	11/799427	US	Method And Apparatus For Creating A Digital Dashboard
82216499	Granted	8261332	7/8/2008	9/4/2012	12/169113	US	ESTABLISHING A TRUST RELATIONSHIP BETWEEN COMPUTING ENTITIES
82216505	Granted	8248816	10/31/2006	8/21/2012	11/591021	US	A Layout Geometry For Printed Circuit Boards With Adative Antipads
82216556	Granted	7519767	5/30/2006	4/14/2009	11/442128	US	Emulated Tape-based Storage Media
82216604	Granted	8149094	4/30/2007	4/3/2012	11/799146	US	Clustering Methods For Radio-frequency-identifier Networks

PATENT
REEL: 038498 FRAME: 0414

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0415

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82216607	Granted	8093989	12/6/2006	1/10/2012	11/635738	US	Method And System For Scheduling Multi-radio-frequency-identification-tag-reader Networks To Increase Interrogation Efficiency
82216610	Granted	8052055	1/31/2007	11/8/2011	11/701225	US	Method And System For Perturbing Multi-radio-frequency-identification-tag-reader Networks To Increase Interrogation Efficiency
82216745	Granted	7716425	9/27/2006	5/11/2010	11/527868	US	Prefetching Data In Distributed Storage Systems
82216751	Granted	7898986	10/31/2006	3/1/2011	11/590499	US	Port Configuration
82216814	Granted	8510833	10/27/2005	8/13/2013	11/260130	US	Connection-rate Filtering Using ARP Requests
82216817	Granted	8533817	10/5/2005	9/10/2013	11/244505	US	Method And Apparatus For Connection-rate Filtering
82217000	Granted	7694169	1/31/2007	4/6/2010	11/700126	US	Restoring A Client Device
82217114	Allowed		10/13/2006		11/580459	US	Graphical Representation Of A Port Security State
82217165	Granted	8103756	10/31/2006	1/24/2012	11/555189	US	Network Access Device Capability Alert Mechanism
82217171	Granted	7971193	7/14/2006	6/28/2011	11/486552	US	METHODS FOR PERFORMINING CROSS MODULE CONTEXT-SENSITIVE SECURITY ANALYSIS
82217174	Granted	7644204	10/31/2006	1/5/2010	11/554838	US	SCSI I/O Coordinator
82217177	Granted	7555607	11/10/2005	6/30/2009	11/271535	US	PROGRAM THREAD SYNCRONIZATION FOR INSTRUCTION CACHELINES
82217183	Granted	7984242	6/1/2009	7/19/2011	12/476109	US	Program Thread Synchronization
82217189	Granted	7647530	10/13/2006	1/12/2010	11/580449	US	Network Fault Pattern Analyzer
82217225	Granted	8188494	6/28/2006	5/29/2012	11/477298	US	UTILIZING NANOWIRE FOR GENERATING WHITE LIGHT
82217228	Granted	8639551	7/31/2006	1/28/2014	11/496948	US	METHOD AND SYSTEM FOR WORKFORCE RELATED RESOURCE PLANNING
82217237	Granted	8396966	10/26/2005	3/12/2013	11/260514	US	METHOD AND AN APPARATUS FOR CREATING VISUAL REPRESENTATIONS OF FARMS THAT ENABLES CONNECTING FARMS SECURELY
82217411	Granted	9043465	7/10/2007	5/26/2015	12/373119	US	METHOD OF PROVIDING SERVICES IN A NETWORK, NETWORK ELEMENT AND COMPUTER PROGRAM PRODUCT
82217474	Published		3/20/2008		12/052686	US	Data Processing System And Method
82217480	Granted	7934105	7/26/2006	4/26/2011	11/494780	US	Data Transfer Device
82217492	Granted	8170539	5/30/2006	5/1/2012	11/442880	US	Messaging With Proprietary Attributes
82217540	Granted	D570981	4/28/2006	6/10/2008	29/258894	US	Fan Module Having A Handle
82217600	Granted	7467268	4/14/2006	39798	11/404240	US	CONCURRENT DATA RESTORE AND BACKGROUND COPY OPERATIONS IN STORAGE NETWORKS
82217603	Granted	7643426	4/27/2006	1/5/2010	11/412442	US	Path Selection In A Network
82217681	Granted	7092850	9/29/2005	8/15/2006	11/238442	US	Sensor Signal Debouncing
82217687	Granted	8306911	1/31/2007	11/6/2012	11/701294	US	PAYMENT OPTION ANALYZER BASED ON MEASURED UTILIZATION

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82217789	Granted	8108511	5/26/2006	1/31/2012	11/441694	US	Abstraction Of Multiple Aggregated Physical Counters Into A Virtual Counter
82217816	Granted	8260790	4/27/2007	9/4/2012	11/790894	US	SYSTEM AND METHOD FOR USING INDEXES TO PARSE STATIC XML DOCUMENTS
82217870	Granted	7721133	4/27/2006	5/18/2010	11/412384	US	Systems And Methods Of Synchronizing Reference Frequencies
82217930	Granted	7823154	9/16/2005	10/26/2010	11/228901	US	System And Method For Providing, By A Plurality Of Schedulers, Differentiated Service To Consumers Of Distributed Resources
82217933	Granted	7743276	9/27/2006	6/22/2010	11/527875	US	SUFFICIENT FREE SPACE FOR REDUNDANCY RECOVERY WITHIN A DISTRIBUTED DATA-STORAGE SYSTEM
82217999	Granted	7610412	10/17/2006	10/27/2009	11/582068	US	Throttling Communication Between Software Processes
82218002	Published		10/31/2006		11/590497	US	Memory Management
82218047	Granted	8041906	10/31/2006	10/18/2011	11/590498	US	Notification Processing
82218110	Granted	8046447	6/30/2006	10/25/2011	11/477864	US	Mechanism For Specifying Port-related Data From Network Devices
82218125	Granted	7796597	10/17/2006	9/14/2010	11/582923	US	AUTO CONFIGURATION OF STATIC RENDEZVOUS POINTS USING BOOTSTRAP ROUTER PROTOCOL MESSAGES FROM PIM SM
82218377	Granted	8255577	4/25/2008	8/28/2012	12/109577	US	An I/O Forwarding Technique For Multi-interrupt Capable Devices
82218434	Granted	7352941	10/31/2006	39539	11/590410	US	Method And Apparatus For Electromagnetic Resonance And Amplification Using Negative Index Material
82218548	Granted	8010083	5/21/2007	8/30/2011	11/802157	US	DETECTION OF CLONED IDENTIFIERS IN COMMUNICATION SYSTEMS
82218608	Granted	7873850	10/11/2006	1/18/2011	11/546096	US	System And Method Of Controlling Power Consumption And Associated Heat Generated By A Computing Device
82218614	Granted	9071506	6/29/2007	6/30/2015	11/819990	US	Accessing Web Services Using Network Management Information
82218665	Granted	8639904	10/22/2009	1/28/2014	12/603905	US	Method And System For Managing Heap Across Process Replication
82218749	Granted	7587555	11/10/2005	9/8/2009	11/272197	US	Program Thread Synchronization
82218791	Granted	7243877	4/7/2006	7/17/2007	11/400648	US	Tape Reel
82218797	Granted	8438346	4/27/2006	5/7/2013	11/412485	US	Synchronization Of A Virtual Storage System And An Actual Storage System
82218851	Granted	7783935	6/2/2006	8/24/2010	11/445589	US	Bit Error Rate Reduction Buffer
82218854	Published		7/6/2010		12/831082	US	Bit Error Rate Reduction Buffer, Method And Apparatus
82218860	Granted	9137179	7/26/2006	9/15/2015	11/493285	US	Memory-mapped Buffers For Network Interface Controllers

PATENT
REEL: 038498 FRAME: 0416

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82218917	Published		9/18/2006		11/523442	US	Distributed-Leader-Election Service For A Distributed Computer System
82218926	Granted	8402463	10/30/2006	3/19/2013	11/554566	US	Hardware Threads Processor Core Utilization
82218974	Granted	8209682	7/26/2006	6/26/2012	11/493250	US	System And Method For Controlling Aggregate CPU Usage By Virtual Machines And Driver Domains Over A Plurality Of Scheduling Intervals
82218977	Granted	8146079	7/26/2006	3/27/2012	11/494187	US	Systems And Methods For Controlling Resource Usage By A Driver Domain On Behalf Of A Virtual Machine
82219103	Granted	7639953	7/27/2006	12/29/2009	11/494815	US	Compact Systems For Generating Polarization-entangled Photons
82219127	Granted	7844649	4/20/2006	11/30/2010	11/407513	US	OPTICAL-BASED, SELF-AUTHENTICATING QUANTUM RANDOM NUMBER GENERATORS
82219163	Granted	7742906	3/6/2007	6/22/2010	11/714509	US	Balancing Collections Of Vertices In A Network
82219175	Granted	7924283	9/19/2006	4/12/2011	11/523240	US	TIME RELEVANCE-BASED VISUALIZATION OF DATA
82219178	Granted	7895666	9/1/2006	2/22/2011	11/514634	US	Data Structure Representation Using Hash-based Directed Acyclic Graphs And Related Method
82219223	Granted	7529437	7/27/2006	5/5/2009	11/494814	US	SCALABLE AND DEFECT-TOLERANT QUANTUM-DOT-BASED QUANTUM COMPUTER ARCHITECTURES AND METHODS FOR FABRICATING QUANTUM DOTS IN QUANTUM COMPUTER ARCHITECTURES
82219226	Granted	7373059	9/22/2006	5/13/2008	11/525717	US	COMPACT, SINGLE CHIP-BASED, ENTANGLED POLARIZATION-STATE PHOTON SOURCES AND METHODS FOR GENERATING PHOTONS IN ENTANGLED POLARIZATION STATES
82219313	Granted	7855957	8/30/2006	12/21/2010	11/468577	US	Method And System Of Transmit Load Balancing Across Multiple Physical Ports
82219361	Granted	7864958	6/16/2006	1/4/2011	11/454632	US	Quantum Key Distribution Method And Apparatus
82219367	Granted	8842839	7/21/2006	9/23/2014	11/490853	US	Device With Multiple One-time Pads And Method Of Managing Such A Device
82219373	Granted	8250363	7/21/2006	41142	11/490852	US	Method Of Provisioning Devices With One-time Pad Data, Device For Use In Such Method, And Service Usage Tracking Based On One-time Pad Data
82219409	Granted	7502888	2/7/2006	3/10/2009	11/348686	US	Symmetric Multiprocessor System
82219412	Granted	8020715	5/17/2007	9/20/2011	11/804110	US	Standalone Open Frame
82219499	Granted	8027338	8/31/2006	9/27/2011	11/469180	US	Discontinuing The Implementation Of An Aggregation Protocol
82219502	Granted	7644377	1/31/2007	1/5/2010	11/700374	US	Generating A Configuration Of A System That Satisfies Constraints Contained In Models
82219664	Granted	7376805	4/21/2006	5/20/2008	11/409471	US	Distributed Storage Array

PATENT
REEL: 038498 FRAME: 0417

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0418

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82219667	Granted	7487311	3/14/2008	2/3/2009	12/048270	US	System And Method For Asynchronous Backup Of Virtual Disks In A Distributed Storage Array
82219673	Granted	7813069	1/31/2008	10/12/2010	12/023126	US	Method And Apparatus For Controlling Motion Of Storage Media
82219853	Granted	8244825	11/6/2006	8/14/2012	11/556973	US	RDMA Data To Responder Node Coherency Domain
82219868	Granted	7391109	5/22/2006	6/24/2008	11/438167	US	Integrated Circuit Interconnect
82220000	Published		11/3/2008		12/263506	US	Logging System Events
82220048	Granted	7710862	8/30/2006	5/4/2010	11/468537	US	METHOD AND SYSTEM OF ASSIGNING MEDIA ACCESS CONTROL (MAC) ADDRESSES ACROSS TEAMED COMMUNICATION PORTS
82220054	Granted	7821973	10/24/2006	10/26/2010	11/552322	US	Sharing Of Host Bus Adapter Context
82220057	Granted	8074009	9/16/2010	12/6/2011	12/884069	US	Sharing Of Host Bus Adapter Context
82220096	Granted	7335526	10/31/2005	39504	11/263788	US	Sensing System
82220105	Granted	7813286	8/30/2006	10/12/2010	11/468499	US	METHOD AND SYSTEM OF DISTRIBUTING MULTICAST GROUP JOIN REQUESTS IN COMPUTER SYSTEMS OPERATING WITH TEAMED COMMUNICATION PORTS
82220234	Granted	8031632	8/30/2006	40820	11/468442	US	Method And System Of Implementing Virtual Local Area Networks (VLANS) With Teamed Communication Ports
82220237	Granted	7649892	8/30/2006	1/19/2010	11/468615	US	METHOD AND SYSTEM OF NETWORK COMMUNICATION RECEIVE LOAD BALANCING
82220294	Granted	8283556	10/8/2008	10/9/2012	12/247860	US	Nanowire-Based Device And Array With Coaxial Electrodes
82220312	Granted	8327389	7/10/2007	12/4/2012	12/375729	US	Interface Module
82220357	Granted	7707215	10/17/2006	4/27/2010	11/550355	US	Parimutuel Content Provisioning
82220477	Granted	7620613	7/28/2006	11/17/2009	11/494942	US	Thermal Management Of Data Centers
82220480	Granted	7644051	7/28/2006	1/5/2010	11/494918	US	Management Of Data Centers Using A Model
82220549	Granted	8799591	1/30/2007	8/5/2014	11/700747	US	READ-WRITE SPINLOCK WITH NO MUTUAL EXCLUSION AMONG READERS
82220555	Granted	8451317	4/30/2007	5/28/2013	11/799386	US	Indexing A Data Stream
82220606	Granted	7624233	8/22/2006	11/24/2009	11/508051	US	Portable Storage Device
82220618	Granted	5920620	1/17/1997	7/6/1999	08/784052	US	Channel Establishing Method Of Point-to-multipoint And Multipoint-to-point Communications
82220858	Granted	6826456	5/4/2001	11/30/2004	09/848999	US	System And Method For Controlling Server Chassis Cooling Fans
82220861	Granted	6934786	5/4/2001	8/23/2005	09/848816	US	Server Chassis Hardware Master System And Method
82220864	Granted	6871300	5/4/2001	3/22/2005	09/848807	US	Embedded Server Chassis Hardware Master System And Method
82220930	Granted	7606842	9/27/2006	10/20/2009	11/535713	US	METHOD OF MERGING A CLONE FILE SYSTEM WITH AN ORIGINAL FILE SYSTEM
82221185	Granted	7743053	10/17/2006	6/22/2010	11/581942	US	Hybrid Database Query Caching
82221359	Granted	7600111	9/20/2006	10/6/2009	11/523870	US	Method Of Restarting A Computer Platform

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82221803	Granted	8019666	9/24/2007	9/13/2011	11/860084	US	AUCTION METHOD AND APPARATUS
82221920	Granted	7451246	4/19/2006	11/11/2008	11/406242	US	Indirectly Controlling A Target Device On A Network
82222034	Granted	9128766	4/24/2006	9/8/2015	11/409851	US	Computer Workload Redistribution Schedule
82222049	Granted	8060436	9/16/2002	11/15/2011	10/244686	US	Software Application Domain And Storage Domain Risk Analysis Process And Method
82222058	Granted	7249347	9/16/2002	7/24/2007	10/244694	US	Software Application Domain And Storage Domain Interface Process And Method
82222097	Granted	7374441	9/15/2006	5/20/2008	11/532331	US	ZERO INSERTION FORCE CONNECTOR ASSEMBLY FOR CIRCUIT BOARDS/CARDS
82222106	Published		1/31/2007		11/669908	US	Data Storage System
82222121	Granted	7933993	4/24/2006	40659	11/409852	US	Relocatable Virtual Port For Accessing External Storage
82222157	Allowed		1/29/2008		12/021971	US	Data Processing System And Method
82222235	Granted	7241096	6/24/2005	7/10/2007	11/160472	US	Captive Screw With Deployment Knob
82222283	Granted	9052916	9/21/2006	6/9/2015	11/524680	US	System ROM With An Embedded Disk Image
82222301	Granted	7545841	4/24/2007	6/9/2009	11/789283	US	Composite Material With Proximal Gain Medium
82222358	Granted	7449912	1/26/2007	11/11/2008	11/627730	US	FAULT DETECTION CIRCUIT
82222361	Granted	7962734	3/15/2007	6/14/2011	11/686528	US	METHOD OF RESTARTING A COMPUTER PLATFORM
82222670	Granted	7926089	7/14/2006	4/12/2011	11/486684	US	Router For Managing Trust Relationships
82222718	Granted	7610383	8/11/2006	10/27/2009	11/502890	US	Data-object-related-request Routing In A Dynamic, Distributed Data-storage System
82222934	Granted	8387053	1/25/2007	2/26/2013	11/626922	US	METHOD AND SYSTEM FOR ENHANCING COMPUTER PROCESSING PERFORMANCE
82223057	Granted	8885928	10/25/2006	11/11/2014	11/552968	US	CLASSIFICATION USING FEATURE SCALING
82223093	Granted	6424929	9/20/1999	7/23/2002	09/399373	US	Method For Detecting Outlier Measures Of Activity
82223117	Granted	5926462	11/16/1995	7/20/1999	08/558729	US	METHOD OF DETERMINING TOPOLOGY OF A NETWORK OF OBJECTS WHICH COMPARES THE SIMILARITY OF THE TRAFFIC SEQUENCES/VOLUMES OF A PAIR OF DEVICES
82223162	Granted	7145881	10/4/2000	12/5/2006	09/678783	US	Method Of Determining The Route Of Packets Through A Network Of Communicating Objects
82223234	Granted	5933416	2/9/1996	8/3/1999	08/599310	US	Method Of Determining The Topology Of A Network Of Objects
82223345	Granted	6928475	2/7/2002	8/9/2005	10/067362	US	Method Of Determining The Topology Of A Network Of Objects
82223348	Granted	6728670	2/7/2002	4/27/2004	10/067229	US	METHOD OF DETERMINING THE TOPOLOGY OF A NETWORK BY TRANSMITTING AND MONITORING SEQUENCES OF ORTHOGONAL SIGNALS
82223351	Granted	6829641	2/7/2002	12/7/2004	10/067363	US	Method Of Determining The Topology Of A Network Of Objects
82223468	Granted	8972613	10/31/2006	3/3/2015	11/590615	US	System And Method For Increasing Input/output Throughput In A Data Storage System

PATENT
REEL: 038498 FRAME: 0419

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82223471	Granted	8046765	7/25/2006	10/25/2011	11/492376	US	Systm And Method For Determining Allocation Of Resource Access Demands To Different Classes Of Service Based At Least In Part On Permitted Degraded Performance
82223480	Granted	7906778	4/2/2007	3/15/2011	11/730486	US	METHODS OF MAKING NANO-SCALE STRUCTURES HAVING CONTROLLED SIZE, NANOWIRE STRUCTURES AND METHODS OF MAKING THE NANOWIRE STRUCTURES
82223486	Granted	8347726	4/25/2007	1/8/2013	11/739853	US	FREE-STANDING NANOWIRE SENSOR AND METHODS FOR FORMING AND USING THE SAME
82223495	Granted	8773882	4/15/2010	7/8/2014	12/761300	US	MIXED-SCALE ELECTRONIC INTERFACES
82223498	Granted	7763978	3/28/2007	7/27/2010	11/729228	US	Three-dimensional Crossbar Array Systems And Methods For Writing Information To And Reading Information Stored In Three-dimensional Crossbar Array Junctions
82223531	Granted	7692215	1/31/2007	4/6/2010	11/701086	US	MIXED-SCALE ELECTRONIC INTERFACE
82223537	Granted	7608905	10/17/2006	10/27/2009	11/581969	US	Independently Addressable Interdigitated Nanowires
82223543	Granted	7560707	4/19/2007	7/14/2009	11/788446	US	Apparatuses And Methods For Up-converting Electromagnetic Radiation
82223546	Granted	7719688	4/24/2007	5/18/2010	11/739272	US	Optical Device And Method Of Making The Same
82223594	Granted	7832461	2/9/2007	11/16/2010	11/673410	US	Cooling Systems And Methods
82223597	Granted	8960268	10/6/2010	42059	12/898776	US	Methods for Cooling Computers And Electronics
82223606	Granted	8046534	10/26/2006	10/25/2011	11/586930	US	Managing Snapshots In Storage Systems
82223663	Granted	7996250	10/30/2006	40764	11/554541	US	Workflow Control Using An Aggregate Utility Function
82223789	Granted	8826024	10/23/2006	9/2/2014	11/584859	US	Trusted Compliance Operations Inside Secure Computing Boundaries
82223792	Granted	7996680	9/27/2006	8/9/2011	11/527791	US	Secure Data Log Management
82223918	Granted	8183566	3/1/2007	5/22/2012	11/681068	US	Hetero-crystalline Semiconductor Device And Method Of Making Same
82224032	Granted	D590403	6/30/1996	4/14/2009	29/262397	US	Computer Controller Front Bezel
82224035	Granted	D635576	2/11/2009	4/5/2011	29/332219	US	Computer Controller Front Bezel
82224038	Granted	D595721	2/11/2009	7/7/2009	29/332250	US	Computer Controller Front Bezel
82224047	Published		9/13/2006		11/531652	US	Determining Most Valuable Ordering Of Items For Presentation
82224173	Granted	7844841	4/30/2007	11/30/2010	11/742440	US	ELECTRONIC DEVICE
82224305	Granted	7877433	10/16/2006	1/25/2011	11/581828	US	Infrastructure By Contract
82224422	Granted	8051250	3/14/2007	11/1/2011	11/686132	US	SYSTEMS AND METHODS FOR PUSHING DATA
82224428	Granted	7975205	1/26/2007	7/5/2011	11/627519	US	ERROR CORRECTION ALGORITHM SELECTION BASED UPON MEMORY ORGANIZATION
82224434	Published		10/27/2006		11/588608	US	Producing A Feature In Response To A Received Expression
82224530	Granted	7792353	10/31/2006	9/7/2010	11/555036	US	RETRAINING A MACHINE-LEARNING CLASSIFIER USING RE-LABELED TRAINING SAMPLES

PATENT
REEL: 038498 FRAME: 0420

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82224533	Published		10/31/2006		11/590466	US	Calculating An Aggregate Of Attribute Values Associated With Plural Cases
82224551	Granted	8504943	10/24/2006	8/6/2013	11/585497	US	Displaying Group Icons Representing Respective Groups Of Nodes
82224668	Granted	7895121	10/31/2006	2/22/2011	11/591388	US	Method And System For Tracking Conversions In A System For Targeted Data Delivery
82224671	Published		6/16/2006		11/454733	US	Automated Service Level Management System
82224722	Granted	7782632	12/19/2006	8/24/2010	11/641243	US	ELECTRICAL POWER CONNECTION WITH TWO POWER CONNNECTORS ON A MODULE IN AN ELECTRONIC SYSTEM
82224746	Granted	7923802	10/13/2006	4/12/2011	11/580647	US	Method And Apparatus For Forming A Photodiode
82224863	Granted	D577026	7/17/2006	9/16/2008	29/263157	US	Computer Module Having A Handle
82224914	Granted	7856549	1/24/2007	12/21/2010	11/657144	US	REGULATING POWER CONSUMPTION
82224968	Granted	7769173	10/30/2006	8/3/2010	11/590493	US	Methods And Systems For Executing Bit-commitment Protocols That Are Based On Entangled Quantum States And A Third Party
82225043	Granted	7924810	9/19/2007	4/12/2011	11/902131	US	Method And Computing System For Controlling Access
82225229	Published		10/29/2007		11/926362	US	A METHOD OF IDENTIFYING AN EXTRACTABLE PORTION OF A SOURCE MACHINE-READABLE DOCUMENT
82225244	Granted	8438560	10/18/2007	5/7/2013	11/874440	US	Resource Assessment Method And System
82225280	Granted	8089882	9/4/2007	1/3/2012	11/849364	US	Load-aware Network Path Configuration
82225286	Granted	8509075	9/4/2007	8/13/2013	11/849358	US	Data-type-based Network Path Configuration
82225292	Granted	7995584	6/19/2008	8/9/2011	12/141927	US	Method And Apparatus For Detecting Malicious Routers From Packet Payload
82225295	Granted	7725556	10/27/2006	5/25/2010	11/553953	US	Computer System With Concurrent Direct Memory Access
82225349	Granted	8782779	9/26/2007	7/15/2014	11/862002	US	System And Method For Achieving Protected Region Within Computer System
82225403	Granted	8291488	6/29/2006	10/16/2012	12/305856	US	Remote Connection Between Intermediary Device And Computing Device Via Central Authority Software
82225433	Granted	8886892	1/26/2007	11/11/2014	11/627469	US	MEMORY MODULE AND METHOD EMPLOYING A MULTIPLEXER TO REPLACE A MEMORY DEVICE
82225475	Granted	8612973	9/26/2007	12/17/2013	11/861846	US	Method And System For Handling Interrupts Within Computer System During Hardware Resource Migration
82225544	Granted	8045562	10/31/2006	10/25/2011	11/590148	US	Estimating Link Interference And Bandwidth
82225547	Granted	7965655	1/31/2007	6/21/2011	11/700579	US	DISTRIBUTED NETWORK DISTANCE DETEMINATION USING A DISTRIBUTED HASH TABLE OVERLAY NETWORK
82225550	Granted	7818508	4/27/2007	10/19/2010	11/741453	US	SYSTEM AND METHOD FOR ACHIEVING ENHANCED MEMORY ACCESS CAPABILITIES
82225556	Granted	8095630	3/20/2007	40918	11/725715	US	Network Booting

PATENT
REEL: 038498 FRAME: 0421

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82225658	Granted	7849121	10/10/2006	12/7/2010	11/546158	US	OPTICAL-BASED, SELF-AUTHENTICATING QUANTUM RANDOM NUMBER GENERATORS
82225718	Granted	7466884	10/17/2006	12/16/2008	11/582088	US	Photonic-interconnect Systems For Reading Data From Memory Cells And Writing Data To Memory Integrated Circuits
82225739	Granted	8335065	4/30/2007	12/18/2012	11/742522	US	Overvoltage Protection In A Power Supply
82225742	Granted	7780455	1/31/2007	8/24/2010	11/669860	US	SYSTEM HAVING PRIMARY AND SECONDARY BACKPLANES
82225778	Granted	8473791	4/30/2007	41450	11/742446	US	Redundant Memory To Mask Dram Failures
82225781	Granted	8108355	10/27/2006	1/31/2012	11/588617	US	Providing A Partially Sorted Index
82225853	Granted	7571069	12/22/2006	40029	11/644168	US	DATA ASSURANCE WORKFLOW DERIVATION AND EXECUTION
82225856	Granted	8935206	1/31/2007	1/13/2015	11/700270	US	Snapshots In Distributed Storage Systems
82225925	Granted	8006103	10/26/2007	8/23/2011	11/924889	US	TPM DEVICE FOR MULTI-PROCESSOR SYSTEMS
82226039	Granted	7656727	4/25/2007	40211	11/739875	US	SEMICONDUCTOR MEMORY DEVICE AND SYSTEM PROVIDING SPARE MEMORY LOCATIONS
82226051	Published		4/5/2007		12/594800	US	Data Transmission System And Method
82226120	Granted	8268720	4/30/2007	9/18/2012	11/742310	US	Method Of Positioning Catalyst Nanoparticle And Nanowire-based Device Employing Same
82226180	Granted	7730365	4/30/2007	6/1/2010	11/742467	US	WORKLOAD MANAGEMENT FOR MAINTAINING REDUNDANCY OF NON-DATA COMPUTER COMPONENTS
82226225	Granted	7883023	1/29/2007	2/8/2011	11/699397	US	Fluid Moving Device Having A Fail-safe Operation
82226297	Published		4/14/2008		12/082737	US	System And Method For Remote Management Of A Computer
82226369	Granted	9146719	3/20/2007	9/29/2015	11/725837	US	DATA LAYOUT USING DATA TYPE INFORMATION
82226591	Published		4/26/2007		11/796515	US	Active Control Of Time-varying Spatial Temperature Distribution
82226672	Granted	8490103	4/30/2007	7/16/2013	11/742553	US	Allocating Computer Processes To Processor Cores As A Function Of Process Utilizations
82226675	Granted	8254579	1/31/2007	8/28/2012	11/700446	US	Cryptographic Key Distribution Using A Trusted Computing Platform
82226678	Granted	8245235	4/30/2007	8/14/2012	11/742582	US	Allocating Computer Resources To Workloads As A Function Of Reliability Indications
82226732	Granted	7934069	4/27/2007	4/26/2011	11/796428	US	Enabling And Disabling Cache In Storage Systems
82226804	Granted	7760627	7/31/2006	7/20/2010	11/495572	US	METHOD AND APPARATUS FOR AUTOMATIC LOAD-BALANCING ON A MULTI-SEGMENT NETWORK
82226867	Granted	7877645	7/30/2007	1/25/2011	11/830802	US	Use Of Operational Configuration Parameters To Predict System Failures
82226981	Granted	7835610	4/11/2007	11/16/2010	11/786519	US	Optical Waveguide
82226984	Granted	7719073	1/11/2007	5/18/2010	11/652220	US	Capacitively Coupling Layers Of A Multilayer Device

PATENT
REEL: 038498 FRAME: 0422

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82227026	Granted	7756367	6/5/2009	7/13/2010	12/479537	US	Photonic Systems And Methods For Encoding Data In Carrier Electromagnetic Waves
82227029	Granted	8009941	6/5/2009	8/30/2011	12/479567	US	Photonic Systems And Methods For Encoding Data In Carrier Electromagnetic Waves
82227044	Granted	8788750	4/27/2007	7/22/2014	11/796679	US	Managing Resources In Cluster Storage Systems
82227161	Granted	8898331	9/13/2007	11/25/2014	11/855119	US	Method, Network And Computer Program For Processing A Content Request
82227167	Granted	7926031	4/18/2007	4/12/2011	11/736833	US	Configuration Management Database And System
82227224	Granted	7466410	1/26/2007	12/16/2008	11/698320	US	Photonic-based Sensors And Methods For Detecting Analytes
82227227	Granted	7582975	4/27/2007	9/1/2009	11/741218	US	Nanowire Device And Method Of Making The Same
82227230	Granted	7688847	10/31/2006	3/30/2010	11/590555	US	Expected Channel Occupancy Time As A Wireless Link Metric
82227347	Granted	7929418	3/20/2008	4/19/2011	12/052680	US	Data Packet Communication Protocol Offload Method And System
82227365	Granted	7672143	5/30/2007	3/2/2010	11/807641	US	Card Holder And Bracket In Computer System
82227368	Granted	7746654	6/7/2007	6/29/2010	11/811311	US	ADAPTABLE PLUG-IN MEZZANINE CARD FOR BLADE SERVERS
82227404	Granted	7649751	6/25/2007	1/19/2010	11/821618	US	APPARATUS FOR INEXPENSIVE MEZZANINE-TYPE CARD BOARD-TO-BOARD CONNECTOR BLIND MATE ALIGNMENT SYSTEM USING PRINTED CIRCUIT BOARD MATERIAL
82227482	Granted	7924720	2/26/2007	4/12/2011	11/710804	US	NETWORK TRAFFIC MONITORING
82227527	Granted	9065740	8/26/2008	6/23/2015	12/198801	US	Prioritising Data Processing Operations
82227539	Granted	8156496	1/29/2008	4/10/2012	12/021945	US	Data Processing System And Method
82227545	Granted	8566467	7/17/2008	41569	12/175252	US	Data Processing System And Method
82227548	Granted	8037223	6/13/2007	10/11/2011	11/818204	US	Reconfigurable I/O Card Pins
82227602	Granted	8553573	4/4/2008	10/8/2013	12/594245	US	APPARATUS AND METHODS FOR ADAPTIVE THROTTLING OF TRAFFIC ACROSS MULTIPLE NETWORK NODES
82227668	Granted	8204979	1/31/2007	6/19/2012	11/701305	US	ADAPTIVE CLIENT/SERVER CONTROL PROTOCOL
82227731	Granted	8213430	2/28/2007	41093	11/680095	US	TRANSMITTING A PACKET FROM A DISTRIBUTED TRUNK SWITCH
82227791	Granted	8009438	3/29/2007	8/30/2011	11/729470	US	Server Infrastructure Having Independent Backplanes To Distribute Power And To Route Signals
82227968	Granted	7805566	3/29/2007	40449	11/729488	US	Replication In Storage Systems Using A Target Port Mimicking A Host Initiator Port
82227971	Granted	8095830	4/3/2007	1/10/2012	11/732454	US	Diagnosis Of System Health With Event Logs
82227974	Granted	8250408	4/2/2007	8/21/2012	11/731981	US	System Diagnosis
82228028	Granted	8484310	4/8/2008	7/9/2013	12/099489	US	Method Of Supplying Advertising Content
82228034	Granted	8650339	11/27/2007	2/11/2014	11/945458	US	Control Of Data Transfer

PATENT
REEL: 038498 FRAME: 0423

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82228037	Granted	7957134	4/10/2007	6/7/2011	11/784793	US	System And Method Having Evaporative Cooling For Memory
82228091	Granted	7991932	4/13/2007	8/2/2011	11/786815	US	FIRMWARE AND/OR A CHIPSET DETERMINATION OF STATE OF COMPUTER SYSTEM TO SET CHIPSET MODE
82228154	Application		4/30/2007		11/799059	US	Availability Management
82228157	Granted	9058127	4/27/2007	6/16/2015	11/796690	US	Data Transfer In Cluster Storage Systems
82228277	Granted	8219918	4/27/2007	7/10/2012	11/796666	US	Displaying Multiple Storage Windows
82228295	Granted	8208386	3/5/2007	6/26/2012	11/714401	US	DISCOVERY OF NETWORK DEVICES
82228298	Granted	8141062	1/31/2007	3/20/2012	11/701290	US	REPLACING A VARIABLE IN A USE OF THE VARIABLE WITH A VARIANT OF THE VARIABLE (as amended)
82228418	Published		1/29/2008		12/022016	US	Data Processing System And Method
82228424	Granted	8055735	10/15/2008	11/8/2011	12/252190	US	METHOD AND SYSTEM FOR FORMING A CLUSTER OF NETWORKED NODES
82228472	Granted	8255203	4/24/2008	8/28/2012	12/109269	US	Method Of Debugging An Executable Computer Program Having Instructions For Different Computer Architectures
82228487	Published		4/11/2008		12/101792	US	A Method And System For Improving Memory Access Performance
82228673	Granted	8266439	9/12/2007	9/11/2012	11/854413	US	Integrity Verification Of Pseudonymized Documents
82228718	Granted	8767535	7/11/2007	7/1/2014	11/827605	US	Dynamic Feed Back Control Of Resources In Computing Environments
82228721	Granted	8108266	1/29/2007	1/31/2012	11/699149	US	METHODS FOR PROVIDING SECURE Ecommerce TRANSACTIONS
82228928	Granted	8903970	4/2/2008	12/2/2014	12/061222	US	Explicit Logging Of Network User Node/target Node Coupling
82229168	Granted	D568886	4/12/2007	5/13/2008	29/285837	US	COMPUTER HAVING A DOOR
82229171	Granted	D568887	4/12/2007	5/13/2008	29/285841	US	COMPUTER HAVING A DOOR
82229174	Granted	7742311	4/13/2007	6/22/2010	11/735067	US	DAMAGE PREVENTION INTERPOSER FOR ELECTRONIC PACKAGE AND ELECTRONIC INTERCONNECT STRUCTURE
82229177	Granted	8909677	4/27/2007	12/9/2014	11/796198	US	Providing A Distributed Balanced Tree Across Plural Servers
82229342	Granted	8159948	7/11/2007	4/17/2012	11/827398	US	Methods And Apparatus For Many-to-one Connection-rate Monitoring
82229348	Published		4/24/2008		12/109236	US	Data Processing System And Method
82229420	Granted	8209365	7/17/2008	6/26/2012	12/175283	US	A Technique For Virtualizing Storage Using Stateless Servers
82229429	Granted	7808005	4/26/2007	10/5/2010	11/789872	US	LIGHT-EMITTING DEVICE WITH PHOTONIC GRATING CONFIGURED FOR EXTRACTING LIGHT FROM LIGHT-EMITTING STRUCTURE
82229480	Granted	8565220	3/28/2008	10/22/2013	12/078260	US	SIGNALING STATUS INFORMATION OF AN APPLICATION SERVICE
82229534	Granted	8064454	4/28/2008	11/22/2011	12/110411	US	Protocol Incompatibility Detection

PATENT
REEL: 038498 FRAME: 0424

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0425

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82229588	Granted	8369247	1/29/2008	2/5/2013	12/449241	US	Method And System For Facilitating Multi-point Communications
82229603	Published		7/19/2007		11/779919	US	Systems And Methods For Communicating With A Network Switch
82229651	Granted	9137103	4/30/2007	9/15/2015	11/796912	US	Configuring Devices In A Secured Network
82229672	Application		7/31/2007		11/831763	US	Systems And Methods For Scheduling Resources To Service Requests
82229780	Granted	8554244	1/29/2008	10/8/2013	12/449246	US	CONFIGURATION OF MOBILE COMMUNICATION DEVICES
82229789	Granted	8209409	4/8/2008	6/26/2012	12/099685	US	Diagnosis Of A Storage Area Network
82229795	Granted	8453015	7/16/2008	5/28/2013	12/174194	US	Memory Allocation For Crash Dump
82229846	Granted	8265785	4/5/2007	41163	11/697193	US	External Load Port Magazine And Storage System And Method Of Using Same
82229852	Published		4/9/2008		12/100279	US	Reconfiguring A Storage Area Network
82229855	Granted	8111828	7/31/2007	2/7/2012	11/888044	US	Management Of Cryptographic Keys For Securing Stored Data
82229969	Granted	8174977	7/6/2007	5/8/2012	11/825492	US	END-TO-END FLOW CONTROL IN A NETWORK BACKGROUND
82229984	Granted	7876759	7/11/2007	1/25/2011	11/775967	US	Quality Of Service With Control Flow Packet Filtering
82229990	Granted	8019910	7/31/2007	40799	11/831861	US	Transaction Flow Control In PCI Express Fabric
82230041	Granted	8505091	4/30/2007	8/6/2013	11/742450	US	Method Of Protecting Against Denial-of-service Attacks
82230086	Application		7/11/2007		11/776064	US	Systematic Approaches To Message Delivery
82230107	Published		4/26/2007		11/796077	US	INTELLIGENT RESOURCE MANAGEMENT IN MULTIPROCESSOR COMPUTER SYSTEMS
82230149	Granted	8255903	7/3/2008	8/28/2012	12/167347	US	Data Processing System And Method
82230158	Granted	7602629	4/17/2007	10/13/2009	11/787588	US	Content Addressable Memory
82230173	Allowed		1/30/2008		12/022486	US	System And Methods For Distributed Output Packet Metering Using Input Lookups
82230272	Granted	8838558	8/8/2007	9/16/2014	11/891147	US	Hash Lookup Table Method And Apparatus
82230299	Granted	8005014	4/27/2007	8/23/2011	11/796419	US	METHOD OF CHOOSING NODES IN A MULTI-NETWORK
82230335	Granted	8799272	7/20/2007	8/5/2014	11/780843	US	Data Skew Insensitive Parallel Join Scheme
82230341	Application		8/15/2007		11/839035	US	Estimating An Operational Condition Of An Electronic Component
82230359	Granted	8078704	4/12/2007	12/13/2011	11/786994	US	PROVISIONING OF A SERVICE ENVIRONMENT USING WEB SERVICES
82230467	Granted	7603585	4/7/2007	10/13/2009	11/697717	US	Systems And Methods For Updating Field Replaceable Units
82230482	Published		10/25/2007		12/671322	US	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82230485	Granted	8781083	1/25/2007	7/15/2014	11/657845	US	PAUSING CALL PROCESSING TO ENABLE THE PLAYBACK OF INFORMATION
82230524	Granted	8009992	6/11/2007	8/30/2011	11/811506	US	Optical Interconnect

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82230542	Granted	8244134	6/19/2007	8/14/2012	11/820310	US	Optical Interconnect
82230647	Granted	8907765	12/24/2007	12/9/2014	11/963982	US	RFID Tag Detection Method And System
82230659	Granted	7904476	7/30/2007	3/8/2011	11/888001	US	COMPUTER-IMPLEMENTED METHOD FOR COMPRESSING REPRESENTATION OF BINARY RELATION
82230662	Application		7/31/2007		11/888381	US	Computer Implemented Method For Role Discovery In Access Control Systems
82230668	Published		5/23/2008		12/125941	US	A Method And A System To Determine Device Criticality During SAN Reconfigurations
82230734	Granted	9047202	4/30/2007	42157	11/799188	US	Creating A Relationship Tree Representing Relatinship Of Graphs To Enable Navigatin Through The Graphs Without Accessing An Input Data Set
82230779	Granted	7835900	4/27/2007	11/16/2010	11/741086	US	Emulated Tape-based Storage Media
82230785	Granted	8195189	7/23/2007	6/5/2012	11/781274	US	Managing Of Items Distributed In A Global Supply Chain
82230797	Granted	8046767	4/30/2007	10/25/2011	11/742530	US	System And Methods For Providing Capasity Management Of Resource Pools For Servicing Workloads
82230965	Published		4/30/2007		11/742019	US	Data Visualization Of A Datacenter
82230989	Granted	7676280	4/30/2007	40246	11/796943	US	Dynamic Environmental Management
82231151	Granted	8151009	4/25/2007	4/3/2012	11/789545	US	SERIAL CONNECTION EXTERNAL INTERFACE FROM PRINTED CIRCUIT BOARD TRANSLATION TO PARALLEL MEMORY PROTOCOL
82231154	Granted	8102671	4/25/2007	1/24/2012	11/789632	US	SERIAL CONNECTION EXTERNAL INTERFACE RISER CARDS AVOIDANCE OF ABUTMENT OF PARALLEL CONNECTION EXTERNAL INTERFACE MEMORY MODULES
82231175	Granted	8904341	4/30/2007	12/2/2014	11/741878	US	DERIVING GROUNDED MODEL OF BUSINESS PROCESS SUITABLE FOR AUTOMATIC DEPLOYMENT
82231211	Granted	7996602	4/30/2007	8/9/2011	11/796903	US	Parallel Memory Device Rank Selection
82231214	Granted	7711887	4/30/2007	5/4/2010	11/796790	US	EMPLOYING A NATIVE FULLY BUFFERED DUAL IN-LINE MEMORY MODULE PROTOCOL TO WRITE PARALLEL PROTOCOL MEMORY MODULE CHANNELS
82231217	Application		4/30/2007		11/796929	US	Power Controller
82231220	Granted	8918496	4/30/2007	41996	11/742525	US	System And Method For Generating Synthetic Workload Traces
82231238	Granted	8543711	4/30/2007	9/24/2013	11/742519	US	System And Method For Evaluating A Pattern Of Resource Demands Of A Workload
82231283	Allowed		5/8/2007		11/745737	US	ALLOCATION OF RESOURCES AMONG COMPUTER PARTITIONS USING PLURAL UTILIZATION PREDICTION ENGINES
82231286	Granted	8312460	5/22/2007	41226	11/752231	US	Allocating Computer Resources To Workloads Using Utilization Based Probability Distributions

PATENT
REEL: 038498 FRAME: 0426

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82231343	Allowed		5/7/2007		11/745422	US	In-processor Dynamic Address Redirection Table For Substituting Instruction Strings
82231475	Granted	8316377	9/6/2007	11/20/2012	11/851306	US	Sharing Legacy Devices In A Multi-host Environment
82231532	Granted	7760506	6/6/2007	7/20/2010	11/758718	US	Electronic Components, Systems And Apparatus With Air Flow Devices
82231601	Granted	8130756	7/13/2007	40974	11/827742	US	Tunnel Configuration
82231604	Granted	8054833	6/5/2007	11/8/2011	11/810368	US	Packet Mirroring
82231646	Granted	7962480	7/31/2007	6/14/2011	11/831841	US	Using A Weighted Tree To Determine Document Relevance
82231670	Granted	8687975	10/23/2008	41730	12/933863	US	Integrated Circuit With Optical Interconnect
82231718	Granted	8689318	1/21/2008	4/1/2014	12/524563	US	TRUSTED COMPUTING ENTITIES
82231721	Granted	7903655	4/19/2007	3/8/2011	11/788179	US	Marked Packet Forwarding
82231724	Granted	8151122	7/5/2007	4/3/2012	11/773759	US	Power Budget Managing Method And System
82231727	Granted	8886917	4/25/2007	11/11/2014	11/789785	US	SWICHING TO CORE EXECUTING OS LIKE CODES UPON SYSTEM CALL READING GREATER THAN PREDETERMINED AMOUNT OF DATA (as amended)
82231739	Application		6/7/2007		11/759914	US	Computer System And Method For Delivering A Received Message With Low Latency
82231841	Granted	8347005	7/31/2007	41275	11/882264	US	MEMORY CONTROLLER WITH MULTI-PROTOCOL INTERFACE
82231844	Granted	8230145	7/31/2007	41114	11/882265	US	Memory Expansion Blade For Multiple Architectures
82231850	Granted	7921363	4/30/2007	4/5/2011	11/796817	US	Applying Data Thinning Processing To A Data Set For Visualization
82231853	Granted	8924843	4/30/2007	12/30/2014	11/796809	US	Visualizing A Plurality Of Time Series In Corresponding Cell Based Lines Of A Display Region
82231856	Granted	7941742	4/30/2007	5/10/2011	11/796840	US	Visualizing Growing Time Series Data In A Single View
82231901	Published		7/7/2007		11/825351	US	Networking With Remaining Battery Life Routing Metric
82231904	Granted	7792990	4/30/2007	40428	11/796973	US	Remote Client Remediation
82231910	Granted	8850073	4/30/2007	9/30/2014	11/742549	US	Data Mirroring Using Batch Boundaries
82231913	Granted	7797341	4/30/2007	9/14/2010	11/799212	US	Desensitizing Database Information
82231916	Granted	8793264	7/18/2007	7/29/2014	11/879992	US	Determining A Subset Of Documents From Which A Particular Document Was Derived
82232165	Granted	8326970	11/5/2007	12/4/2012	11/935196	US	System And Method For Modeling A Session-based System With A Transactions-based Analytic Model
82232168	Granted	8964746	2/15/2008	2/24/2015	12/032280	US	Transmitting A Packet From A Distributed Trunk Switch
82232171	Granted	7869714	8/8/2007	1/11/2011	11/835833	US	Electronic System Having Free Space Optical Elements
82232210	Granted	8909384	8/27/2007	41982	11/845231	US	Computing Apparatus Operable Under Multiple Operational Policies
82232336	Granted	8127212	9/26/2007	2/28/2012	11/904284	US	SYSTEM AND METHOD FOR DETERMINING THE FAULT TOLERANCE OF AN ERASURE CODE

PATENT
REEL: 038498 FRAME: 0427

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82232414	Granted	8352957	1/31/2008	1/8/2013	12/012301	US	Apparatus And Method For Passing Metadata In Streams Modules
82232477	Granted	7477809	7/31/2007	39826	11/831555	US	Photonic Guiding Device
82232483	Granted	7835602	10/23/2008	11/16/2010	12/288884	US	Photonic Guiding Device
82232543	Granted	7197559	10/19/2001	39168	10/038098	US	Transaction Breakdown Feature To Facilitate Analysis Of End User Performance Of A Server System
82232600	Granted	7903409	7/18/2007	3/8/2011	11/779624	US	System And Method For Cooling An Electronic Device
82232606	Granted	8799903	7/31/2007	8/5/2014	11/888349	US	Systems And Methods For Exchanging Runtime Functionalities Between Software Stacks
82232666	Granted	6341310	10/26/1998	1/22/2002	09/178707	US	SYSTEM AND METHODS FOR FACILITATING THE VIEWING AND ANALYSIS OF WEB SITE USAGE DATA
82232675	Granted	5974572	10/14/1997	10/26/1999	08/949680	US	SOFTWARE SYSTEM AND METHOD FOR GENERATING A LOAD TEST USING A SERVER ACCESS LOG
82232711	Granted	6360332	6/21/1999	3/19/2002	09/337082	US	SOFTWARE SYSTEM AND METHODS FOR TESTING THE FUNCTIONALITY OF A TRANSACTIONAL SERVER
82232720	Granted	8250302	10/1/2008	8/21/2012	12/243093	US	SYSTEM FOR AN METHOD OF DATA CACHE MANAGEMENT
82232777	Granted	8196610	7/26/2007	6/12/2012	11/881286	US	Controlling Cooling Fluid Flow In A Cooling System With A Variable Orifice
82232795	Granted	7783822	7/25/2007	8/24/2010	11/828042	US	Systems And Methods For Improving Performance Of A Routable Fabric
82232858	Granted	6449739	1/17/2000	9/10/2002	09/484686	US	POST-DEPLOYMENT MONITORING OF SERVER PERFORMANCE
82232861	Granted	6564342	5/31/2002	5/13/2003	10/161460	US	POST-DEPLOYMENT MONITORING OF SERVER PERFORMANCE
82232900	Granted	7983135	10/16/2008	40743	12/253136	US	OPTICAL SYSTEM WITH SUPERLENS
82232960	Granted	7823000	7/27/2007	10/26/2010	11/829128	US	Measuring AC Power Consumption Using Choke With Inductive Power Sensor
82232963	Granted	8756307	7/30/2007	6/17/2014	11/830586	US	Translating Service Level Objectives To System Metrics
82232972	Granted	8537563	9/21/2007	9/17/2013	11/859601	US	Memory System
82233095	Granted	8135849	7/31/2007	3/13/2012	11/831756	US	Server For Authenticating Clients Using File System Permissions
82233098	Granted	8965843	1/23/2008	2/24/2015	12/018323	US	Prioritized Replication Paths
82233101	Granted	7895455	6/25/2007	40596	11/768102	US	Dynamic Converter Control For Efficient Operation
82233161	Granted	8166334	2/20/2008	4/24/2012	12/918050	US	Redriver With Two Reference Clocks And Method Of Operation Thereof
82233167	Granted	8024514	7/17/2007	9/20/2011	11/879399	US	ACCESS CONTROL MANAGEMENT
82233170	Granted	6477483	1/17/2000	11/5/2002	09/484684	US	SERVICE FOR LOAD TESTING A TRANSACTIONAL SERVER OVER THE INTERNET
82233209	Granted	6754701	5/5/2000	6/22/2004	09/565832	US	USE OF A SINGLE THREAD TO SUPPORT MULTIPLE NETWORK CONNECTIONS FOR SERVER LOAD TESTING

PATENT
REEL: 038498 FRAME: 0428

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82233230	Granted	6973489	3/21/2000	12/6/2005	09/531821	US	SERVER MONITORING VIRTUAL POINTS OF PRESENCE
82233284	Granted	7692930	7/31/2007	4/6/2010	11/831377	US	Low Profile Dimm Board
82233299	Published		10/25/2007		12/671346	US	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82233335	Granted	6738933	10/19/2001	5/18/2004	10/039271	US	ROOT CAUSE ANALYSIS OF SERVER SYSTEM PERFORMANCE DEGRADATIONS
82233344	Granted	9081627	7/31/2007	7/14/2015	11/831657	US	Workload Management With Resource Transfer Sequence Planned As A Function Of Ranking Of Resource Allocations
82233347	Granted	7740209	7/27/2007	6/22/2010	11/878861	US	CABLE ROUTING DEVICE
82233398	Granted	9021506	7/25/2007	4/28/2015	11/880957	US	Resource Ejectability In Multiprocessor Systems
82233401	Granted	7984150	7/31/2007	7/19/2011	11/888269	US	Cell Compatibilty In Multiprocessor Systems
82233473	Granted	8132088	8/14/2007	3/6/2012	11/838498	US	DATA FORMATTING IN DATA STORAGE
82233476	Granted	8340897	7/31/2007	12/25/2012	11/888190	US	Providing Contemporaneous Maps To A User At A Non-GPS Enabled Mobile Device
82233584	Granted	6633912	7/13/2001	10/14/2003	09/906946	US	SYSTEM, METHOD AND APPARATUS FOR PROVIDING AN ENTERPRISE PORTAL
82233587	Granted	7047277	7/13/2001	5/16/2006	09/905647	US	SYSTEM AND COMPUTER-INPLEMENTED METHOD FOR CREATING CONFIGURATION FILES FOR WEB TRANSACTION TESTS
82233593	Granted	6631411	7/13/2001	10/7/2003	09/905672	US	APPARATUS AND METHOD FOR MONITORING A CHAIN OF ELECTRONIC TRANSACTIONS
82233599	Granted	5958008	4/11/1997	9/28/1999	08/837012	US	SOFTWARE SYSTEM AND ASSOCIATED METHODS FOR SCANNING AND MAPPING DYNAMICALLY-GENERATED WEB DOCUMENTS
82233602	Granted	6144962	4/11/1997	11/7/2000	08/843265	US	VISUALIZATION OF WEB SITES AND HIERARCHICAL DATA STRUCTURES
82233608	Granted	6205122	4/2/1999	3/20/2001	09/285099	US	AUTOMATIC NETWORK TOPOLOGY ANALYSIS
82233611	Granted	6137782	6/17/1999	10/24/2000	09/334675	US	AUTOMATIC NETWORK TRAFFIC ANALYSIS
82233731	Granted	7651356	7/25/2007	1/26/2010	11/828319	US	TAMPER-EVIDENT CONNECTOR
82233908	Granted	7925876	8/14/2007	4/12/2011	11/838298	US	COMPUTER WITH EXTENSIBLE FIRMWARE INTERFACE IMPLEMENTING PARALLEL STORAGE-DEVICE ENUMERATION
82233959	Granted	8140637	9/26/2008	3/20/2012	12/239263	US	DATA TRANSFER
82233962	Granted	7984236	9/13/2007	7/19/2011	11/854731	US	DATA TRANSFER
82234028	Granted	7003781	5/5/2000	2/21/2006	09/564929	US	Method And Apparatus For Correlation Of Events In A Distributed Multi-system Computing Environment
82234037	Granted	7996853	10/4/2005	8/9/2011	11/243240	US	Method And Apparatus For Correlation Of Events In A Distributed Multi-system Computing Environment
82234154	Granted	7546017	9/28/2007	6/9/2009	11/904887	US	Electro-photonic Modulators

PATENT
REEL: 038498 FRAME: 0429

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0430

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82234157	Granted	7489436	9/11/2007	2/10/2009	11/900347	US	Hybrid Integrated Source Of Polarization-entangled Photons
82234283	Granted	9002986	4/23/2007	4/7/2015	11/738719	US	Systems And Methods For Sharing Customer Assets
82234418	Granted	7907530	9/20/2007	3/15/2011	11/917649	US	Determining Link Costs
82234532	Granted	7929865	7/27/2007	4/19/2011	11/881557	US	Free Space WDM Signal Detector
82234598	Granted	7835647	10/17/2007	11/16/2010	11/975228	US	Method And System Of Tracking Optical Beam Shift
82234649	Granted	7895192	7/19/2007	2/22/2011	11/880392	US	Estimating The Loaded Execution Runtime Of A Database Query
82234658	Granted	7477441	7/24/2007	1/13/2009	11/881076	US	MEMS Device With Nanowire Standoff Layer
82234661	Granted	7663202	6/26/2007	2/16/2010	11/819226	US	Nanowire Photodiodes And Methods Of Making Nanowire Photodiodes
82234706	Granted	7720342	10/31/2008	40316	12/262394	US	Optical Device With A Graded Bandgap Structure And Methods Of Making And Using The Same
82234712	Granted	7764850	10/1/2008	7/27/2010	12/243782	US	OPTICAL MODULATOR INCLUDING ELECTRICALLY CONTROLLED RING RESONATOR
82234715	Granted	7783145	10/15/2007	8/24/2010	11/872180	US	Electrode Having Nanofilaments
82234718	Granted	7630603	7/26/2007	12/8/2009	11/829042	US	Optical Waveguide Ring Resonator With Photo-tunneling Input/output Port
82234724	Granted	8768132	10/16/2008	7/1/2014	12/253196	US	Ridge Waveguide
82234769	Granted	7474811	9/14/2007	1/6/2009	11/856007	US	Nanowire Photonic Apparatus Employing Optical Field Confinement
82234778	Granted	8385698	12/12/2007	2/26/2013	12/743740	US	CONTROLLABLE OPTICAL RING RESONATOR HAVING PERIODICALLY SPACED CONTROL ELECTRODES
82234781	Granted	7466881	7/13/2007	12/16/2008	11/827766	US	Optical Switch
82234784	Granted	7751655	7/27/2007	7/6/2010	11/881679	US	Micro-ring Optical Detector/modulator
82234787	Granted	8059922	5/26/2010	11/15/2011	12/787647	US	METHODS OF MANIPULATING OPTICAL ENERGY WITHIN A WAVEGUIDE
82234793	Granted	8044381	7/30/2007	10/25/2011	11/830601	US	Light Emitting Diode (LED)
82234841	Granted	7856437	7/31/2007	12/21/2010	11/888092	US	Storing Nodes Representing Respective Chunks Of Files In A Data Store
82234844	Granted	8463787	10/25/2010	6/11/2013	12/911007	US	Storing Nodes Representing Respective Chunks Of Files In A Data Store
82234847	Granted	7725437	7/31/2007	5/25/2010	11/888154	US	Providing An Index For A Data Store
82234955	Granted	7865389	7/19/2007	1/4/2011	11/879980	US	Analyzing Time Series Data That Exhibits Seasonal Effects
82234970	Granted	7764852	7/30/2007	7/27/2010	11/888015	US	MICRORESONANTOR SYSTEMS AND METHODS OF FABRICATING THE SAME
82235021	Granted	7765123	7/19/2007	7/27/2010	11/879979	US	Indicating Which Of Forecasting Models At Different Aggregation Levels Has A Better Forecast Quality
82235024	Published		7/20/2007		11/880284	US	Providing A Model Of A Life Cycle Of An Enterprise Offering

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82235030	Granted	8032033	10/23/2007	10/4/2011	11/977369	US	Synchronous Optical Bus Providing Communication Between Computer System Components
82235084	Granted	7921025	7/19/2007	4/5/2011	11/879977	US	Building Market Models for Plural Market Participants
82235093	Granted	7925805	10/24/2008	4/12/2011	12/258052	US	Critical Resource Management
82235153	Granted	8351204	1/31/2008	1/8/2013	12/864230	US	MODULAR DATA PROCESSING COMPONENTS AND SYSTEMS
82235156	Granted	8357980	10/15/2007	1/22/2013	11/974746	US	Plasmonic High-speed Devices For Enhancing The Performance Of Microelectronic Devices
82235213	Granted	8108582	10/13/2008	1/31/2012	12/249977	US	Notifying Asynchronous Events To A Host Of A Data Storage System And Apparatus For The Same
82235216	Granted	7765122	7/19/2007	7/27/2010	11/879924	US	FORECASTING BASED ON A COLLECTION OF DATA INCLUDING AN INITIAL COLLECTION AND ESTIMATED ADDITIONAL DATA VALUES
82235222	Allowed		6/27/2008		12/163208	US	Access Control System And Method
82235267	Granted	7979742	7/19/2007	7/12/2011	11/880391	US	[improving] Recoverability Of A Dataset Associated With A Multi-tier Storage System (AMENDED)
82235330	Granted	8505019	10/31/2008	8/6/2013	12/289680	US	System And Method For Instant Capacity/workload Management Integration
82235348	Granted	8280974	7/31/2007	10/2/2012	11/831790	US	Migrating Workloads Using Networked Attached Memory
82235354	Published		9/30/2008		12/242752	US	Classifier Indexing
82235456	Granted	8898558	9/29/2008	11/25/2014	12/240934	US	Managing Multimodal Annotations Of An Image
82235537	Granted	8255915	10/26/2007	8/28/2012	11/924623	US	Workload Management For Computer System With Container Hierarchy And Workload-group Policies
82235546	Granted	8533041	9/29/2008	9/10/2013	12/286486	US	Risk-and-return Based Advertisment Selection And Scheduling
82235582	Granted	8024520	9/21/2007	9/20/2011	11/903384	US	Maintaining Data Stored In A Memory Module When Transferring The Memory Module From A First Controller To A Second Controller
82235648	Granted	8959089	4/25/2008	2/17/2015	12/988365	US	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82235672	Granted	8566835	10/31/2008	10/22/2013	12/263425	US	Dynamically Resizing A Virtual Machine Container
82235708	Granted	8447719	9/27/2008	5/21/2013	12/239755	US	COMPILATION OF CAUSAL RULES INTO CONTINUATIONS
82235726	Granted	8914683	9/30/2008	12/16/2014	12/241866	US	REPAIRING HIGH-SPEED SERIAL LINKS
82235729	Granted	8516221	10/31/2008	8/20/2013	12/263233	US	On-the-fly TLB Coalescing
82235771	Granted	8063738	9/11/2008	11/22/2011	12/208344	US	RFID System With A Mobile RFID Reader
82235777	Granted	8053748	10/20/2008	11/8/2011	12/254607	US	Integrated Circuits With Phase Change Devices
82235780	Published		7/31/2009		12/533625	US	System And Method For Providing Program Tracking Information
82235837	Granted	8402511	7/30/2009	3/19/2013	12/512164	US	LDAPI Communication Across OS Instances
82235957	Granted	8418974	2/20/2008	4/16/2013	12/918522	US	Mounting Assembly For Rack Equipment

PATENT
REEL: 038498 FRAME: 0431

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82236101	Granted	8273983	10/3/2008	9/25/2012	12/244939	US	PHOTONIC DEVICE AND METHOD OF MAKING SAME USING NANOWIRES
82236233	Granted	8432635	1/30/2008	4/30/2013	12/865399	US	Servo Write Head Gap Width Correction
82236527	Granted	8275578	9/25/2008	9/25/2012	12/238017	US	DIAGNOSTICS FOR CENTRALLY MANAGED COMPUTER SYSTEM
82236662	Granted	8254996	8/21/2008	41149	12/195435	US	Systems And Methods For Managing Access Channels
82236668	Granted	8046552	9/30/2008	10/25/2011	12/242087	US	Tracking Metadata Changes During Data Copy In A Storage System
82236776	Granted	8046529	9/25/2008	10/25/2011	12/238177	US	UPDATING CONTROL INFORMATION IN NON-VOLATILE MEMORY TO CONTROL SELECTION OF CONTENT
82236899	Granted	8030729	10/1/2008	10/4/2011	12/243804	US	DEVICE FOR ABSORBING OR EMITTING LIGHT AND METHODS OF MAKING THE SAME
82236902	Granted	8712035	1/31/2008	4/29/2014	12/012292	US	ONLINE DATA CONVERSION TECHNIQUE USING A SLIDING WINDOW
82237019	Published		12/20/2007		12/808229	US	MODEL BASED DEPLOYMENT OF COMPUTER BASED BUSINESS PROCESS ON DEDICATED HARDWARE
82237034	Granted	8982565	5/15/2008	3/17/2015	12/121350	US	Toolless Configuration Of A Computer Enclosure
82237277	Granted	8621470	1/24/2008	12/31/2013	12/019172	US	WAKEUP-ATTRIBUTE-BASED ALLOCATION OF THREADS TO PROCESSORS
82237598	Granted	7924717	2/27/2009	40645	12/394466	US	Systems And Methods Of Handling Access Control Violations
82237607	Granted	8289692	3/14/2008	10/16/2012	12/922411	US	Blade Server For Increased Processing Capacity
82237658	Granted	8161154	9/30/2008	4/17/2012	12/241435	US	Establishing A Thin Client Terminal Services Session
82237664	Granted	8332877	1/30/2008	12/11/2012	12/022843	US	Coordinated Actions Of Kernel And Userspace Components
82237793	Granted	8202047	5/7/2008	41079	12/116601	US	Fan Module Latching Device
82237841	Granted	8065537	4/28/2008	11/22/2011	12/110575	US	Adjusting Cap Settings Of Electronic Devices According To Measured Workloads
82237850	Published		4/19/2008		12/937930	US	Device And Method For Cooling Fan Control Using Measured Amperage Load.
82237892	Granted	7937273	9/27/2008	5/3/2011	12/239756	US	Change Collision Calculation System And Method
82237901	Published		2/21/2008		12/918388	US	Systems And Methods Of Component Voltage Adjustment
82237979	Granted	7496646	9/20/2002	2/24/2009	10/251690	US	System And Method For Management Of A Storage Area Network
82238033	Granted	7266722	9/20/2002	9/4/2007	10/251893	US	SYSTEM AND METHOD FOR EFFICIENT LOCK RECOVERY
82238078	Granted	8732706	10/20/2008	5/20/2014	12/254648	US	Generating Governing Metrics For Resource Provisioning
82238090	Granted	7920560	4/23/2008	4/5/2011	12/108474	US	Method For Detecting Topology Of Computer Systems
82238144	Published		1/30/2008		12/812937	US	OPTICAL INTERCONNECTS
82238150	Granted	8306015	8/21/2008	11/6/2012	12/195448	US	A Technique For Identifying RTP Based Traffic In Core Routing Switches

PATENT
REEL: 038498 FRAME: 0432

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82238264	Published		9/21/2008		12/234678	US	Capturing Application State Information For Simulation In Managed Environments
82238270	Granted	8817817	5/15/2008	41877	12/121523	US	Method For Ethernet Power Savings On Link Aggregated Groups
82238279	Published		2/25/2009		12/392126	US	Data Processing System And Method
82238285	Published		11/21/2008		12/275232	US	TASK-REGISTRATION-BASED USER AUTHORIZATION
82238291	Granted	7814759	5/19/2008	10/19/2010	12/153406	US	Method For Controlling System Temperature
82238339	Granted	8761550	1/31/2008	6/24/2014	12/864228	US	OPTICAL TAPS FOR CIRCUIT BOARD-MOUNTED OPTICAL WAVEGUIDES
82238348	Granted	7656651	5/16/2008	2/2/2010	12/121933	US	Apparatus And Methods For Automatically Positioning An Interface Module In A Rack System
82238408	Granted	8161391	5/16/2008	4/17/2012	12/121968	US	On-board Input And Management Device For A Computing System
82238456	Published		10/1/2008		12/243022	US	Server-embedded Distributed Storage System
82238465	Granted	7929919	9/25/2008	4/19/2011	12/237869	US	SYSTEMS AND METHODS FOR A PLL-ADJUSTED REFERENCE CLOCK
82238519	Granted	8670241	5/15/2008	3/11/2014	12/121613	US	Blade Device Enclosure
82238531	Granted	8122503	10/3/2008	2/21/2012	12/244974	US	Methods And Systems For Managing A Potential Security Threat To A Network
82238591	Published		10/1/2008		12/243920	US	Copying Logical Disk Mappings Between Arrays
82238597	Granted	8050021	5/16/2008	11/1/2011	12/122519	US	Ejectable/retractable Interface Module For A Computer System
82238645	Granted	8522002	1/28/2008	8/27/2013	12/811198	US	SYSTEMS AND METHODS FOR DEPLOYMENT OF BOOT IMAGES IN DISKLESS SERVERS
82238660	Published		12/20/2007		12/808227	US	AUTOMATED MODEL GENERATION FOR COMPUTER BASED BUSINESS PROCESS
82238852	Allowed		10/10/2008		12/249603	US	Methods And Systems For Managing Security In A Network
82238888	Granted	D588601	1/15/2008	3/17/2009	29/302351	US	Bronco Front Bezel
82238897	Granted	7813120	6/13/2008	10/12/2010	12/138625	US	Airflow Path Within An Electronic Module Enclosure
82238903	Granted	7755889	6/12/2008	7/13/2010	12/138186	US	Air Manifold For Electronic Module Enclosure
82238918	Granted	8630739	3/14/2008	1/14/2014	12/921524	US	Exergy Based Evaluation Of An Infrastructure
82239029	Published		10/1/2008		12/243051	US	Classifying A Data Item With Respect To A Hierarchy Of Categories
82239077	Published		2/29/2008		12/918389	US	Identification Of Elements Of Currently-executing Component Script
82239326	Granted	8332861	10/31/2008	41254	12/289681	US	Virtualized Temporary Instant Capacity
82239329	Application		10/30/2008		12/289601	US	Automatic Determination Of Workload Management Policy Settings
82239335	Application		9/30/2008		12/242589	US	Predicting Performance Consequences Of Migrating An Application From First Hardware To Second Hardware

PATENT
REEL: 038498 FRAME: 0433

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82239338	Granted	D598456	2/28/2008	8/18/2009	29/304300	US	Front Bezel
82239341	Granted	D598457	2/28/2008	8/18/2009	29/304305	US	Front Bezel
82239353	Granted	8379544	1/23/2009	41324	12/359026	US	COMMUNICATIONS
82239407	Granted	9069613	9/30/2008	6/30/2015	12/242707	US	Processing Batch Database Workload While Avoiding Overload
82239413	Granted	8148800	10/1/2008	41002	12/243182	US	NANOWIRE-BASED SEMICONDUCTOR DEVICE AND METHOD EMPLOYING REMOVAL OF RESIDUAL CARRIERS
82239467	Granted	8368050	1/30/2008	2/5/2013	12/864210	US	PLASMON ENHANCED LIGHT-EMITTING DIODES
82239515	Granted	8009937	10/28/2008	40785	12/260006	US	Charge-based Memory Cell For Optical Resonator Tuning
82239527	Granted	8693894	10/28/2008	41737	12/259985	US	Gain Clamped Optical Device For Emitting LED Mode Light
82239533	Granted	7983519	10/16/2008	7/19/2011	12/253201	US	PHOTONIC CONNECTION AND METHOD FOR ENHANCING ALIGNMENT ACCURACY THEREOF
82239539	Granted	8392157	11/27/2007	3/5/2013	12/744898	US	SYSTEM SYNTHESIS TO MEET AN EXERGY LOSS TARGET VALUE
82239587	Granted	8635593	9/30/2008	1/21/2014	12/241661	US	Dynamic Autocompletion Tool
82239641	Application		9/23/2008		12/236289	US	Generating A Trace Identifying Activity Of A Computer System During The Execution Of An Application
82239650	Granted	8897139	12/5/2008	41968	12/328961	US	Packet Processing Indication
82239659	Application		10/29/2008		12/260735	US	Using A Virtual Machine To Acquire Information About Capabilities Of A Physical Machine
82239665	Granted	8910152	9/23/2008	12/9/2014	12/236304	US	Migrating A Virtual Machine By Using A Hot-plug Event
82239701	Application		10/29/2008		12/260762	US	Controlling Access To Memory Using A Controller That Performs Cryptographic Functions
82239707	Application		9/29/2008		12/240694	US	Migrating A Virtual Machine Based On Information Relating To Communications Among Virtual Machines
82239716	Granted	8341626	9/29/2008	12/25/2012	12/240611	US	Migration Of A Virtual Machine In Response To Regional Environment Effects
82239722	Granted	8181175	9/23/2008	5/15/2012	12/236196	US	Accounting For Resource Usage Time By A Virtual Machine
82239728	Granted	8053982	10/1/2008	40855	12/243117	US	LIGHT-EMITTING DIODES WITH CARRIER EXTRACTION ELECTRODES
82239764	Granted	8185894	9/24/2008	41051	12/237177	US	Training A Virtual Machine Placement Controller
82239770	Granted	8365169	9/23/2008	1/29/2013	12/236244	US	Migrating A Virtual Machine Across Processing Cells Connected To An Interconnect That Provides Data Communication Without Cache Coherency Support
82239776	Granted	8542960	10/31/2008	9/24/2013	12/262419	US	Tunable Ring Resonator
82239827	Granted	8732308	10/1/2008	5/20/2014	12/243111	US	Coordinated Management In Virtualized Systems Using Management Brokers And Management Channels
82239848	Granted	7941015	10/30/2008	5/10/2011	12/262142	US	Ring Light Emitting Diode
82239854	Granted	7863625	9/30/2008	40547	12/242559	US	Nanowire-based Light-emitting Diodes And Light-detection Devices With Nanocrystalline Outer Surface

PATENT
REEL: 038498 FRAME: 0434

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0435

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82239893	Allowed		10/1/2008		12/243896	US	Access Grants
82239899	Granted	8627111	10/1/2008	1/7/2014	12/243903	US	Managing Associations Between Keys And Values
82240076	Granted	8255917	9/25/2008	41149	12/238074	US	Auto-configuring Workload Management System
82240079	Allowed		10/28/2008		12/259992	US	UPDATING A COMPUTER SYSTEM
82240085	Granted	8037350	10/13/2008	10/11/2011	12/250367	US	Altering A Degree Of Redundancy Used During Execution Of An Application
82240094	Granted	8427478	10/28/2008	4/23/2013	12/290252	US	Displaying Continually Incoming Time Series Data That Uses Overwriting Of One Portion Of The Time Series Data While Another Portion Of The Time Series Data Remains Unshifted
82240100	Published		10/28/2008		12/290322	US	Non-overlapping Visualization Of Data Records Of A Scatter Plot
82240202	Granted	9141687	10/1/2008	9/22/2015	12/243075	US	Identification Of Data Objects Within A Computer Database
82240205	Granted	8892910	12/17/2008	11/18/2014	12/316819	US	Method And System For Providing Synamic Power Sharing To Network Devices
82240217	Granted	7840669	9/30/2008	11/23/2010	12/241799	US	PROVISIONING ARTIFACTS FOR POLICY ENFORCEMENT OF SERVICE-ORIENTED ARCHITECTURE (SOA) DEPLOYMENTS
82240223	Granted	7979739	8/21/2008	7/12/2011	12/195440	US	Systems And Methods For Managing A Redundant Management Module
82240229	Granted	9143494	11/14/2008	9/22/2015	12/271581	US	Method And Apparatus For Accessing A Network
82240268	Granted	8726045	3/31/2008	5/13/2014	12/935125	US	Automated Power Topology Discovery By Detecting Communication Over Power Line And Associating PDU Port Identifier To Computing Device
82240352	Granted	8116815	8/21/2008	2/14/2012	12/195428	US	Systems And Methods For Maintaining Base Stations In Wireless Networks
82240388	Granted	9072202	10/12/2007	6/30/2015	11/871485	US	Systems And Methods For Cleaning Filters Of An Electrical Device
82240391	Granted	8121807	10/15/2008	40960	12/288021	US	Method And System For Device Reconfihuration For Defect Amelioration
82240469	Published		9/25/2008		12/237695	US	Management Of A Service Performing Structure
82240520	Granted	8362894	10/30/2009	41303	12/609481	US	Methods And Systems For Providing Departure Notification From A Travel Assistance System
82240577	Published		2/26/2008		12/919126	US	Fan And Cooling Device
82240598	Granted	8199432	9/30/2008	41072	12/241995	US	Extended Tape Path Length Between Nip Point And Guide In Tape Drive
82240661	Granted	8464086	3/3/2008	41436	12/920575	US	Software-Based Power Capping
82240724	Granted	8626355	4/1/2008	1/7/2014	12/935985	US	Cooling Provisioning Management In A Three Dimensional Package

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82240835	Published		4/30/2008		12/937938	US	POWER SUPPLY ASSEMBLY FOR SERVER RACK AND METHOD FOR MOUNTING POWER SUPPLY FOR SERVER RACK
82240844	Granted	8355251	8/21/2008	1/15/2013	12/195425	US	Remote Exhaust For Rack Systems
82240964	Published		4/8/2009		12/937127	US	DATA PROCESSING SYSTEM AND METHOD
82241087	Granted	8307417	2/13/2009	11/6/2012	12/370608	US	Port Enablement
82241150	Granted	8199671	9/30/2008	6/12/2012	12/241728	US	Throttling Network Traffic Generated By A Network Discovery Tool During A Discovery Scan
82241207	Granted	8650579	10/29/2007	2/11/2014	11/927083	US	Containment For Computer-software Update Installation Processes
82241282	Published		6/2/2008		12/131395	US	Multiplexing Reserved Ports
82241288	Granted	8924794	2/21/2008	12/30/2014	12/867445	US	Method And Computer Program Product For Forecasting System Behavior
82241339	Granted	8180744	10/1/2008	41044	12/243103	US	Managing Storage Of Data In A Data Structure
82241387	Granted	8260101	10/31/2008	9/4/2012	12/263384	US	System And Method For An In-plane Hollow Metal Waveguide Optical Power Beam Splitter
82241453	Granted	8595405	2/18/2008	11/26/2013	12/867462	US	Systems And Methods Of Communicatively Coupling A Host Computing Device And A Peripheral Device
82241474	Granted	8423698	4/2/2008	41380	12/935541	US	CONVERSION OF RESETS SENT TO A SHARED DEVICE
82241516	Published		10/31/2008		12/263080	US	Graphic For Network Switches
82241528	Granted	8373061	10/28/2008	2/12/2013	12/259969	US	Photovoltaic Cells With Stacked Light-absorption Layers And Methods Of Fabricating The Same
82241645	Granted	8392383	9/26/2008	41338	12/239433	US	System And Method For Recording Files Of Data
82241663	Granted	8694991	8/22/2008	4/8/2014	12/935152	US	Server Virtualized Using Virtualization Platform
82241720	Granted	8972410	5/11/2009	3/3/2015	12/463972	US	Identifying Related Objects In A Computer Database
82241726	Granted	8620859	6/10/2008	12/31/2013	12/136075	US	DATA PROCESSING SYSTEM AND METHOD OF EVALUATING EFFECTIVENESS OF USAGE OF A FILE SYSTEM (as amended)
82241786	Allowed		11/21/2007		11/986599	US	Allocation Of Resources For Concurrent Query Execution Via Adaptive Segmentation
82241843	Granted	8555048	9/25/2008	10/8/2013	12/238092	US	COMPUTER SYSTEM FOR BOOTING A SYSTEM IMAGE BY ASSOCIATING INCOMPLETE IDENTIFIERS TO COMPLETE IDENTIFIERS VIA QUERYING STORAGE LOCATIONS ACCORDING TO PRIORITY LEVEL WHERE THE QUERYING IS SELF ADJUSTING
82241852	Granted	9008467	10/31/2008	4/14/2015	12/262312	US	Nanoparticle-based Quantum Confined Stark Effect Modulator
82241897	Granted	8390800	3/4/2008	3/5/2013	12/864234	US	ANGLE SENSOR, SYSTEM AND METHOD EMPLOYING GUIDED-MODE RESONANCE
82241903	Granted	8390005	10/1/2008	3/5/2013	12/243105	US	Apparatus And Method For Nanowire Optical Emission

PATENT
REEL: 038498 FRAME: 0436

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82241969	Granted	8392633	10/1/2008	3/5/2013	12/243216	US	Scheduling Requesters Of A Shared Storage Resource
82242095	Published		2/15/2008		12/867107	US	METHOD AND COMPUTER PROGRAM PRODUCT FOR CHANGING AN IT SYSTEM
82242224	Granted	8693814	3/28/2008	4/8/2014	12/922092	US	FLEXIBLE OPTICAL INTERCONNECT
82242269	Granted	8250427	10/1/2008	41142	12/243471	US	Selecting Erasure Codes For A Fault Tolerant System
82242275	Granted	8488267	6/6/2008	7/16/2013	12/993796	US	Sensor Position Adjustment With Media Velocity Relative Sample Timing
82242281	Granted	8843877	11/17/2008	9/23/2014	12/272485	US	Integrated SOA Deployment And Management System And Method For Software Services
82242287	Granted	8233804	9/30/2008	7/31/2012	12/241945	US	Fiber Optic Cable Diagnostics Using Digital Modulation
82242389	Granted	7990812	10/1/2008	40757	12/243368	US	STORAGE SYSTEMS AND METHODS FOR PUBLISHING DEVICE ADDRESSES
82242395	Granted	8055954	10/1/2008	11/8/2011	12/243340	US	Storage Systems And Methods For Distributed Support Ticket Processing
82242509	Granted	9122724	10/28/2008	42248	12/260053	US	COMBINED JOIN
82242584	Granted	8938139	3/11/2008	1/20/2015	12/921768	US	Optoelectronic Switches Using On-chip Optical Waveguides
82242593	Granted	8229596	9/25/2008	7/24/2012	12/238281	US	Systems And Methods To Interface Diverse Climate Controllers And Cooling Devices
82242602	Granted	8200969	1/31/2008	6/12/2012	12/012293	US	Data Verification By Challenge
82242644	Granted	8660432	4/2/2008	41695	12/922098	US	IMAGE-ROTATION PRISMS AND OPTICAL INTERCONNECTS EMPLOYING THE SAME
82242662	Granted	8174769	4/4/2008	5/8/2012	12/922095	US	BEAMSPLITTERS WITH OFFSET COMPENSATION
82242719	Published		5/1/2008		12/989981	US	Storing Checkpoint Data In Non-volatile Memory
82242725	Granted	8370834	3/9/2009	2/5/2013	12/400491	US	Routing Across A Virtual Network
82242767	Granted	8032493	9/26/2008	10/4/2011	12/239034	US	System And Method Of Obtaining Interrelated Data In A Database
82242845	Published		10/30/2008		12/262017	US	AN ARCHITECTURE FOR INSTANTIATING INFORMATION TECHOLOGY SERVICES
82242848	Granted	8375396	1/31/2008	41317	12/012291	US	Backup Procedure With Transparent Load Balancing
82242893	Published		10/21/2008		12/255608	US	Method For Database Design
82242902	Granted	8396883	6/23/2008	3/12/2013	12/994314	US	Spatial Querying In A Data Warehouse
82242950	Published		9/30/2008		12/242678	US	Characterizing Queries To Predict Execution In A Database
82243010	Published		10/28/2008		12/290281	US	Automated Visual Analysis Of Nearby Markings Of A Visualization To Perform Relationship Determination And Exception Identification
82243016	Allowed		9/30/2008		12/242616	US	Predicting Performance Of Multiple Queries Executing In A Database
82243082	Granted	8009499	10/1/2008	40785	12/243857	US	Providing A Capacitor-based Power Supply To Enable Backup Copying Of Data From Volatile Storage To Persistent Storage

PATENT
REEL: 038498 FRAME: 0437

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82243097	Granted	8019765	10/29/2008	9/13/2011	12/260836	US	Identifying Files Associated With A Workflow
82243100	Granted	8306947	10/30/2008	11/6/2012	12/261473	US	REPLICATION OF OPERATIONS ON OBJECTS DISTRIBUTED IN A STORAGE SYSTEM
82243226	Published		9/26/2008		12/239316	US	System And Method For Generating Messages
82243409	Allowed		3/9/2009		12/400526	US	Distributed Network Connection Policy Management
82243451	Published		9/23/2008		12/236186	US	System And Method For Distributing Enduring Eredentials In An Untrusted Network Environment
82243508	Granted	D625252	12/5/2007	40463	29/298475	US	Modular Power Supply (as Amended)
82243574	Granted	8126696	10/15/2008	2/28/2012	12/252121	US	Modifying Length Of Synchronization Quanta Of Simulation Time In Which Execution Of Nodes Is Simulated
82243637	Granted	6751702	10/31/2000	6/15/2004	09/699347	US	Method For Automated Provisioning Of Central Data Storage Devices Using A Data Model
82243643	Granted	6816897	4/30/2001	11/9/2004	09/843813	US	Console Mapping Tool For Automated Deployment And Management Of Network Devices
82243646	Granted	7855888	1/13/2009	12/21/2010	12/352907	US	Cooling Manifold Assembly
82243655	Granted	8903985	10/13/2009	12/2/2014	12/578019	US	SHARING STATUS INFORMATION ACROSS A PLURALITY OF COMMUNICATION NETWORKS
82243661	Application		9/30/2008		12/242610	US	Managing A Payment Transaction
82243706	Published		6/17/2008		12/140281	US	Data Processing System And Method
82243712	Granted	8122069	10/21/2008	2/21/2012	12/255619	US	Methods For Paining Text Snippets To File Activity
82243718	Granted	7953752	10/30/2008	5/31/2011	12/261665	US	Methods For Merging Text Snippets For Context Classification
82243766	Published		5/27/2009		12/472584	US	INFORMATION SHARING METHOD AND APPARATUS
82244141	Granted	8489831	10/1/2008	7/16/2013	12/243193	US	Systems And Methods For Data Snapshot Replication
82244147	Granted	8798960	10/29/2008	8/5/2014	12/260771	US	Application Performance Analysis For A Multiple Processor Queuing Station
82244150	Granted	6763361	10/31/2000	7/13/2004	09/699348	US	Object-oriented Database Abstraction And Statement Generation
82244156	Granted	6658426	10/31/2000	37957	09/699349	US	Object-oriented Database Abstraction And Statement Generation
82244162	Granted	7152109	4/20/2001	12/19/2006	09/838141	US	AUTOMATED PROVISIONING OF COMPUTING NETWORKS ACCORDING TO CUSTOMER ACCOUNTS USING A NETWORK DATABASE DATA MODEL
82244195	Granted	8762507	12/22/2006	6/24/2014	11/644366	US	Method And System For Managing An Information Technology System
82244204	Published		10/2/2008		12/244096	US	Distributed Sensor System
82244261	Granted	7437437	4/25/2001	10/14/2008	09/841008	US	Access Authentication For Distributed Networks
82244264	Granted	7818414	8/4/2008	40470	12/185701	US	Access Authentication For Distributed Networks
82244267	Granted	7496645	10/18/2001	2/24/2009	09/978710	US	Deployment Of Business Logic Software And Data Content Onto Network Servers

PATENT
REEL: 038498 FRAME: 0438

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82244273	Granted	8019835	4/20/2001	40799	09/838135	US	Automated Provisioning Of Computing Networks Using A Network Data Model
82244324	Granted	6996845	11/28/2000	38755	09/722655	US	Internet Security Analysis System And Process
82244327	Granted	7200867	2/7/2006	39175	11/348416	US	Webcrawl Internet Security Analysis And Process
82244330	Granted	7444680	4/2/2007	10/28/2008	11/695147	US	Webcrawl Internet Security Analysis And Process
82244342	Granted	7647631	12/7/2004	1/12/2010	11/007713	US	Automated User Interaction In Application Assessment
82244348	Granted	8566945	2/11/2005	10/22/2013	11/056928	US	System And Method For Testing Web Applications With Recursive Discovery And Analysis
82244390	Granted	8656495	11/17/2006	41688	11/560969	US	Web Application Assessment Based On Intelligent Generation Of Attack Strings
82244399	Published		11/17/2006		11/560984	US	Characterization Of Web Application Inputs
82244465	Granted	8127122	9/16/2008	40967	12/211202	US	Boot Drive Selection
82244519	Granted	8463880	3/24/2008	6/11/2013	12/079014	US	Method And System For Removing A Tunnel Between Portal Points
82244525	Granted	8205134	9/30/2008	6/19/2012	12/286492	US	Error Detection Method And Apparatus
82244570	Granted	8332340	5/22/2008	12/11/2012	12/743781	US	HYBRID MICROSCALE-NANOSCALE NEUROMORPHIC INTEGRATED CIRCUIT
82244576	Granted	9063947	10/24/2008	6/23/2015	12/258316	US	Detecting Duplicative Hierarchical Sets Of Files
82244582	Granted	9143554	10/13/2008	9/22/2015	12/250256	US	CONTROL OF A COMPUTING SYSTEM HAVING ADJUSTABLE INPUTS
82244585	Allowed		6/11/2009		12/482475	US	Apparatus And Method For Email Storage
82244594	Granted	7958022	6/17/2008	40701	12/140287	US	Pre-pay Communication Services
82244645	Granted	8789039	9/26/2008	41842	12/239373	US	Method And System Of Installing A Program On A First Computer, And Duplicating The Installation On A Second Computer
82244654	Granted	8190555	1/30/2009	5/29/2012	12/322263	US	METHOD AND SYSTEM FOR COLLECTING AND DISTRIBUTING USER-CREATED CONTENT WITHIN A DATA-WAREHOUSE-BASED COMPUTATIONAL SYSTEM
82244759	Granted	7881228	9/9/2008	2/1/2011	12/206753	US	SYSTEM AND METHOD FOR BROADCAST PRUNING IN ETHERNET BASED PROVIDER BRIDGING NETWORK
82244771	Published		10/23/2008		12/257232	US	Apparatus And Method For Recording Video Data
82244783	Published		10/27/2008		12/258741	US	GENERATING A QUERY PLAN FOR ESTIMATING A NUMBER OF UNIQUE ATTRIBUTES IN A DATABASE
82244843	Granted	8429216	9/23/2008	4/23/2013	12/235905	US	Generating A Hash Value From A Vector Representing A Data Object
82244894	Granted	8843354	6/19/2008	9/23/2014	12/990463	US	Capacity Planning
82244963	Granted	7924520	10/1/2008	4/12/2011	12/243208	US	Method And Apparatus For Determining Position Of A Storage Medium
82244969	Published		10/24/2008		12/257440	US	CUSTOMIZING PRODUCTS
82245014	Published		12/12/2008		12/316412	US	Workload Management In A Parallel Database System

PATENT
REEL: 038498 FRAME: 0439

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82245017	Granted	7974943	10/30/2008	40729	12/261055	US	Building A Synchronized Target Databse
82245203	Granted	8156063	9/29/2008	4/10/2012	12/240593	US	DECISION MAKING BASED ON CHANGES INPUT TO A DATABASE
82245221	Granted	8918670	10/29/2008	12/23/2014	12/260609	US	Active Link Verification For Failover Operations In A Storage Network
82245269	Published		10/23/2008		12/256586	US	Detecting Potentially Unauthorized Objects Within An Enterprise
82245341	Published		10/9/2008		12/248648	US	Cross-layer Power Management In A Multi-layer System
82245386	Granted	7741867	10/30/2008	6/22/2010	12/262051	US	DIFFERENTIAL ON-LINE TERMINATION
82245410	Granted	8131814	10/15/2008	3/6/2012	12/252173	US	Dynamic Pinning Remote Direct Memory Access
82245515	Granted	8565218	10/31/2008	10/22/2013	12/263429	US	Flow Path Discovery In Network To Guarantee Multiple Metric Qos Constraints
82245518	Published		10/30/2008		12/261761	US	Filter Generation For Load Testing Managed Environments
82245578	Published		7/3/2008		12/993926	US	Memory Server
82245635	Granted	8543005	4/30/2008	9/24/2013	12/990494	US	Intentionally Skewed Optical Clock Signal Distribution
82245644	Published		10/14/2008		12/251259	US	Prioritizing Problems In IT Services
82245695	Granted	8180751	10/31/2008	5/15/2012	12/263414	US	Using An Encyclopedia To Build User Profiles
82245704	Granted	8094582	4/7/2009	1/10/2012	12/419633	US	Location Determination For Placing A New Capacity Point In A Wirelesss Network
82245707	Granted	8228912	4/30/2009	7/24/2012	12/433807	US	Selecting Wireless Mesh Node Locations
82245710	Granted	8018753	10/30/2008	9/13/2011	12/262038	US	MEMORY MODULE INCLUDING VOLTAGE SENSE MONITORING INTERFACE
82245719	Granted	7930593	10/1/2008	4/19/2011	12/243262	US	Segment Based Technique And System For Detecting Performance Anomalies And Changes For A Computer Based Service
82245911	Published		10/14/2008		12/250881	US	Scheduling Queries Using A Stretch Metric
82246022	Published		9/30/2008		12/242186	US	Reduced-resource Block Thin Provisioning
82246325	Granted	8140461	3/24/2008	3/20/2012	12/079021	US	System And Method For Identifying Conflicting Network Access Rules And Creating A Resolved Consequence
82246406	Published		6/30/2009		12/495628	US	QUERY PROGRESS ESTIMATION BASED ON PROCESSED VALUE PACKETS
82246448	Granted	8234459	3/13/2009	7/31/2012	12/403712	US	SWITCH MODULE BASED NON-VOLATILE MEMORY IN A SERVER
82246451	Granted	8176293	3/27/2009	5/8/2012	12/383766	US	Method And System For Moving Active Virtual Partitions Between Computers
82246472	Granted	7965914	10/30/2008	40715	12/262160	US	CRITICALLY COUPLED MICRORING RESONATOR AND METHOD
82246568	Granted	7974219	9/26/2008	40729	12/232966	US	Network Troubleshooting Using Path Topology
82246592	Granted	8892492	12/17/2008	11/18/2014	12/336667	US	Declarative Network Access Control
82246697	Granted	D607349	10/28/2008	1/5/2010	29/326971	US	Sensor And LED Enclosure

PATENT
REEL: 038498 FRAME: 0440

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82246772	Granted	8566332	3/2/2009	10/22/2013	12/396430	US	Populating Variable Content Slots On Web Pages
82246775	Granted	8255185	10/15/2008	41149	12/252355	US	Automated Information Technology Management
82246889	Granted	8875142	10/23/2009	41940	12/604568	US	JOB SCHEDULING ON A MULTIPROCESSING SYSTEM BASED ON RELIABILITY AND PERFORMANCE RANKINGS OF PROCESSORS AND WEIGHTED EFFECT OF DETECTED ERRORS (AS AMENDED)
82246904	Granted	9015204	7/15/2009	4/21/2015	12/503794	US	ONBOARDING RESOURCES TO AN IDENTITY MANAGEMENT SYSTEM
82246949	Granted	8046450	3/13/2009	10/25/2011	12/403877	US	ASSOCIATING NETWORK PORTS OF A COMPUTER SYSTEM WITH NETWORK PORTS OF A NETWORK DEVICE
82246970	Granted	8103675	10/20/2008	1/24/2012	12/254303	US	Predicting User Item Ratings
82247030	Granted	8723498	12/19/2008	41772	12/339984	US	Systems And Methods Of Increasing Power Measurement Accuracy For Power Factor Correction
82247033	Granted	8109142	4/30/2009	40946	12/433661	US	INERTIAL SENSING SYSTEM WITH A CURVED BASE AND A DIAMAGNETIC MASS
82247072	Granted	8533843	10/13/2008	9/10/2013	12/250199	US	A Device, Method, And Program Product For Determining An Overall Business Service Vulnerability Score
82247075	Granted	8209742	1/7/2009	6/26/2012	12/350130	US	Computer-implemented Method For Obtaining A Minimum Biclique Cover In A Bipartite Dataset
82247153	Granted	9058836	1/29/2009	6/16/2015	12/362432	US	Data Transfer Apparatus
82247201	Granted	8134774	4/16/2009	40981	12/386295	US	DYNAMICALLY RECONFIGURABLE NEGATIVE INDEX MATERIAL CROSSBARS WITH GAIN
82247276	Granted	8670320	2/9/2010	41709	12/703164	US	Quality Of Service Routing Architecture
82247279	Granted	8316289	1/29/2009	11/20/2012	12/361669	US	Updating Sequential Data
82247342	Granted	7971458	4/24/2008	40729	12/109313	US	Bracket Assembly For Lock
82247384	Published		1/22/2009		12/357745	US	Methods For Secure Data Distribution
82247396	Granted	7817417	10/17/2008	10/19/2010	12/253781	US	Flexible Airflow Baffle For An Electronic System
82247405	Granted	8984906	8/7/2007	3/24/2015	11/834781	US	Cool Design Data Center
82247447	Published		9/29/2008		12/865512	US	Neuromorphic Circuit
82247573	Granted	7929295	6/23/2009	4/19/2011	12/489867	US	Systems And Methods For Providing Airflow
82247633	Granted	8381167	1/29/2009	41324	12/320587	US	Business Service Discovery
82247651	Granted	8127124	3/19/2009	40967	12/407642	US	Remote Configuration Of Computing Platforms
82247696	Granted	8756094	1/26/2009	6/17/2014	12/359853	US	RISK MITIGATION FOR COMPUTER SYSTEM CHANGE REQUESTS
82247759	Granted	8392928	10/28/2008	41338	12/259837	US	AUTOMATED WORKLOAD PLACEMENT RECOMMENDATIONS FOR A DATA CENTER
82247762	Granted	8539482	10/30/2008	9/17/2013	12/262110	US	VIRTUAL-SERVER LICENSE STATUS DETERMINATION
82247768	Application		1/28/2009		12/360917	US	Displaying Computer Resource Hierarchy
82247774	Allowed		1/28/2009		12/361510	US	LICENSE MANAGER FOR CENTRAL MANAGEMENT PRODUCTS

PATENT
REEL: 038498 FRAME: 0441

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0442

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82247840	Granted	8054575	1/12/2009	11/8/2011	12/352434	US	Position Signal Processor
82247900	Published		10/29/2009		12/608606	US	Policy Enforcement In Trusted Platforms
82247906	Granted	8130641	3/13/2009	3/6/2012	12/403466	US	Methods And Systems For Managing Network Traffic Within A Virtual Network Systems
82247942	Granted	8280054	4/30/2009	10/2/2012	12/387352	US	SCRAMBLING AND DESCRAMBLING SYSTEMS FOR SECURE COMMUNICATION
82247954	Granted	8041789	1/28/2009	10/18/2011	12/361365	US	MIGRATION OF PROFILES BETWEEN ENCLOSURES
82247963	Published		10/31/2008		12/262485	US	Telecommunication Systems
82248068	Granted	8180715	12/11/2008	5/15/2012	12/332930	US	SYSTEMS AND METHODS FOR COLLABORATIVE FILTERING USING COLLABORATIVE INDUCTIVE TRANSFER
82248140	Granted	8205117	4/20/2009	6/19/2012	12/426303	US	Migratory Hardware Diagnostic Testing
82248152	Granted	7937506	10/31/2008	5/3/2011	12/262670	US	RESTORING DATA TO A POINT IN A CONTINUUM OF INPUT/OUTPUT OPERATIONS
82248155	Published		12/16/2008		12/316712	US	CONTINUOUS, AUTOMATED DATABASE-TABLE PARTITIONING AND DATABASE-SCHEMA EVOLUTION
82248200	Granted	7984282	3/5/2009	7/19/2011	12/398184	US	Evasion Of Power On Self Test During An Operating System Initiated Reboot
82248203	Granted	8214685	10/31/2008	7/3/2012	12/262679	US	RECOVERING FROM A BACKUP COPY OF DATA IN A MULTI-SITE STORAGE SYSTEM
82248212	Granted	8881132	3/5/2009	11/4/2014	12/398185	US	System And Method For Update Of Firmware Of A Storage Array Controller In A Storage Area Network
82248218	Granted	8448181	1/30/2009	5/21/2013	12/363581	US	Sizing An Infrastructure Configuraton Optimized For A Workload Mix
82248221	Granted	8055493	1/30/2009	11/8/2011	12/363597	US	Sizing An Infrastructure Configuration Optimized For A Workload Mix Using A Predictive Model
82248260	Published		1/23/2009		12/321612	US	Placement Of Cells In Bins To Provide Non Overlapping Visualization Of Data Points Of A Scatter Plot
82248266	Application		10/31/2008		12/289678	US	Management Of Multiple Scale Out Workloads
82248269	Granted	8271818	4/30/2009	9/18/2012	12/453148	US	MANAGING UNDER-UTILIZED RESOURCES IN A COMPUTER
82248278	Granted	8312419	10/30/2008	41226	12/261324	US	AUTOMATED LIFECYCLE MANAGEMENT OF A COMPUTER IMPLEMENTED SERVICE
82248446	Granted	8055687	1/20/2009	11/8/2011	12/356479	US	SYSTEM AND METHOD FOR DETERMINING INTERVALS OF A SPACE FILLING CURVE IN A QUERY BOX
82248452	Application		10/31/2008		12/263314	US	POWER-CONSUMPTION ESTIMATION MODEL FOR COMPUTER
82248458	Granted	9009498	10/31/2008	42108	12/263336	US	Estimating Power Consumption For A Target Host
82248461	Granted	8086555	1/23/2009	12/27/2011	12/359167	US	Collaborative Filtering Systems And Methods
82248467	Allowed		2/12/2009		12/370551	US	Database Join Optimized For Flash Storage
82248503	Granted	9047124	10/14/2008	6/2/2015	12/251293	US	Query Scheduler

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82248512	Granted	8180694	10/31/2008	5/15/2012	12/262538	US	A System And Method For Incorporating Qualitative Inputs Into Econometric Models
82248521	Granted	8938530	2/4/2009	1/20/2015	12/365771	US	Method And System For Identifying Dynamic Content In Hypertext Transfer Protocol (HTTP) Responses
82248527	Granted	8447734	11/30/2009	5/21/2013	12/627914	US	HDAG Backup System With Variable Retention
82248530	Granted	8223344	1/27/2009	41107	12/360177	US	POSITIONING DEVICES IN A RACK BASED ON OPTICAL SIGNALS
82248578	Granted	8281172	4/30/2009	41184	12/432905	US	SERVER WITH MULTIPLE POWER SUPPLIES TRANSITIONING FIRST POWER SUPPLY FROM ITS ONLINE STATE TO ITS STANDBY STATE AND SECOND POWER SUPPLY TO ITS DEEP-SLEEP STATE (amended)
82248587	Granted	9128984	2/2/2009	9/8/2015	12/364107	US	Query Plan Analysis Of Alternative Plans Using Robustness Mapping
82248629	Published		1/30/2009		12/363558	US	AUTOMATED TEST EXECUTION IN A SHARED VIRTUALIZED RESOURCE POOL
82248638	Granted	8315500	10/3/2008	11/20/2012	12/245612	US	Metamaterial Inclusion Structure And Method
82248650	Granted	8136029	9/26/2008	3/13/2012	12/239461	US	METHOD AND SYSTEM FOR CHARACTERISING A WEB SITE BY SAMPLING
82248653	Granted	8116144	10/15/2008	2/14/2012	12/251805	US	Memory Module Having A Memory Device Configurable To Different Data Pin Configurations
82248707	Granted	8264208	12/20/2008	41163	12/340704	US	Systems And Methods Of Charging Super-capacitors
82248755	Granted	8347393	1/9/2009	1/1/2013	12/351788	US	Method And System For Detecting A State Of A Web Application Using A Signature
82248779	Granted	8315055	7/10/2009	11/20/2012	12/500873	US	Systems And Methods For Providing Heat Transfer
82248815	Granted	8081129	3/31/2009	12/20/2011	12/415715	US	MEMRISTIVE ANTENNA
82248887	Granted	8121444	4/24/2009	40960	12/430061	US	OPTICALLY AND ELECTRICALLY ACTUATABLE DEVICES
82248893	Granted	7985962	12/23/2008	7/26/2011	12/342399	US	A MEMRISTIVE DEVICE
82248896	Granted	8006565	4/30/2009	8/30/2011	12/433775	US	PRESSURE SENSOR GRID
82248905	Granted	7991253	4/30/2009	8/2/2011	12/433834	US	MEMRISTIVE ARRAY WITH WAVEGUIDE
82249022	Granted	8363654	11/7/2008	1/29/2013	12/266783	US	Predictive Packet Forwarding For A Network Switch
82249028	Published		12/22/2009		12/644021	US	DYNAMICALLY ALLOCATING RESOURCES BETWEEN COMPUTER PARTITIONS
82249073	Published		7/2/2009		12/497433	US	Method Of Selective Replication In A Storage Area Network
82249127	Granted	8289969	1/26/2009	41198	12/359536	US	Network Edges Switch Configuration Based On Connection Profille
82249130	Granted	7903404	4/29/2009	3/8/2011	12/432170	US	DATA CENTERS
82249151	Published		1/9/2009		12/351164	US	Virtual Tape Library
82249157	Granted	9032240	4/23/2009	5/12/2015	12/428487	US	Method And System For Providing High Availability SCTP Applications

PATENT
REEL: 038498 FRAME: 0443

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82249202	Granted	8255405	1/30/2009	41149	12/363695	US	Term Extraction From Service Description Documents
82249211	Granted	8185536	1/30/2009	5/22/2012	12/363698	US	Rank Order Service Providers Based On Desired Service Properties
82249268	Published		12/15/2009		12/638726	US	Associating A Signing Key With A Software Component Of A Computing Platform
82249274	Published		3/6/2009		12/399366	US	Entity Identification And Information Retrieval With A Mobile Device
82249325	Application		1/28/2009		12/361277	US	Managing A Multi-parent Containment Hierarchy Of Computing Resources
82249382	Granted	8725707	3/26/2009	5/13/2014	12/411670	US	Data Continuous SQL Process
82249388	Published		12/11/2008		12/314480	US	System And Method For Providing Transaction Classification
82249391	Granted	9098563	7/14/2009	8/4/2015	12/502641	US	Comparing Versions Of A Hierarchical Object
82249403	Granted	8284945	6/2/2009	10/9/2012	12/476313	US	Automatic Change Of Symmetrical Encryption Key
82249448	Granted	8554736	4/30/2009	10/8/2013	12/432980	US	Backup Method
82249460	Granted	8290507	4/16/2009	10/16/2012	12/425055	US	Locating A Wireless Device
82249511	Granted	8650396	12/1/2009	41681	12/628673	US	Permission-based Dynamically Tunable Operating System Kernel
82249520	Published		8/25/2009		12/546954	US	Associating Attribute Information With A File System Object
82249592	Published		6/9/2009		12/481533	US	Identity Data Management In A High Availability Network
82249628	Granted	8208454	4/29/2009	6/26/2012	12/432584	US	Determining Optimal Locations For Wireless Access Points In A Wireless Network
82249649	Published		1/23/2009		12/358447	US	A SYSTEM AND METHOD FOR DISCOVERING PROVIDERS
82249652	Granted	9159090	6/9/2009	10/13/2015	12/409555	US	Building A Standardized Web Form
82249655	Published		9/15/2009		12/560172	US	Controlling Power Usage By At Least One Electronic Apparatus
82249691	Granted	8671295	7/30/2009	3/11/2014	12/512541	US	GENERATING A SIGNAL TO REDUCE COMPUTER SYSTEM POWER CONSUMPTION FROM SIGNALS PROVIDED BY A PLURALITY OF POWER SUPPLIES
82249694	Granted	8489612	3/24/2009	7/16/2013	12/409978	US	Identifying Similar Files In An Environment Having Multiple Client Computers
82249712	Granted	8484621	6/24/2009	7/9/2013	12/490350	US	Method And System For Data Centric Heap Profiling
82249754	Granted	8655827	10/29/2009	2/18/2014	12/608878	US	QUESTIONNAIRE GENERATION
82249766	Published		6/2/2009		12/476821	US	SYSTEM AND METHOD FOR CLASSIFYING INFORMATION
82249814	Granted	8019920	10/1/2008	9/13/2011	12/243420	US	Method To Improve Operating Performance Of A Computing Device
82249823	Granted	8001310	3/4/2009	40771	12/397610	US	SCALABLE COMPUTER NODE HAVING AN EXPANSION MODULE THAT IS SOCKET-COMPATIBLE WITH A CENTRAL PROCESSING UNIT
82249826	Published		9/30/2008		12/242104	US	Trusted Key Management For Virtualized Platforms

PATENT
REEL: 038498 FRAME: 0444

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82249829	Granted	8539145	7/28/2009	9/17/2013	12/510822	US	INCREASING THE NUMBER OF RANKS PER CHANNEL
82249835	Granted	8390625	10/29/2009	3/5/2013	12/608830	US	TRANSFORMING STORED DATA INTO DATA OF REQUESTED DETAIL LEVEL
82249880	Granted	8799616	11/17/2009	41856	12/619700	US	Method And System For Preferred CPU Binding On Virtual Partitions
82249892	Application		2/20/2009		12/390174	US	Verifying Compatibility Of Blade Components
82249895	Published		4/9/2009		12/421152	US	Systems And Methods For Activating A Network Appliance
82249901	Granted	9141419	1/30/2009	9/22/2015	12/363415	US	Capturing And Restoring An Appliance Image
82249904	Allowed		2/12/2009		12/370355	US	Network Device Configuration Management By Physical Location
82249961	Granted	8693368	7/22/2009	41737	12/507734	US	Method And System For Remote Identification Of A Network Node
82250006	Published		10/29/2009		12/608520	US	Locating A Fault In A Communications Network
82250024	Granted	8694974	4/29/2009	4/8/2014	12/432635	US	Load-checking Atomic Section
82250081	Granted	8341314	3/25/2010	41268	12/731153	US	Managing I/O Request In Storage System
82250087	Granted	8893146	12/23/2009	11/18/2014	12/645492	US	Method And System Of An I/O Stack For Controlling Flows Of Workload Specific I/O Requests
82250090	Granted	8054763	5/15/2009	11/8/2011	12/466395	US	Migration Of Switch In A Storage Area Network
82250153	Granted	8510578	4/28/2009	8/13/2013	12/431628	US	Line-card Disabling For Power Management
82250216	Granted	9072018	4/30/2009	6/30/2015	12/433392	US	Wireless Channel Switching Using Co-located Radios
82250264	Granted	8606058	4/30/2009	12/10/2013	12/433794	US	MULTI-CHANNEL OPTICAL COUPLER
82250267	Published		4/30/2009		12/433777	US	Service Level Agreement Negotiation And Associated Methods
82250321	Granted	8924707	3/24/2010	42003	12/730276	US	Communicating Confidential Information Between An Application And A Database
82250375	Granted	8045253	5/28/2009	10/25/2011	12/473402	US	SUB-DIFFRACTION-LIMITED IMAGING SYSTEMS AND METHODS
82250405	Granted	7979491	3/27/2009	40736	12/412821	US	Producing Chunks From Input Data Using A Plurality Of Processing Elements
82250441	Granted	8138756	4/24/2009	40988	12/429876	US	MICROFIBER MAGNETOMETER
82250465	Granted	8649270	10/30/2009	41681	12/609255	US	DYNAMIC NETWORK CONFIGURATION
82250468	Granted	8477045	10/29/2009	7/2/2013	12/608720	US	CONFIGURATION INFORMATION PROVIDED TO CONFIGURABLE ELECTRONIC DEVICE RESIDING IN A SHIPPING BOX
82250507	Application		3/4/2009		12/397393	US	Networks Switch Providing For Notification Of Mac Authentication Failure
82250510	Granted	8184758	12/16/2008	5/22/2012	12/335705	US	Method And Apparatus For Detecting Electrical Idle
82250516	Granted	8024529	5/28/2009	9/20/2011	12/473391	US	Providing Shared Memory In A Distributed Computing System

PATENT
REEL: 038498 FRAME: 0445

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82250522	Published		1/18/2010		12/688913	US	METHOD AND SYSTEM FOR GENERATING A SPACE-EFFICIENT SNAPSHOT OR SNAPCLONE OF LOGICAL DISKS
82250525	Granted	7992058	12/16/2008	8/2/2011	12/335728	US	Method And Apparatus For Loopback Self Testing
82250570	Granted	8305889	1/31/2010	11/6/2012	12/697267	US	METHOD FOR ALLOCATING A RESOURCE AMONG CONSUMERS IN PROPORTION TO CONFIGURABLE WEIGHTS
82250579	Granted	8607245	5/15/2009	41618	12/466416	US	DYNAMIC PROCESSOR-SET MANAGEMENT
82250627	Granted	8631109	5/12/2009	1/14/2014	12/464668	US	System And Method For Dynamic Control Of Network Management Traffic Loads
82250636	Published		2/3/2009		12/364806	US	Intuitive File Sharing With Transparent Security
82250639	Application		3/19/2009		12/407722	US	Single Sign-on Method And System
82250642	Published		8/27/2009		12/548869	US	Method And System For Administration Of Storage Objects
82250690	Granted	8195877	4/29/2009	41065	12/432035	US	CHANGING THE REDUNDANCY PROTECTION FOR DATA ASSOCIATED WITH A FILE
82250750	Granted	8446044	10/28/2009	5/21/2013	12/607434	US	Power Conversion And Distribution Scheme For Electronic Equipment Racks
82250756	Granted	8390705	10/27/2009	41338	12/606947	US	NANOWIRE PHOTODIODES
82250759	Published		4/30/2009		12/433418	US	Adaptive Merging In Database Indexes
82250765	Granted	8474041	4/22/2010	41450	12/765772	US	Autonomous Diagnosis And Mitigation Of Network Anomalies
82250768	Published		4/13/2009		12/422875	US	Data Stream Processing
82250771	Granted	8290880	4/22/2009	10/16/2012	12/427924	US	System And Method For Estimating A Parameter That Represents Data Describing A Physical System
82250780	Published		4/3/2009		12/418484	US	Personal Project Management
82250816	Published		8/19/2009		12/544012	US	Reporting Operational Information Of A Network Device
82250819	Published		9/29/2009		12/569824	US	CONSISTENCY CHECKING FOR CREDIT-BASED CONTROL OF DATA COMMUNICATIONS
82250825	Published		4/27/2009		12/430411	US	System And Method For Making A Recommendation Based On User Data
82250834	Published		8/26/2009		12/461842	US	Data Restructuring In Multi Level Memory Hierarchies
82250837	Published		6/18/2009		12/486816	US	Providing Collaborative Business Intelligence
82250876	Granted	8924846	7/3/2009	12/30/2014	13/258464	US	Apparatus And Method For Text Extraction
82250888	Published		10/30/2009		12/609490	US	Email Worm Detection Methods And Devices
82250891	Published		10/29/2009		12/608524	US	Automated Design Of An IT Infrastructure
82250894	Granted	8390454	7/31/2009	3/5/2013	12/534028	US	A USB Hosted Sensor Module
82250900	Published		7/31/2009		12/534045	US	An Optical System And Method For Monitoring And Locating Objects
82250903	Granted	8251279	6/30/2009	8/28/2012	12/495678	US	Variable Data Barcode
82251011	Granted	8812166	10/20/2009	41870	12/581990	US	SUPPLYING A RESOURCE TO AN ENTITY FROM A RESOURCE ACTUATOR

PATENT
REEL: 038498 FRAME: 0446

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82251014	Granted	8270200	7/30/2009	9/18/2012	12/512230	US	Nanoscale Three-terminal Switching Device
82251023	Granted	8204873	8/26/2009	6/19/2012	12/548352	US	System And Method For Query Expression Optimization
82251062	Granted	8000265	6/12/2009	40771	12/483268	US	Method And System For Determining Network Topology Of A Virtual Private Network In Multi Protocol Label Switching (MPLS) Based Virtual Private Networks (VPNs)
82251128	Published		10/19/2009		12/581840	US	Modeling Wholesale Price Schedules To Reduce Double Marginalization
82251134	Granted	8910049	8/20/2010	12/9/2014	12/859803	US	USER-INITIATED MODE FOR REMOTE SUPPORT
82251140	Granted	8566519	7/9/2010	10/22/2013	12/833594	US	Providing Preferred Seed Data For Seeding A Data Deduplicating Storage System
82251155	Published		10/5/2009		12/573800	US	FLOW CONTROL SYSTEM AND METHOD
82251188	Published		4/10/2009		12/422066	US	Dynamic Assignment Of Graphics Processing Unit To A Virtual Machine
82251200	Published		7/23/2009		12/508254	US	APPARATUS, METHOD AND SYSTEM FOR MODIFYING PAGES
82251206	Granted	8108718	11/13/2009	40939	12/618675	US	Checkpointing In Massively Parallel Processing
82251209	Published		7/29/2009		12/511200	US	Method And System For Calendaring Events
82251215	Granted	8863152	2/19/2010	10/14/2014	12/708542	US	Communication Bridge
82251254	Granted	7519385	10/27/2005	4/14/2009	11/259865	US	Wireless Access Point (AP) Automatic Channel Selection And Automatic Power Adjustment
82251257	Granted	9003419	7/30/2009	42101	12/512246	US	Network Balancing Procedure That Includes Redistributing Flows On Arcs Incident On A Batch Of Vertices
82251263	Published		7/31/2009		12/533693	US	Method And System To Maintain Service Architecture Repositories
82251269	Granted	7031336	11/27/2002	38825	10/306972	US	SPACE-TIME-POWER SCHEDULING FOR WIRELESS NETWORKS
82251275	Granted	7881313	4/14/2006	2/1/2011	11/404309	US	Space-time-power Scheduling For Wireless Networks
82251278	Granted	7366202	12/8/2003	39567	10/730649	US	System And Method For Interference Mitigation For Wireless Communication
82251317	Granted	8374622	12/12/2007	41317	11/955055	US	Call Admission Control For Wi Fi
82251326	Granted	7873352	5/9/2006	40561	11/430547	US	FAST ROAMING IN A WIRELESS NETWORK USING PER-STA PAIRWISE MASTER KEYS SHARED ACROSS PARTICIPATING ACCESS POINTS
82251374	Published		8/27/2009		12/548987	US	Method And System For Processing Network Activity Data
82251380	Allowed		7/8/2003		10/615095	US	Implementing "all Wireless" Network Over Wi Fi Equipment Using "scheduled TDMA"
82251437	Allowed		6/5/2009		13/260291	US	SYSTEM AND METHOD FOR REPRESENTING USER INTERACTION WITH A WEB SERVICE
82251446	Granted	8054620	4/29/2009	11/8/2011	12/432483	US	Stacked Drives For A Blade System
82251686	Granted	7124090	12/8/1999	39007	09/456647	US	Electronic Publication Distribution Method and System

PATENT
REEL: 038498 FRAME: 0447

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82251689	Granted	8583476	9/15/2004	41590	10/941303	US	Electronic Publishing And Delivery
82251692	Granted	8515806	10/16/2006	8/20/2013	11/549734	US	Electronic Publication Distribution Method And System
82251755	Granted	6430562	3/1/1999	37474	09/260859	US	Integrated Resource Management System and Method
82251761	Granted	6052694	3/18/1998	4/18/2000	09/044105	US	METHOD AND APPARATUS FOR LOGGING DATABASE PERFORMANCE CHARACTERISTICS
82251779	Granted	7054821	1/31/1996	5/30/2006	08/594563	US	System and Method for Modeling Skills
82251842	Granted	6341282	4/19/1999	1/22/2002	09/295234	US	Information Retrieval System and Method
82251887	Granted	6356886	11/30/1995	3/12/2002	08/566432	US	Apparatus And Method For Communicating With A Knowledge Base
82251893	Granted	6236984	11/26/1997	5/22/2001	08/980351	US	Method and System of Managing Contract Negotiation Records
82251899	Granted	6938007	6/6/1996	38594	08/660616	US	Method of Pricing Application Software
82251902	Granted	6041362	10/20/1995	3/21/2000	08/546390	US	Method And System For Integrating Disparate Information Technology Applications And Platforms Across An Enterprise
82252004	Granted	6182222	3/25/1997	1/30/2001	08/824222	US	Secure Data Storage System and Method
82252010	Granted	6032131	5/20/1997	36585	08/859239	US	System And Method For Accurately Modeling Spending
82252064	Granted	6820071	1/16/1997	38307	08/784224	US	Knowledge Management System and Method
82252070	Granted	6208984	8/29/1997	36977	08/921128	US	Method and System of Determining Access to Records of Members of a Community
82252076	Granted	6381626	4/22/1999	4/30/2002	09/296353	US	ATM Video Advertising
82252124	Granted	6453352	7/14/1997	37516	08/892580	US	Integrated Electronic Commerce System and Method
82252136	Granted	6796488	3/27/1997	9/28/2004	08/828022	US	Automated System and Method for Check Amount Encoding at a Point-of-Sale
82252142	Granted	6618728	1/31/1996	9/9/2003	08/594561	US	Multi-process Compression
82252154	Granted	6018715	2/29/1996	1/25/2000	08/609034	US	Automated Travel Planning System
82252193	Granted	7156300	6/7/1995	39084	08/487813	US	System And Method For Dispensing Of A Receipt Reflecting Prepaid Phone Services
82252208	Granted	5977967	5/1/1996	11/2/1999	08/642002	US	Object-Oriented Business Object Interface Framework and Method
82252259	Granted	5991766	12/2/1997	11/23/1999	08/982338	US	Method And System For Managing Redundant Objects In A Distributed Object System
82252262	Granted	5991882	8/7/1997	11/23/1999	08/908302	US	Automated Password Reset
82252340	Granted	5832451	1/23/1996	11/3/1998	08/589934	US	Automated Travel Service Management Information System
82252373	Granted	6119094	2/29/1996	9/12/2000	08/610107	US	Automated System for Identifying Alternate Low-Cost Travel Arrangements
82252385	Granted	5839114	2/29/1996	36116	08/609040	US	Automated System For Selecting An Initial Computer Reservation System

PATENT
REEL: 038498 FRAME: 0448

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82252448	Granted	5983195	6/6/1997	36473	08/870513	US	METHOD AND SYSTEM FOR SCHEDULING PRODUCT ORDERS IN A MANUFACTUING FACILITY
82252499	Granted	5732274	11/8/1995	35878	08/555358	US	Method For Compilation Using A Database For Target Language Independence
82252502	Granted	5710915	12/21/1995	1/20/1998	08/576102	US	Method For Accelerating Access To A Database Clustered Partitioning
82252505	Granted	5687377	10/6/1995	11/11/1997	08/539514	US	Method For Storing Variables In A Programming Language
82252511	Granted	6026397	5/22/1996	2/15/2000	08/651319	US	Data Analysis System and Method
82252514	Granted	5778390	6/7/1996	7/7/1998	08/660636	US	METHOD AND SYSTEM FOR CREATING, DUPLICATING, AND ARCHIVING DATABASE FILES
82252523	Granted	5890132	6/14/1996	3/30/1999	08/664460	US	Associating A Physical Application To A Business Operation
82252589	Granted	5737727	1/25/1996	4/7/1998	08/591920	US	Process Management System And Method
82252625	Granted	5886634	5/5/1997	3/23/1999	08/851221	US	Item Removal System And Method
82252628	Granted	5819231	5/1/1996	10/6/1998	08/617672	US	Compensation Planning Tool And Method
82252637	Granted	5721655	7/15/1996	2/24/1998	08/680369	US	Method For Labeling A Removable Media Cartridge
82252643	Granted	5745690	2/29/1996	4/28/1998	08/609141	US	Data Processing System and Method
82252649	Granted	5740431	1/24/1996	4/14/1998	08/590858	US	Configuration File Management
82252688	Granted	5819281	2/26/1996	10/6/1998	08/606983	US	Notification Of Aspect Value Change In Object-oriented Programming
82252697	Granted	5745689	5/23/1996	4/28/1998	08/652066	US	System and Method for Providing Pager Services to Users of a Computer Network
82252706	Granted	5778389	5/23/1996	7/7/1998	08/652065	US	Method And System For Synchronizing Computer File Directories
82252709	Granted	5737606	7/18/1996	4/7/1998	08/683289	US	Method And System For Delegation In A Class-based Language
82252715	Granted	6055637	9/27/1996	4/25/2000	08/722841	US	SYSTEM AND METHOD FOR ACCESSING ENTERPRISE-WIDE RESOURCE BY PRESENTING TO THE RESOURCE A TEMPORARY CREDENTIAL
82252757	Granted	5964828	1/30/1998	10/12/1999	09/016529	US	Method And System For Maintaining The Integrity Of Objects
82252760	Granted	6029177	1/30/1998	2/22/2000	09/016143	US	Method And System For Maintaining The Integrity Of A Database Providing Persistent Storage For Objects
82252814	Granted	5964831	10/29/1996	10/12/1999	08/741148	US	Distributed On-line Data Communications System And Method
82252820	Granted	5743742	4/1/1996	4/28/1998	08/625967	US	METHOD AND SYSTEM FOR MEASURING LEADERSHIP EFFECTIVENESS
82252838	Granted	5828833	8/15/1996	10/27/1998	08/700617	US	Method And System For Allowing Remote Procedure Calls Through A Network Firewall
82252886	Granted	5933818	6/2/1997	8/3/1999	08/869281	US	Autonomous Knowledge Discovery System And Method
82252889	Granted	5758346	1/29/1997	5/26/1998	08/790411	US	Converting Representations Of Year

PATENT
REEL: 038498 FRAME: 0449

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82253003	Granted	5675649	11/30/1995	10/7/1997	08/565525	US	Process For Cryptographic Key Generation And Safekeeping
82253009	Granted	5787424	11/30/1995	7/28/1998	08/565535	US	Process And System For Recursive Document Retrieval
82253012	Granted	5745893	11/30/1995	4/28/1998	08/565806	US	Process And System For Arrangement Of Documents
82253015	Granted	5808615	5/1/1996	9/15/1998	08/640604	US	Process And System For Mapping The Relationship Of The Content Of A Collection Of Documents
82253063	Granted	5796633	7/12/1996	8/18/1998	08/678934	US	Method And System For Performance Monitoring In Computer Networks
82253066	Granted	5696701	7/12/1996	12/9/1997	08/678800	US	Method And System For Monitoring The Performance Of Computers In Computer Networks Using Modular Extensions
82253069	Granted	5758071	7/12/1996	5/26/1998	08/679293	US	Method And System For Tracking The Configuration Of A Computer Coupled To A Computer Network
82253207	Granted	7114147	4/23/2001	9/26/2006	09/840727	US	Method and System for Reporting XML Data Based on Precomputed Context and a Document Object Model
82253696	Granted	6850866	9/12/2002	2/1/2005	10/242881	US	MANAGING PERFORMANCE METRICS DESCRIBING A RELATIONSHIP BETWEEN A PROVIDER AND A CLIENT
82253774	Granted	7587308	11/21/2005	9/8/2009	11/285090	US	WORD RECOGNITION USING ONTOLOGIES
82254071	Granted	6728603	12/18/2001	4/27/2004	10/025332	US	System and Method for Managing Wireless Vehicular Communications
82254080	Granted	8984326	10/31/2007	3/17/2015	11/931677	US	TESTING DISASTER RECOVERY ELEMENTS
82254125	Granted	6687560	11/13/2001	2/3/2004	10/008098	US	Processing Performance Data Describing a Relationship Between a Provider and a Client
82254134	Granted	6892234	6/12/2002	5/10/2005	10/170284	US	Multi-Tiered Enterprise Management System And Method Including A Presentation Services Unit External To The Enterprise
82254251	Granted	8417704	9/9/2003	4/9/2013	10/657916	US	Extensible Agent System And Method
82254260	Granted	6901418	5/7/2002	5/31/2005	10/139631	US	Data Archive Recovery
82254503	Granted	7149206	2/8/2002	12/12/2006	10/072121	US	System And Method For Managing Wireless Vehicular Communications
82254578	Granted	7099751	10/1/2002	8/29/2006	10/260527	US	DRIVE-BY-WIRELESS VEHICLE CONTROL
82254704	Granted	8103534	10/23/2002	1/24/2012	10/279188	US	System And Method For Managing Supplier Intelligence
82254713	Granted	7165036	10/23/2002	1/16/2007	10/279195	US	System and Method for Managing a Procurement Process
82254815	Granted	6970803	10/25/2002	11/29/2005	10/280082	US	DETERMINING THE COMPLEXITY OF A COMPUTING ENVIRONMENT
82254887	Granted	6791471	10/1/2002	9/14/2004	10/260528	US	COMMUNICATING POSITON INFORMATION BETRWEEN VEHICLES
82254944	Granted	7469417	6/17/2003	12/23/2008	10/462994	US	Infrastructure Method And System For Authenticated Dynamic Security Domain Boundary Extension
82254956	Granted	6750418	12/11/2002	6/15/2004	10/316971	US	METHOD AND SYSTEM FOR WELD PROCESS MONITORING
82255082	Granted	8676853	2/27/2003	3/18/2014	10/375331	US	System And Method For Software Reuse

PATENT
REEL: 038498 FRAME: 0450

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82255088	Granted	7580947	3/27/2003	8/25/2009	10/401104	US	Data Representation For Improved Link Analysis
82255190	Granted	7277879	12/17/2002	10/2/2007	10/321788	US	Concept Navigation in Data Storage Systems
82255394	Granted	7562215	5/21/2003	7/14/2009	10/443448	US	SYSTEM AND METHOD FOR ELECTRONIC DOCUMENT SECURITY
82255439	Granted	7562024	6/18/2003	7/14/2009	10/465481	US	Method And System For Addressing Client Service Outages
82255451	Granted	7725388	5/5/2003	5/25/2010	10/430361	US	Verification Of Electronic Financial Transactions
82255499	Granted	8285578	1/21/2004	10/9/2012	10/763072	US	Managing Information Technology (IT) Infrastructure Of An Enterprise Using A Centralized Logistics And Management (CLAM) Tool
82255751	Granted	7350185	9/3/2003	3/25/2008	10/654633	US	MACRO PATTERN EFFORT ESTIMATION
82255898	Granted	7278065	11/17/2003	10/2/2007	10/715013	US	ENTERPRISE DIRECTORY SERVICE DOMAIN CONTROLLER REPLICATION ALERT AND REPAIR
82255937	Granted	7756737	12/17/2003	7/13/2010	10/738819	US	USER-BASED METHOD AND SYSTEM FOR EVALUATING ENTERPRISE SOFTWARE SERVICES COSTS
82255940	Granted	7590630	12/15/2003	9/15/2009	10/736001	US	MANAGING ELECTRONIC INFORMATION
82256000	Granted	7356814	12/15/2003	4/8/2008	10/736304	US	System, Method, And Computer Program Product For Communicating With An Ldap Server
82256015	Granted	7693426	12/18/2003	4/6/2010	10/739812	US	LASER-BASED COMMUNICATIONS WITH A REMOTE INFORMATION SOURCE
82256147	Granted	8145898	12/23/2003	3/27/2012	10/744122	US	ENCRYPTION/DECRYPTION PAY PER USE WEB SERVICE
82256204	Granted	8533027	7/30/2004	9/10/2013	10/902256	US	USER INTERFACE ENABLING APPROVAL/DISAPPOVAL OF REVISED CONTRACT PERFORMANCE INDICATORS
82256252	Granted	8059580	5/14/2004	11/15/2011	10/846064	US	INTERNET MICRO CELL
82256306	Granted	8386597	9/9/2005	2/26/2013	11/223537	US	SYSTEMS AND METHODS FOR THE PROVISION OF DATA PROCESSING SERVICES TO MULTIPLE ENTITIES
82256393	Published		3/20/2006		11/384593	US	Personnel Motivation Model
82256396	Granted	7437446	11/1/2004	10/14/2008	10/977497	US	REPORTING OF ABNORMAL COMPUTER RESOURCE UTILIZATION DATA
82256453	Published		4/5/2004		10/818013	US	SYSTEM AND METHOD FOR INCREASING ORGANIZATIONAL ADAPTABILITY
82256456	Granted	7703123	8/9/2004	4/20/2010	10/914620	US	Method And System For Security Control In An Organization
82256516	Granted	8078546	11/22/2005	12/13/2011	11/284866	US	METHOD AND PROCESS FOR EMPLOYING A RETIRED WORKFORCE
82256522	Granted	8332479	8/26/2005	12/11/2012	11/213490	US	Enterprise Application Server System And Method
82256636	Granted	7574694	9/28/2004	8/11/2009	10/952542	US	Method For Application And Infrastructure Rationalization
82256639	Granted	7301464	5/24/2005	11/27/2007	11/135868	US	PROCESS AND METHOD FOR SAFER VEHICLE NAVIGATION THROUGH FACIAL GESTURE RECOGNITION AND OPERATOR CONDITION MONITORING
82256702	Granted	6983202	4/12/2004	1/3/2006	10/822490	US	IMPLEMENTING GEO-FENCING ON MOBILE DEVICES

PATENT
REEL: 038498 FRAME: 0451

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82256711	Granted	7198192	2/1/2005	4/3/2007	11/048239	US	WIRELESS MOBILE INSTANT PRODUCT PRICE COMPARISON AND PRODUCT REVIEW
82256762	Granted	7414542	12/2/2004	8/19/2008	11/002177	US	SYSTEM AND METHOD FOR SIGNALING STATUS OF TRAFFIC FLOW
82256810	Granted	8166185	3/5/2002	4/24/2012	10/092181	US	System And Method For Enterprise Software Distribution
82256816	Granted	6983449	3/15/2002	1/3/2006	10/099331	US	System And Method For Configuring Software For Distribution
82256825	Granted	7356394	1/11/2005	4/8/2008	11/033212	US	RFID VEHICLE MANAGEMENT SYSTEM AND METHOD
82256942	Granted	7480680	4/28/2005	1/20/2009	11/116985	US	Validating Application Resources
82256999	Published		5/11/2005		11/126939	US	ENTERPRISE-TO-ENTERPRISE INTEGRATION
82257074	Granted	7690002	10/11/2005	3/30/2010	11/247703	US	SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR SYSTEM EVENT NOTIFICATION AND TRACKING
82257128	Granted	7423399	4/21/2006	9/9/2008	11/408486	US	APPARATUS, AND ASSOCIATED METHOD, FOR CONTROLLING THE REPETITION RATE OF AN INTERMITTENT WINDSHIELD WIPER
82257137	Granted	7302306	5/15/2006	11/27/2007	11/434040	US	Determining Processing Times At Stations In An Assembly System
82257182	Granted	7992002	7/7/2006	8/2/2011	11/456165	US	Data Depository And Associated Methodology Providing Secured Access Pursuant Standard Conformity
82257188	Published		9/13/2006		11/531361	US	DETERMINING A TECHNOLOGY STATE OF AN ENTITY USING A TECHNOLOGY INDEX
82257194	Granted	7937356	11/16/2006	5/3/2011	11/560389	US	APPARATUS, AND ASSOCIATED METHOD, FOR ASSESSING VIABILITY OF COMMUNICATION SYSTEM ARRANGEMENT TRANSFORMATION
82257260	Published		7/24/2008		12/178961	US	A SYSTEM AND METHOD FOR QUANTITATIVE ASSESSMENT OF THE AGILITY OF A BUSINESS OFFERING
82257263	Allowed		12/19/2006		11/612775	US	APPARATUS, AND ASSOCIATED METHOD, FOR CONTROLLING CONNECTIVITY OF A COMPUTER DEVICE WITH A COMPUTER NETWORK
82257269	Granted	7770058	12/29/2006	8/3/2010	11/618617	US	DISASTER RECOVERY WITHIN SECURE ENVIRONMENTS
82257314	Published		7/2/2007		11/772725	US	SYSTEMS AND PROCESSES FOR EVALUATING WEBPAGES
82257317	Granted	8930010	2/5/2007	1/6/2015	11/671358	US	Intelligent Assembly System And Method Of Use
82257326	Granted	7966212	9/6/2007	6/21/2011	11/851258	US	Quantitative Alignment Of Business Offerings With The Expectations Of A Business Prospect
82257329	Granted	8001158	12/13/2007	8/16/2011	11/956267	US	SYSTEMS AND PROCESSES FOR EVALUATING DATABASE COMPLEXITIES
82257368	Granted	8528070	9/5/2007	9/3/2013	11/899288	US	System And Method For Secure Service Delivery
82257386	Granted	8234140	9/26/2007	7/31/2012	11/904084	US	SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR RESOURCE COLLABORATION ESTIMATION
82257431	Granted	7966363	10/30/2007	40715	11/929020	US	Method And System For Visualizing Distributed Systems

PATENT
REEL: 038498 FRAME: 0452

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82257440	Granted	9002012	12/1/2007	4/7/2015	11/949028	US	APPARATUS AND METHOD FOR SECURING DATA IN COMPUTER STORAGE
82257449	Published		6/30/2008		12/164623	US	MANAGING CHANGE REQUESTS IN AN ENTERPRISE
82257452	Granted	8364788	3/13/2008	1/29/2013	12/047855	US	PROCESSING CLIENT REQUESTS FOR COMMON SERVICES ACCORDING TO ONE OR MORE CANONICAL FORMS
82257458	Granted	9015056	2/6/2008	4/21/2015	12/012836	US	PRESCRIPTION REFILL REMINDER SYSTEM AND METHOD
82257497	Published		2/1/2008		12/012391	US	SYSTEM AND METHOD FOR GENERATING LOCATION CODES
82257500	Granted	7991631	2/12/2008	8/2/2011	12/029860	US	MANAGING A MULTI-SUPPLIER ENVIRONMENT
82257512	Granted	8255916	4/10/2008	8/28/2012	12/100775	US	APPARATUS, AND ASSOCIATED METHOD, FOR ALLOCATING PROCESSING AMONGST DATA CENTERS
82257557	Granted	8566182	8/7/2008	10/22/2013	12/188090	US	ENTERPRISE ASSET MANAGEMENT
82257560	Published		4/22/2008		12/148767	US	VIRTUALIZED APPLICATION ENVIRONMENT
82257569	Granted	8255349	6/10/2008	8/28/2012	12/136522	US	AUTOMATED DESIGN OF COMPUTER SYSTEM ARCHITECTURE
82257575	Granted	7970726	5/9/2008	6/28/2011	12/118361	US	APPARATUS, AND AN ASSOCIATED METHOD, FOR QUANTIFYING A QUALITY OF A USE CASE
82257581	Published		6/4/2008		12/132858	US	APPARATUS, AND ASSOCIATED METHOD, FOR PROVIDING PERSONALIZED CONTENT TO AN EXHIBIT-AREA GUEST
82257584	Granted	8782613	8/12/2008	7/15/2014	12/190478	US	OPTIMIZING APPLICATIONS USING SOURCE CODE PATTERNS AND PERFORMANCE ANALYSIS
82257629	Published		8/13/2008		12/190712	US	FLEXIBLE INTEGRATED ACCESS TO PUBLISHED MATERIAL
82257635	Published		8/13/2008		12/190933	US	BOOKMARKS FOR FLEXIBLE INTEGRATED ACCESS TO PUBLISHED MATERIAL
82257641	Granted	7966664	6/3/2008	6/21/2011	12/132440	US	ERROR AND EXCEPTION MESSAGE HANDLING FRAMEWORK
82257644	Granted	8065206	7/25/2008	11/22/2011	12/180039	US	BYTE-BASED METHOD, PROCESS AND ALGORITHM FOR SERVICE-ORIENTED AND UTILITY INFRASTRUCTURE USAGE MEASUREMENT, METERING, AND PRICING
82257680	Published		8/15/2008		12/192652	US	AIRCRAFT STATUS TIMELINE
82257686	Granted	8291373	8/13/2008	10/16/2012	12/191160	US	GENERATING LOADRUNNER SCRIPTS
82257689	Granted	7684321	12/17/2002	40260	10/322322	US	System For Supply Chain Management Of Virtual Private Network Services
82257692	Granted	7764700	4/27/2007	7/27/2010	11/790842	US	System For Supply Chain Management Of Virtual Private Network Services
82257743	Published		7/24/2008		12/179279	US	SYSTEM AND METHOD FOR ELECTRONIC DATA SECURITY
82257764	Published		8/14/2008		12/191968	US	EXTENDED INSTRUCTION SET ARCHITECTURES
82257815	Granted	8554760	10/7/2009	10/8/2013	12/574911	US	System And Method For Optimizing Queries
82257824	Granted	9141664	8/31/2009	42269	12/550834	US	System And Method For Optimizing Queries
82257827	Granted	8380699	9/4/2009	2/19/2013	12/554254	US	System And Method For Optimizing Queries

PATENT
REEL: 038498 FRAME: 0453

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82257932	Granted	6732171	5/31/2002	5/4/2004	10/063992	US	Distributed Network Storage System With Virtualization
82257938	Granted	7200664	3/29/2004	4/3/2007	10/708867	US	Distributed Network Storage System With Virtualization
82257995	Published		7/30/2009		12/512739	US	Computer-readable Media, Methods And Computer Systems For Designing A Software Application Graphically
82258016	Published		8/14/2009		12/541794	US	System And Method For Inter-domain Information Transfer
82258130	Published		7/31/2009		12/533864	US	Linear Programming Using L1 Minimization To Determine Securities In A Portfolio
82258139	Published		11/6/2009		12/614260	US	DETERMINING AT LEAST ONE CATEGORY PATH FOR IDENTIFYING INPUT TEXT
82258181	Granted	8063395	9/30/2009	40869	12/570286	US	MEMRISTOR AMORPHOUS METAL ALLOY ELECTRODES
82258193	Granted	8310252	10/26/2009	11/13/2012	12/605441	US	TESTING A NONVOLATILE CIRCUIT ELEMENT HAVING MULTIPLE INTERMEDIATE STATES
82258208	Granted	8493138	8/26/2009	7/23/2013	12/548124	US	Memcapacitive Devices
82258322	Granted	8676946	3/17/2009	41716	12/406071	US	WARNINGS FOR LOGICAL-SERVER TARGET HOSTS
82258325	Granted	8427980	7/21/2010	4/23/2013	12/841039	US	Methods And Apparatus To Determine And Implement Multidimensional Network Topologies
82258328	Published		8/20/2009		12/544227	US	MAP REDUCE AND PARALLEL PROCESSING IN DATABASES
82258367	Granted	8638799	7/10/2009	1/28/2014	12/501067	US	Establishing Network Quality Of Service For A Virtual Machine
82258376	Granted	8207593	7/28/2009	41086	12/510589	US	MEMRISTOR HAVING A NANOSTRUCTURE IN THE SWITCHING MATERIAL
82258379	Granted	8008648	7/24/2009	8/30/2011	12/509299	US	MEMRISTORS WITH INSULATION ELEMENTS AND METHODS FOR FABRICATING THE SAME
82258385	Granted	8193808	9/11/2009	6/5/2012	12/558408	US	OPTICALLY INTEGRATED BIOSENSOR BASED ON OPTICALLY DETECTED MAGNETIC RESONANCE
82258391	Granted	8910153	7/13/2009	41982	12/502074	US	Managing Virtualized Accelerators Using Admission Control, Load Balancing And Scheduling
82258394	Granted	8101473	7/10/2009	1/24/2012	12/501259	US	ROUNDED THREE-DIMENSIONAL GERMANIUM ACTIVE CHANNEL FOR TRANSISTORS AND SENSORS
82258439	Published		7/22/2009		12/507782	US	MITIGATING RESOURCE USAGE DURING VIRTUAL STORAGE REPLICATION
82258451	Granted	8850142	9/15/2009	41912	12/560268	US	ENHANCED VIRTUAL STORAGE REPLICATION
82258493	Granted	8904406	7/30/2009	1/2/2015	12/512256	US	Coordination Of Tasks Executed By A Pluality Of Threads
82258520	Published		2/13/2010		12/705584	US	SYSTEM AND METHOD FOR DETERMINING THE PROVENANCE OF A DOCUMENT
82258565	Granted	8301805	11/26/2009	41212	12/626628	US	Managing I/O Request In A Storage System
82258574	Granted	8341704	10/30/2009	12/25/2012	12/610226	US	Secure Communication Between Client Device And Server Device
82258637	Granted	8235339	6/26/2009	8/7/2012	12/492573	US	Method And Apparatus For Engaging A Rail With Various Support Structures

PATENT
REEL: 038498 FRAME: 0454

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82258682	Published		10/20/2009		13/258478	US	Data Processing System And Method
82258700	Published		10/14/2009		12/579270	US	Detection Of Network Address Spoofing And False Positive Avoidance
82258706	Granted	8210463	9/30/2009	41093	12/571331	US	Coatings For Tape Guides
82258760	Published		10/9/2009		13/259436	US	Method Of Sending A Message Using A Mobile Phone
82258889	Published		12/10/2009		12/635272	US	System And Method For Executing A Query
82258943	Granted	8639651	10/30/2009	1/28/2014	12/609937	US	Manipulating Environmental Conditions In An Infrastructure
82258955	Granted	8321644	10/1/2009	11/27/2012	12/571823	US	Backing Up Filesystems To A Storage Device
82258958	Granted	8886610	10/1/2009	11/11/2014	12/571922	US	Backup Simulation For Backing Up Filesystems To A Storage Device
82258994	Granted	8085801	8/8/2009	40904	12/538116	US	Resource Arbitration
82259003	Granted	8209567	1/28/2010	41086	12/695780	US	Message Clustering Of System Event Logs
82259018	Granted	8259736	12/15/2009	41156	12/638794	US	Selecting A Path Through A Network
82259072	Granted	8694819	8/24/2009	41737	12/461774	US	Virtualization Of Real-time Clock
82259075	Granted	8356149	10/30/2009	1/15/2013	12/609173	US	Memory Migration
82259120	Published		2/16/2010		12/706154	US	Functional-form Queries
82259126	Granted	8370582	1/26/2010	2/5/2013	12/693742	US	Merging Subsequent Updates To A Memory Location
82259204	Published		12/18/2009		12/642544	US	Optimization Of An Application Program
82259246	Published		7/31/2009		12/534078	US	Method And Apparatus For Option-based Marking Of A DHCP Packet
82259309	Granted	8566287	3/29/2010	41569	12/748467	US	Method And Apparatus For Scheduling Data Backups
82259372	Published		10/30/2009		12/610208	US	Performance Of First And Second Macros While Data Is Moving Through Hardware Pipeline
82259390	Granted	8431474	9/25/2009	4/30/2013	12/567537	US	Three Dimensional Multilayer Circuit
82259396	Granted	8258050	7/17/2009	9/4/2012	12/505377	US	Method Of Making Light Trapping Crystalline Structures
82259435	Granted	8392168	11/3/2009	3/5/2013	12/611213	US	SIMULATING AN APPLICATION DURING A SAMPLING PERIOD AND A NON-SAMPLING PERIOD
82259441	Granted	9003003	9/15/2009	4/7/2015	12/559849	US	Managing Computer Resources
82259444	Granted	8448860	2/28/2010	5/28/2013	12/714513	US	System And Method For Determining Asset Location In A Rack
82259555	Granted	8463784	8/7/2009	41436	12/537614	US	IMPROVING DATA CLUSTERING STABILITY
82259561	Granted	8374982	1/14/2010	2/12/2013	12/687458	US	System And Method For Constructing Forecasting Models
82259564	Published		4/30/2010		12/771868	US	METHOD AND SYSTEM FOR LOGGING TRACE EVENTS OF A NETWORK DEVICE
82259570	Granted	8676859	1/21/2010	41716	12/691101	US	Method And System For Analyzing Data Stored In A Database
82259615	Published		11/22/2009		12/623428	US	Routing Packet From First Virtual Machine To Second Virtual Machine Of A Computing Device
82259618	Published		11/6/2009		12/613537	US	A Storage System With A Memory Blade That Generates A Computational Result For A Storage Device

PATENT
REEL: 038498 FRAME: 0455

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82259621	Published		8/6/2009		12/536498	US	Building User Profiles For Website Personalization
82259624	Granted	8739130	10/29/2009	41786	12/608096	US	Quality Assurance Testing
82259627	Granted	8683445	10/28/2009	41723	12/607781	US	User-interface Testing
82259633	Published		12/3/2009		12/629907	US	CLICKSTREAMS AND WEBSITE CLASSIFICATION
82259645	Granted	8762304	1/4/2010	41814	12/651765	US	Policy Scheduling
82259684	Granted	8555253	11/2/2009	41555	12/611065	US	System And Method For Monitoring Exploratory Testing By A Plurality Of Testers
82259693	Published		2/13/2010		12/705586	US	SYSTEM AND METHOD FOR IDENTIFYING FRESH INFORMATION IN A DOCUMENT SET
82259696	Published		6/7/2010		12/795580	US	VISUAL DISPLAY OF DATA FROM A PLURALITY OF DATA SOURCES
82259702	Allowed		11/8/2009		12/614432	US	Outlier Data Point Detection
82259744	Published		2/13/2010		12/705585	US	SYSTEM AND METHOD FOR DISPLAYING DOCUMENTS
82259750	Published		10/30/2009		12/588856	US	A SYSTEM AND METHOD FOR MINIMIZING POWER CONSUMPTION FOR A WORKLOAD IN A DATA CENTER
82259831	Granted	8472761	11/30/2009	6/25/2013	12/628028	US	WAVEGUIDE SYSTEMS AND METHODS
82259882	Granted	8310100	4/16/2010	11/13/2012	12/762035	US	System And Method For A Redundant Power Solution
82259933	Published		1/28/2010		12/695261	US	Method And Apparatus For Random Access Of Data Stored In A Sequential Manner
82259942	Granted	8660994	1/28/2010	41695	12/695285	US	Selective Data Deduplication
82259945	Granted	8427285	4/29/2010	4/23/2013	12/770207	US	Configurable Control Of Data Storage Device Visual Indicators In A Server Computer System
82259948	Published		1/29/2010		12/696277	US	SYSTEM AND METHOD FOR GENERATING ENTERPRISE APPLICATIONS
82259951	Granted	8589475	1/28/2010	41597	12/695622	US	MODELING A CLOUD COMPUTING SYSTEM
82259993	Published		5/28/2011		13/118408	US	PRIORITIZATION FOR PRODUCT MANAGEMENT
82260002	Granted	8978900	5/18/2010	42080	12/782327	US	BULK RAIL BRACKET
82260011	Granted	8174824	12/22/2009	5/8/2012	12/645372	US	ENCLOSURE WITH ACCESS PANEL
82260020	Granted	8819028	12/14/2009	8/26/2014	13/258482	US	System And Method For Web Content Extraction
82260059	Granted	8351324	5/29/2010	1/8/2013	12/790802	US	Analyzing Service Impacts On Virtual Private Networks
82260062	Published		10/29/2010		12/916043	US	ASSESSING HEALTH OF PROJECTS
82260125	Published		2/12/2010		12/704779	US	Computer-based Project Management
82260137	Granted	8526177	5/4/2010	9/3/2013	12/773629	US	FAN FOR COOLING MULTIPLE PROCESSORS HOUSED IN A SUB-CHASSIS
82260143	Granted	8392393	2/12/2010	3/5/2013	12/704770	US	GRAPH SEARCHING
82260245	Granted	8586959	4/28/2010	41597	12/769557	US	MEMRISTIVE SWITCH DEVICE
82260269	Granted	8515223	7/30/2010	8/20/2013	12/847844	US	LENS
82260302	Granted	8391656	7/29/2010	41338	12/846740	US	GRATING COUPLED CONVERTER
82260317	Allowed		1/29/2010		12/696524	US	NANOSCALE SWITCHING DEVICE
82260320	Granted	8120071	1/11/2010	40960	12/685494	US	MEMFET RAM

PATENT
REEL: 038498 FRAME: 0456

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82260323	Granted	8842363	1/29/2010	9/23/2014	12/696682	US	DYNAMICALLY VARYING AN OPTICAL CHARACTERISTIC OF LIGHT BY A SUB-WAVELENGTH GRATING
82260329	Granted	8175430	1/29/2010	5/8/2012	12/696958	US	OPTICAL MULTIPLEXER/DEMULTIPLEXER SYSTEMS CONFIGURED WITH NON-PERIODIC GRATINGS
82260377	Granted	8595362	12/10/2009	41604	12/635598	US	Managing Hardware Resources For Soft Partitioning
82260446	Published		5/10/2010		12/776740	US	EDGE LINK DISCOVERY
82260449	Granted	8688838	12/14/2009	4/1/2014	12/637532	US	Profile Management Systems
82260452	Published		1/20/2010		12/690819	US	Bus Arbritration For Sideband Signals
82260515	Published		12/15/2009		12/637786	US	REDUNDANT, FAULT-TOLERANT MANAGEMENT FABRIC FOR MULTIPARTITION SERVERS
82260518	Granted	9001510	1/27/2010	42101	12/694887	US	System And Method For Positioning A Midplane Within A Computer Chassis
82260554	Granted	8122291	1/21/2010	40960	12/691512	US	METHOD AND SYSTEM OF ERROR LOGGING
82260557	Granted	8161324	12/17/2009	41016	12/641091	US	ANALYSIS RESULT STORED ON A FIELD REPLACEABLE UNIT
82260560	Published		12/17/2009		12/641001	US	Resource Fault Management For Partitions
82260572	Granted	8429602	3/12/2010	4/23/2013	12/723459	US	IDENTIFICATION OF USER INTERFACE CONTROLS
82260620	Granted	8407447	12/16/2009	41359	12/639335	US	DYNAMICALLY REALLOCATING COMPUTING COMPONENTS BETWEEN PARTITIONS
82260638	Published		1/27/2010		12/694954	US	METHOD AND SYSTEM OF EMULATING DEVICES ACROSS SELECTED COMMUNICATION PATHWAYS THROUGH A TERMINAL SESSION
82260641	Application		1/26/2010		12/693925	US	COMPUTER DATA ARCHIVE OPERATIONS
82260677	Granted	8976499	4/27/2010	42073	12/768242	US	E-fuse System For Supplying Current To A Load Along More Than One Path
82260692	Published		2/16/2011		13/028233	US	Method For Determining Network Topology
82260704	Published		3/30/2010		12/798257	US	Generalized Scatter Plots
82260746	Published		1/28/2010		12/695963	US	WAVELET COMPRESSION WITH BOOTSTRAP SAMPLING
82260749	Granted	8260768	1/29/2010	9/4/2012	12/697093	US	Transformation Of Directed Acyclic Graph Query Plans To Linear Query Plans
82260752	Granted	8719722	3/10/2010	5/6/2014	12/721431	US	PRODUCING A REPRESENTATION OF PROGRESS OF A DATABASE PROCESS
82260755	Granted	8745038	2/25/2010	6/3/2014	12/712943	US	Optimization Of Integration Flow Plans
82260764	Granted	8621058	4/27/2011	41639	13/095219	US	Providing Cloud-Based Computing Services
82260767	Granted	8973000	5/11/2010	42066	12/777401	US	Determining Multiprogramming Levels
82260872	Granted	8457806	5/28/2010	6/4/2013	12/790436	US	Managing An Infrastructure Having A 3D Package And Cooling Resource Actuators
82260881	Granted	8401925	1/26/2010	3/19/2013	12/694181	US	SOFTWARE PRODUCT LICENSING
82260941	Granted	8312126	3/1/2010	11/13/2012	12/715056	US	Managing At Least One Computer Node
82261007	Granted	8909603	2/15/2010	12/9/2014	12/705635	US	Backing Up Objects To A Storage Device
82261013	Granted	8228794	2/3/2010	7/24/2012	12/699616	US	Minimizing Pathological Flooding Of A Network

PATENT
REEL: 038498 FRAME: 0457

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82261052	Granted	8352085	4/29/2010	41282	12/770186	US	Distribution Of Cooling Resources Using Hirerarchically Identfied Cooling Microgrids
82261061	Granted	8478709	3/8/2010	7/2/2013	12/719198	US	Evaluation Of Client Status For Likelihood Of Churn
82261067	Allowed		6/24/2010		12/822438	US	FORWARDING BROADCAST TRAFFIC TO A HOST ENVIRONMENT
82261115	Granted	8984257	4/6/2010	3/17/2015	12/755083	US	Managing Sensor And Actuator Data For A Processor And Service Processor Located On A Common Socket
82261121	Granted	8086765	4/29/2010	12/27/2011	12/769897	US	Direct I/O Device Access By A Virtual Machine With Memory Managed Using Memory Disaggregation
82261124	Granted	8364909	1/25/2010	41303	12/692792	US	Determining A Conflict In Accessing Shared Resources Using A Reduced Number Of Cycles
82261130	Granted	8452867	8/2/2010	5/28/2013	12/848664	US	System And Methods For Network And Server Power Management
82261139	Granted	8392761	3/31/2010	41338	12/751005	US	Memory Checkpointing Using A Co-located Processor And Service Processor
82261193	Granted	8656452	7/20/2010	41688	12/840185	US	Data Assurance
82261196	Granted	8239863	6/29/2010	8/7/2012	12/826195	US	Method And System For Migrating A Virtual Machine
82261199	Granted	8665748	4/2/2010	3/4/2014	12/753755	US	Method For Energy Efficient Configuration Of Ports Of A Logical Communication Channel
82261202	Published		12/29/2009		12/648405	US	SYSTEM AND METHOD FOR NEGOTIATING A SALE
82261247	Granted	8247060	4/30/2010	41142	12/771994	US	A Flexible Metamaterial Structure Based On Graphene Structures
82261250	Published		8/25/2010		12/862956	US	SYSTEM AND METHOD FOR EXTRACT, TRANSFORM, AND LOAD WORKFLOW GENERATION
82261265	Granted	8661014	9/23/2010	2/25/2014	12/888429	US	Stream Processing By A Query Engine
82261301	Published		4/27/2010		12/768174	US	Dynamic Collaborative Adaptation Of A Business Activity In Business Activity Management System
82261307	Published		4/22/2010		12/765471	US	RESOURCE MATCHING
82261316	Granted	8664940	10/12/2010	3/4/2014	12/902480	US	GRAPHITE-BASED SENSOR
82261319	Granted	8203837	3/31/2010	41079	12/751189	US	Cooling System
82261331	Granted	8237539	10/7/2010	41128	12/899759	US	THERMISTOR
82261364	Granted	8732094	7/30/2010	41779	12/847763	US	Enforcement Of Security Requirements For A Business Model
82261385	Granted	8832651	3/30/2010	9/9/2014	12/750371	US	Central Service Provisioning System
82261430	Published		6/4/2010		12/794552	US	Quality Of Service Control
82261433	Granted	8375194	5/27/2010	2/12/2013	12/788706	US	SYSTEM AND METHOD FOR FREEING MEMORY
82261490	Granted	7902869	4/30/2010	3/8/2011	12/771135	US	EXTENSIBLE THREE DIMENSIONAL CIRCUIT
82261502	Granted	8351234	4/29/2010	1/8/2013	12/770539	US	EXTENSIBLE THREE DIMENSIONAL CIRCUIT HAVING PARALLEL ARRAY CHANNELS

PATENT
REEL: 038498 FRAME: 0458

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82261505	Granted	8930525	4/27/2010	1/6/2015	12/768451	US	Method And Apparatus For Measuring Business Transaction Performance
82261517	Granted	8542518	3/31/2010	9/24/2013	12/751437	US	PHOTO-RESPONSIVE MEMORY RESISTOR AND METHOD OF OPERATION
82261556	Granted	8935307	4/29/2003	1/13/2015	10/425927	US	INDEPENDENT DATA ACCESS IN A SEGMENTED FILE SYSTEM
82261568	Granted	D631480	3/19/2010	1/25/2011	29/357979	US	Computer Having A Front Bezel
82261580	Granted	7769711	5/30/2007	8/3/2010	11/755649	US	Migration Of Control In A Distributed Segmented File System
82261613	Granted	7464125	6/14/2005	12/9/2008	11/152996	US	Checking The Validity Of Blocks And Backup Duplicates Of Blocks During Block Reads
82261616	Granted	7430570	4/28/2004	9/30/2008	10/833924	US	Shadow Directory Structure In A Distributed Segmented File System
82261619	Granted	8316066	8/20/2007	41233	11/841552	US	Shadow Directory Structure In A Distributed Segmented File System
82261622	Granted	8131782	9/29/2008	3/6/2012	12/240873	US	Shadow Directory Structure In A Distributed Segmented File System
82261628	Granted	7546319	4/28/2004	6/9/2009	10/833355	US	File System Consistency Checking In A Distributed Segmented File System
82261631	Granted	8103639	5/5/2009	1/24/2012	12/435958	US	File System Consistency Checking In A Distributed Segmented File System
82261637	Granted	7650341	12/22/2006	1/19/2010	11/615534	US	DATA BACKUP/RECOVERY
82261700	Granted	8184394	4/20/2010	5/22/2012	12/763682	US	Transducer Head Assemblies And Modules
82261748	Granted	8554746	8/18/2010	10/8/2013	12/859220	US	MULTIPLE-SOURCE DATA COMPRESSION
82261751	Granted	8587985	10/1/2010	11/19/2013	12/896641	US	MEMORY ARRAY WITH GRADED RESISTANCE LINES
82261754	Published		6/2/2010		12/792535	US	COMPRESSING DATA IN A WIRELESS NETWORK
82261760	Granted	8259485	8/31/2010	41156	12/873084	US	MULTILAYER STRUCTURES HAVING MEMORY ELEMENTS WITH VARIED RESISTANCE OF SWITCHING LAYERS
82261766	Granted	8204887	8/27/2010	6/19/2012	12/870129	US	SYSTEM AND METHOD FOR SUBSEQUENCE MATCHING
82261808	Granted	8997084	4/20/2011	42094	13/090270	US	METHOD AND APPARATUS FOR DETERMINING COMPATIBLE VERSIONS OF DEPENDENT ENTITIES IN A COMPUTER SYSTEM
82261814	Granted	8943328	1/29/2010	1/27/2015	12/696799	US	KEY ROTATION FOR ENCRYPTED STORAGE MEDIA
82261817	Granted	9032218	1/29/2010	42136	12/697045	US	KEY ROTATION FOR ENCRYPTED STORAGE MEDIA USING A MIRRORED VOLUME REVIVE OPERATION
82261925	Granted	8451666	5/26/2010	41422	12/787857	US	READING A MEMORY ELEMENT WITHIN A CROSSBAR ARRAY
82261928	Granted	8570785	5/26/2010	10/29/2013	12/788161	US	READING A MEMORY ELEMENT WITHIN A CROSSBAR ARRAY
82261931	Allowed		12/14/2010		12/967899	US	MANAGING SHARED MEMORY

PATENT
REEL: 038498 FRAME: 0459

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82262000	Granted	9063715	6/10/2010	6/23/2015	12/813012	US	Management Of A Virtual Power Infrastructure
82262012	Published		7/1/2010		12/828596	US	Provisioning Of Cooling Resources Through A Delivery Apparatus
82262015	Granted	8620945	9/23/2010	12/31/2013	12/888427	US	A Query Rewind Mechanism For Processing A Continuous Stream Of Data
82262063	Granted	8738656	8/23/2010	41786	12/861736	US	Method And System For Processing A Group Of Resource Identifiers
82262114	Granted	8294132	3/30/2010	10/23/2012	12/750351	US	GRAPHENE MEMRISTOR HAVING MODULATED GRAPHENE INTERLAYER CONDUCTION
82262135	Granted	8261038	4/22/2010	9/4/2012	12/765367	US	Method And System For Allocating Storage Space
82262198	Granted	8279619	3/25/2010	10/2/2012	12/731687	US	POINT OF LOAD (POL) POWER SUPPLY SYSTEMS WITH REPLACEMENT MODULE
82262255	Published		3/29/2010		12/748924	US	Electronic Device And Method
82262261	Published		5/25/2010		12/786899	US	MULTI-ATTRIBUTE SYSTEM FOR PROJECT PLANNING
82262264	Granted	8892490	9/22/2010	11/18/2014	12/887965	US	DETERMINING WHETHER A POINT IN A DATA STREAM IS AN OUTLIER USING HIERARCHICAL TREES
82262300	Granted	9002830	7/12/2010	4/7/2015	12/834592	US	Determining Reliability Of Electronic Documents Associated With Events
82262318	Granted	8239349	10/7/2010	8/7/2012	12/900133	US	EXTRACTING DATA
82262324	Published		5/27/2010		12/788459	US	DETERMINING WHETHER A COMPOSITE CONFIGURATION ITEM SATISFIES A COMPLIANCE RULE
82262366	Granted	8392571	4/30/2010	3/5/2013	12/771059	US	Method And System For Allocating Bandwidth
82262372	Granted	8903833	6/4/2010	12/2/2014	12/794621	US	OBJECT IDENTIFICATION BY ELECTOR
82262381	Granted	9053241	6/11/2010	6/9/2015	12/814345	US	SCRIPTING APPLICATION WITH ROLE IDENTIFICATION
82262384	Published		7/2/2010		12/830233	US	Rule Based Automation
82262390	Granted	8621486	6/30/2010	12/31/2013	12/827134	US	SIGNIFICANCE LEVEL AUTOMATION
82262393	Granted	8443292	6/11/2010	5/14/2013	12/814364	US	SCRIPTING APPLICATION WITH PRIVACY MODE COORDINATION
82262426	Published		6/14/2010		12/815203	US	REUSABLE CAPACITY PLANNING SCENARIO TEMPLATES
82262429	Published		6/14/2010		12/815194	US	PERSONALIZED CAPACITY PLANNING SCENARIOS USING REUSABLE CAPACITY PLANNING SCENARIO TEMPLATES
82262447	Granted	8489827	10/28/2010	7/16/2013	12/914079	US	Method and System for Storage-System Management
82262453	Granted	8532495	7/23/2010	41527	12/842282	US	METHOD FOR ENERGY EFFICIENT PULSING OPERATION OF TRANSCEIVERS OF A NETWORKED DEVICE
82262492	Granted	8531956	5/29/2010	9/10/2013	12/790814	US	Channel Assignment For A Wireless Network
82262507	Granted	8924791	8/30/2010	12/30/2014	12/871582	US	System Including A Vendor Computer System For Testing Software Products In A Cloud Network
82262552	Allowed		9/20/2010		12/885587	US	METHODS AND APPARATUS TO MANAGE SYSTEM PERFORMANCE INFORMATION

PATENT
REEL: 038498 FRAME: 0460

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82262579	Published		3/16/2010		12/725361	US	OPTIMIZATION OF A RESOURCE MATCHING MODEL BY MAPPING A MODEL TO A BIPARTITE GRAPH
82262627	Granted	8395917	6/17/2010	3/12/2013	12/817750	US	REDUNDANT PARALLEL NON-ISOLATED INPUT CONVERTERS
82262639	Granted	8391717	5/24/2010	3/5/2013	12/785962	US	Flow-control Methods And Systems For Multibus Systems
82262702	Granted	8654550	6/17/2010	2/18/2014	12/817716	US	Circulating Current Detection For Redundant Power Supply
82262738	Granted	8972455	10/19/2010	42066	12/907730	US	SYSTEM AND METHOD FOR TRAFFIC SURGE CONTROL
82262750	Published		7/30/2010		12/847907	US	MEMORY DEVICE ALTERING PERFORMANCE CHARACTERISTIC BASED ON BANDWIDTH DEMAND
82262822	Published		9/16/2010		12/883992	US	INTEGRATING USER INTERFACE COMPONENTS
82262867	Published		6/22/2010		12/821079	US	METHOD AND SYSTEM FOR PREDICTIVE DESIGNATED ROUTER HANDOVER IN A MULTICAST NETWORK
82262948	Granted	8396953	3/12/2010	3/12/2013	12/723168	US	PROCESSING PACKETS USING A VIRTUALIZED DESCRIPTOR QUEUE
82262951	Granted	8171349	6/18/2010	5/1/2012	12/818582	US	Associating A Monitoring Manager With An Executable Service In A Virtual Machine Migrated Between Physical Machines
82262987	Granted	8149145	8/5/2010	4/3/2012	12/851409	US	Method And Apparatus For Adaptive Lossless Data Compression
82262996	Published		7/9/2010		12/833080	US	COOLING SYSTEMS AND METHODS
82263008	Granted	8626476	8/31/2010	41646	12/872032	US	DETERMINING THE IMPACT OF ELEMENTS IN A TECHNOLOGY SYSTEM
82263050	Granted	8850321	6/23/2010	41912	12/821457	US	CROSS-DOMAIN BUSINESS SERVICE MANAGEMENT
82263065	Published		8/27/2010		12/870428	US	CORRELATION OF METRICS MONITORED FROM A VIRTUAL ENVIRONMENT
82263071	Published		3/29/2010		12/749473	US	Method And System For Efficient Snapshotting Of Data-Objects
82263077	Granted	8433685	8/18/2010	4/30/2013	12/859130	US	METHOD AND SYSTEM FOR PARITY-PAGE DISTRIBUTION AMONG NODES OF A MULTI-NODE DATA-STORAGE SYSTEM
82263119	Granted	8819286	10/19/2010	41877	12/907173	US	METHODS, SYSTEMS, AND APPARATUS FOR PROCESSING MESSAGING DATA SETS USING STRUCTURED DATA SETS
82263128	Published		10/4/2010		12/897678	US	METHOD AND SYSTEM FOR DEPLOYING APPLICATION COMPONENTS IN A PARTIAL DEPLOYMENT
82263131	Granted	8909053	6/24/2010	12/9/2014	12/822934	US	Tenant Isolation In A Multi-tent Cloud System
82263137	Granted	8539059	6/2/2010	9/17/2013	12/792400	US	MANAGING COOLING DEVICES AND COMPUTING NODES IN AN INFRASTRUCTURE
82263176	Published		6/7/2010		12/795191	US	MANAGING A NETWORK SYSTEM
82263182	Published		10/28/2010		12/913873	US	PROVIDING A STATUS INDICATION FOR A PROJECT

PATENT
REEL: 038498 FRAME: 0461

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82263185	Published		8/27/2010		12/870006	US	IDENTIFYING AN INDIVIDUAL IN RESPONSE TO A QUERY SEEKING TO LOCATE PERSONNEL WITH PARTICULAR EXPERIENCE
82263188	Published		10/28/2010		12/913870	US	IDENTIFING A CANDIDATE ACTION FOR AN ISSUE
82263191	Published		8/24/2010		12/862216	US	INTERACTIVE LAYERED VISUALIZATION OF A LAYERED SOFTWARE ARCHITECTURE
82263194	Published		9/7/2010		12/876651	US	TEST PLANNING TOOL FOR SOFTWARE UPDATES
82263299	Granted	8392805	7/15/2010	3/5/2013	12/837085	US	NON-MDS ERASURE CODES FOR STORAGE SYSTEMS
82263302	Granted	8458513	7/30/2010	6/4/2013	12/847203	US	EFFICIENT FAILURE RECOVERY IN A DISTRIBUTED DATA STORAGE SYSTEM
82263314	Granted	8805766	10/19/2010	8/12/2014	12/907181	US	METHODS AND SYSTEMS FOR MODIFYING A KNOWLEDGE BASE SYSTEM
82263371	Published		10/8/2010		12/901156	US	PROCESSING CHANGE DATA
82263380	Published		10/28/2010		12/914299	US	GENERATING PROGRESSIVE QUERY RESULTS
82263383	Published		6/15/2010		12/815732	US	System And Method For Designing And Displaying Advertisements
82263386	Granted	8324976	4/1/2011	12/4/2012	13/078595	US	OSCILLATOR CIRCUITRY HAVING NEGATIVE DIFFERENTIAL RESISTANCE
82263488	Published		10/7/2010		12/924870	US	Visualizing Motifs With Visual Structures
82263512	Granted	8385101	7/30/2010	2/26/2013	12/847874	US	MEMORY RESISTOR HAVING PLURAL DIFFERENT ACTIVE MATERIALS
82263551	Published		10/25/2010		12/911389	US	PROVIDING BUSINESS INTELLIGENCE
82263569	Granted	9018797	5/28/2010	42122	12/790514	US	Power Distribution Management
82263614	Granted	8824665	10/11/2010	41884	12/901736	US	Unshielded Twisted Pair Termination Circuit
82263617	Granted	8537846	4/27/2010	9/17/2013	12/768722	US	Dynamic Priority Queue Level Assignment For A Network Flow
82263620	Granted	8396936	10/28/2010	3/12/2013	12/914889	US	Computer System with Cooperative Cache
82263623	Granted	8537669	4/27/2010	9/17/2013	12/768723	US	Priority Queue Level Optimization For A Network Flow
82263626	Published		9/3/2010		12/807378	US	Visual Representation Of A Cell-based Calendar Transparently Overlaid With Event Visual Indicators For Mining Data Records
82263629	Granted	8391289	10/29/2010	3/5/2013	12/915509	US	MANAGING A FORWARDING TABLE IN A SWITCH
82263635	Granted	8458547	10/26/2010	6/4/2013	12/912688	US	Method For Constructing A Histogram
82263698	Granted	8424826	10/12/2010	41387	12/902824	US	ATTACHMENT APPARATUS FOR AN EXTERNAL POWER SUPPLY
82263761	Granted	8135979	6/24/2010	40981	12/822275	US	COLLECTING NETWORK-LEVEL PACKETS INTO A DATA STRUCTURE IN RESPONSE TO AN ABNORMAL CONDITION
82263800	Granted	8648491	9/28/2010	2/11/2014	12/892300	US	PASSIVE IMPEDANCE MATCHING

PATENT
REEL: 038498 FRAME: 0462

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82263809	Granted	8744631	1/28/2011	6/3/2014	13/016278	US	MANIPULATING ENVIRONMENTAL CONDITIONS IN AN INFRASTRUCTURE
82263821	Published		9/24/2010		12/889709	US	Reimaging A Multi-Node Storage System
82263863	Published		10/25/2010		12/911356	US	DISTRIBUTED DATABASE SYNCHRONIZATION
82263887	Published		10/15/2010		12/905735	US	PREDICTING FUTURE OUTCOMES
82263890	Published		7/30/2010		12/847066	US	Method And System For Processing Unified State Change Notifications
82264001	Granted	8818974	10/27/2010	41877	12/913561	US	SYSTEM AND METHOD FOR SYNCHRONOUSLY UPDATING A HIERARCHY BRIDGE TABLE
82264076	Granted	8769505	1/24/2011	41821	13/012457	US	EVENT INFORMATION RELATED TO SERVER REQUEST PROCESSING
82264130	Published		10/27/2010		12/913486	US	SYNCHRONIZED FIRMWARE UPDATE
82264133	Granted	8443365	11/3/2010	41408	12/938987	US	METHODS AND SYSTEMS TO CLONE A VIRTUAL MACHINE INSTANCE
82264175	Granted	8271312	8/25/2010	41170	12/868645	US	INTRODUCING REVENUE-GENERATING FEATURES
82264178	Granted	8356141	6/28/2010	1/15/2013	12/825163	US	IDENTIFYING REPLACEMENT MEMORY PAGES FROM THREE PAGE RECORD LISTS
82264181	Published		10/19/2010		12/907605	US	MANAGING SETTINGS OF COMPUTING DEVICES
82264238	Granted	8260826	10/19/2010	9/4/2012	12/907940	US	Data Processing System And Method
82264262	Granted	8627311	2/1/2011	41646	13/019052	US	SYSTEMS, METHODS, AND APPARATUS TO DEPLOY SOFTWARE
82264265	Granted	8479034	8/9/2010	41457	12/853148	US	Method For Controlling The Power Usage Of A Computer
82264298	Published		10/28/2010		12/914418	US	TIME TRACKING SYSTEMS AND METHODS
82264310	Granted	8549482	12/15/2010	10/1/2013	12/969378	US	DISPLAYING SUBTITLES
82264316	Published		1/11/2011		13/004743	US	METHODS AND APPARATUS TO GENERATE A WIZARD APPLICATION
82264319	Granted	8566745	10/29/2010	10/22/2013	12/916442	US	A METHOD AND SYSTEM FOR PROJECT AND PORTFOLIO MANAGEMENT
82264328	Published		10/26/2010		12/912438	US	SYSTEM AND METHOD FOR DEPLOYING A SOFTWARE PROGRAM
82264367	Published		2/3/2011		13/020547	US	PROCESSING NON-EDITABLE FIELDS IN WEB PAGES
82264370	Published		1/28/2011		13/016433	US	METHODS AND SYSTEMS OF CONTENT DEVELOPMENT FOR A DATA WAREHOUSE
82264376	Published		9/6/2011		13/226197	US	Discovering Tiers Within An Application
82264382	Published		10/29/2010		12/916445	US	SYSTEM AND METHOD FOR SOFTWARE DEVELOPMENT REPORT GENERATION
82264424	Published		12/13/2010		12/966643	US	COMPUTER INVENTORY DATA CONSOLIDATION
82264427	Published		10/29/2010		12/916435	US	System And Method For Metric Based Allocation Of Costs

PATENT
REEL: 038498 FRAME: 0463

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82264448	Granted	8339951	7/28/2010	12/25/2012	12/845446	US	Method For Configuration Of A Load Balancing Algorithm In A Network Device
82264502	Application		8/20/2010		12/859931	US	Disaggregating Power Consumption
82264508	Granted	8914155	10/28/2010	12/16/2014	12/914600	US	CONTROLLING FLUID FLOW IN A DATA CENTER
82264511	Granted	8260803	10/19/2010	9/4/2012	12/907948	US	SYSTEM AND METHOD FOR DATA STREAM PROCESSING
82264550	Published		10/27/2010		12/913597	US	VERSION MISMATCH DELAY AND UPDATE FOR A DISTRIBUTED SYSTEM
82264565	Granted	8935484	3/31/2011	1/13/2015	13/077842	US	WRITE-ABSORBING BUFFER FOR NON-VOLATILE MEMORY
82264568	Granted	8762425	10/18/2010	41814	12/906334	US	Managing A Data Structure
82264571	Granted	8499121	8/31/2011	41485	13/222919	US	METHODS AND APPARATUS TO ACCESS DATA IN NON-VOLATILE MEMORY
82264613	Granted	9009724	9/24/2010	42108	12/889727	US	Load Balancing Data Access In Virtualized Storage Nodes
82264616	Published		9/24/2010		12/889824	US	Systems And Methods Of Managing Virtual Storage Resources
82264619	Published		10/27/2010		12/925684	US	VISUAL ANALYSIS OF A TIME SEQUENCE OF EVENTS USING A TIME DENSITY TRACK
82264676	Granted	8627448	11/2/2010	1/7/2014	12/938090	US	SELECTIVE INVALIDATION OF PACKET FILTERING RESULTS
82264679	Granted	8487289	10/6/2010	41471	12/899210	US	ELECTRICALLY ACTUATED DEVICE
82264688	Granted	8525146	12/6/2010	9/3/2013	12/961214	US	ELECTRICAL CIRCUIT COMPONENT
82264697	Granted	8212621	10/29/2010	7/3/2012	12/916485	US	MEMRISTIVE PROGRAMMABLE FREQUENCY SOURCE AND METHOD
82264700	Granted	9013177	10/27/2010	4/21/2015	12/913657	US	PROGRAMMABLE ANALOG FILTER
82264703	Granted	8188897	10/29/2010	41058	12/916376	US	ANALOG TO DIGITAL CONVERTER
82264760	Published		9/23/2010		12/888626	US	METHOD AND SYSTEM FOR EVENT CORRELATION
82264874	Published		10/26/2010		12/912228	US	System And Method For Generating An Information Integration Flow Design Using Hypercubes
82264877	Granted	8538912	9/22/2010	9/17/2013	12/888128	US	APPARATUS AND METHOD FOR AN AUTOMATIC INFORMATION INTEGRATION FLOW OPTIMIZER
82265075	Granted	9152522	10/22/2010	42283	12/910629	US	METHODS FOR CONFIGURATION MANAGEMENT USING A FALLBACK CONFIGURATION
82265114	Published		11/8/2010		12/942006	US	Backup Policies for Using Different Storage Tiers
82265117	Published		11/8/2010		12/941996	US	LOAD BALANCING BACKUP JOBS IN A VIRTUALIZED STORAGE SYSTEM HAVING A PLURALITY OF PHYSICAL NODES
82265138	Published		12/20/2010		12/973830	US	Indexing for deduplication
82265240	Granted	8561074	11/19/2010	41562	12/950887	US	ENHANCED BACKUP JOB SCHEDULING
82265318	Granted	8331052	10/27/2010	41254	12/913007	US	WRITING DATA TO A TAPE
82265321	Granted	8477446	1/4/2011	41457	12/984474	US	WRITING DATA TO A TAPE
82265369	Published		1/14/2011		13/007467	US	DATA STAGING FOR RESULTS OF ANALYTICS

PATENT
REEL: 038498 FRAME: 0464

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82265375	Granted	8997056	12/15/2010	42094	12/968910	US	DIRECTED GRAPHS PERTAINING TO READ/WRITE OPERATIONS
82265378	Published		1/27/2011		13/015475	US	TRANSFORMING ENTITY AND RELATION DATA USING A PROXY ENGINE
82265498	Granted	8538029	3/24/2011	41534	13/071459	US	ENCRYPTION KEY FRAGMENT DISTRIBUTION
82265501	Granted	8693881	11/19/2010	4/8/2014	12/950199	US	OPTICAL HETERODYNE DEVICES
82265507	Granted	7697679	9/15/2006	40281	11/521785	US	TELEPHONE SET HAVING A HANDSET WITH AN INTEGRATED POINTING DEVICE
82265630	Granted	5822303	1/30/1995	10/13/1998	08/380749	US	REPEATERS FOR SECURE LOCAL AREA NETWORKS
82265942	Granted	5781726	1/31/1996	7/14/1998	08/594878	US	Management Of Polling Traffic In Connection Oriented Protocol Sessions
82265945	Granted	5805827	3/4/1996	36046	08/610706	US	Distributed Signal Processing For Data Channels Maintaining Channel Bandwidth
82265948	Granted	5933420	4/30/1996	8/3/1999	08/640184	US	Method and Apparatus For Assigning Spectrum Of A Wireless Local Area Network
82265951	Granted	6208629	3/10/1999	3/27/2001	09/266245	US	METHOD AND APPARATUS FOR ASSIGNING SPECTRUM OF A LOCAL AREA NETWORK
82266047	Granted	5802309	6/12/1996	9/1/1998	08/662350	US	Method For Encoding SNMP Summary Objects
82266050	Granted	5781745	5/20/1996	7/14/1998	08/651804	US	High Speed Communication Bus
82266263	Granted	5715287	10/18/1995	35829	08/544745	US	METHOD AND APPARATUS FOR DUAL PURPOSE TWISTED PAIR INTERFACE CIRCUIT FOR MULTIPLE SPEED MEDIA IN A NETWORK
82266326	Granted	5818838	10/12/1995	36074	08/542157	US	METHOD AND APPARATUS FOR TRANSPARENT INTERMEDIATE SYSTEM BASED FILTERING ON A LAN OF MULTICAST PACKETS
82266377	Granted	6085243	12/13/1996	7/4/2000	08/766274	US	Distributed remote management (DRMON) for networks
82266386	Granted	5805596	12/21/1995	9/8/1998	08/576802	US	METHOD FOR IN-BAND COMMUNICATION OF MANAGEMENT INFORMATION IN A BACKPLANE ARCHITECTURE OF A STACKABLE ETHERNET REPEATER
82266485	Granted	6753761	10/28/2002	6/22/2004	10/281778	US	Power Transfer Apparatus For Concurrently Transmitting Data And Power Over Data Wires
82266488	Granted	7005969	3/12/2004	2/28/2006	10/799212	US	Power Transfer Apparatus For Concurrently Transmitting Data And Power Over Data Wires
82266491	Granted	6989735	3/18/2004	1/24/2006	10/804615	US	Power Transfer Apparatus For Concurrently Transmitting Data And Power Over Data Wires
82266494	Granted	5802054	8/15/1996	9/1/1998	08/698745	US	ATOMIC NETWORK SWITCH WITH INTEGRATED CIRCUIT SWITCH NODES
82266497	Granted	6256306	6/3/1998	37075	09/089838	US	ATOMIC NETWORK SWITCH WITH INTEGRATED CIRCUIT SWITCH NODES

PATENT
REEL: 038498 FRAME: 0465

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82266503	Granted	6691147	12/7/1999	38027	09/455841	US	Method And Apparatus Supporting Network Communications
82266506	Granted	6230193	10/31/1996	5/8/2001	08/739397	US	Method And Apparatus Supporting Network Communications
82266509	Granted	7447728	2/2/2004	11/4/2008	10/770065	US	Method And Apparatus Supporting Network Communications
82266512	Granted	7899077	10/27/2008	40603	12/258573	US	Method And Apparatus For Supporting Network Communications
82266560	Granted	5663634	4/30/1996	35675	08/641400	US	Startup Network For A Flyback Converter With Linear Regulation
82266608	Granted	5943341	10/4/1996	36396	08/726166	US	TOKEN RING ADAPTER INTERFACE
82266614	Granted	6157647	11/6/1996	12/5/2000	08/744920	US	Direct Addressing Between VLAN Subnets
82266617	Granted	5883894	12/30/1996	3/16/1999	08/774480	US	SHARED AUTO-NEGOTIATION LOGIC FOR MULTIPLE PORT NETWORK DEVICES
82266626	Granted	6148002	3/15/1999	11/14/2000	09/268862	US	SHARED AUTO-NEGOTIATION LOGIC FOR MULTIPLE PORT NETWORK DEVICES
82266629	Granted	5999541	2/28/1997	36501	08/807267	US	Transmission Of Token-Ring Packets Over Ethernet By Tunneling
82266638	Granted	6009423	10/29/1997	12/28/1999	08/960239	US	Search Apparatus
82266677	Granted	5898889	4/30/1996	36277	08/641401	US	QUALIFIED BURST CACHE For Transfer Of Data Between Disparate Clock Domains
82266683	Granted	5936537	9/23/1996	8/10/1999	08/716763	US	High Frequency Signal Detector
82266686	Granted	5949784	5/1/1997	9/7/1999	08/847038	US	Forwarding Mechanism for multi-destination Packets To Minimize Per Packet Scheduling Overhead In A Network Forwarding Engine
82266752	Granted	6188691	3/16/1998	2/13/2001	09/039725	US	Multicast Domain Virtual Local Area Network
82266755	Granted	6021495	5/30/1997	2/1/2000	08/866818	US	METHOD FOR APPARATUS FOR AUTHENTICATION PROCESS OF A STAR OR HUB NETWORK CONNECTION PORTS BY DETECTING INTERRUPTION IN LINK BEAT
82266797	Granted	5805403	3/28/1996	9/8/1998	08/620801	US	Integrated Circuit Temperature Monitoring And Protection System
82266803	Granted	5935245	4/29/1997	8/10/1999	08/827965	US	Method And Apparatus For Providing Secure Network Communications
82266824	Granted	6115776	5/2/1997	9/5/2000	08/850538	US	Network And Adaptor With Time-Based And Packet Number Based Interrupt Combinations
82266860	Granted	6020562	11/11/1997	2/1/2000	08/967489	US	REDUCED-CAPACITANCE COMPONENT MOUNTING PADS AND CAPACITANCE-REDUCTION METHODS FOR HIGH FREQUENCY MULTI-LAYER PRINTED CIRCUIT BOARDS
82266863	Granted	6298067	5/1/1998	10/2/2001	09/071694	US	Distributed Arbitration Scheme For Network Device
82266866	Granted	6256320	5/29/1998	7/3/2001	09/087104	US	DUAL CLOCKS FOR NETWORK DEVICE

PATENT
REEL: 038498 FRAME: 0466

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82266869	Granted	6091722	3/18/1997	7/18/2000	08/819873	US	Subscriber Loop Bypass Modem
82266878	Granted	5875309	4/18/1997	2/23/1999	08/843957	US	Arbitration System Using Linked Table
82266881	Granted	5959972	5/27/1997	9/28/1999	08/863441	US	METHOD OF PORT/LINK REDUNDANCY IN AN ATM SWITCH
82266887	Granted	6026085	4/8/1997	2/15/2000	08/835536	US	Architecture to Support A Single System Image Across Multiple Network Access Servers
82266923	Granted	6449348	5/29/1997	9/10/2002	08/865015	US	Power Transfer Apparatus For Use By Network Devices Including Telephone Equipment
82267046	Granted	5949788	5/6/1997	9/7/1999	08/852146	US	Method And Apparatus For Multipoint Trunking
82267172	Granted	6084915	3/3/1998	7/4/2000	09/034611	US	SIGNALING METHOD HAVING MIXED-BASE SHELL MAP INDICES
82267178	Granted	6002681	5/13/1997	12/14/1999	08/855052	US	Dual Band Modem
82267181	Granted	5949783	9/8/1997	9/7/1999	08/929196	US	Lan Emulation Subsystems for Supporting Multiple Virtual Lans
82267193	Granted	5896415	5/27/1997	4/20/1999	08/863507	US	DEVICE FOR OUT-OF-BAND TRANSMISSION ON COMPUTER PERIPHERAL
82267196	Granted	6035371	5/28/1997	3/7/2000	08/864475	US	METHOD AND APPARATUS FOR ADDRESSING A STATIC RANDOM ACCESS MEMORY DEVICE BASED ON SIGNALS FOR ADDRESSING A DYNAMIC MEMORY ACCESS DEVICE
82267358	Granted	6075773	3/17/1998	6/13/2000	09/042878	US	MULTI-USER LAN PACKET GENERATOR
82267361	Granted	6125112	3/23/1998	9/26/2000	09/046230	US	NON-BUFFERED, NON-BLOCKING MULTISTAGE ATM SWITCH
82267367	Granted	5999517	3/13/1998	12/7/1999	09/042161	US	Summarization Of Routing Information In a Hierarchical Network
82267373	Granted	6061736	3/13/1998	5/9/2000	09/042162	US	Routing Over Similar Paths
82267379	Granted	6118796	5/7/1997	9/12/2000	08/852659	US	Apparatus For An Improved ISDN Terminal Adapter Having Automatic ISDN Switch Detection And Methods For Use Therein
82267382	Granted	5931928	5/7/1997	8/3/1999	08/852657	US	System for ISDN terminal adapter DCE for automatically negotiating data compression with it's PPP peer when DTE is unable or unwilling to negotiate compression
82267430	Granted	6201374	6/12/2000	3/13/2001	09/078460	US	Voltage Regulation And Power Switching System
82267433	Granted	6181681	12/29/1997	1/30/2001	08/999482	US	LOCAL AREA NETWORK MEDIA ACCESS CONTROLLER LAYER BRIDGE
82267442	Granted	5946327	9/9/1997	8/31/1999	08/927372	US	Method And Apparatus For Converting Between A Multi-Bit TDM Bus And A Single-Bit TDM Bus Using Digital Logic
82267484	Granted	5922044	6/12/1997	7/13/1999	08/873440	US	System and Method For Providing Information To Applets In A Virtual Machine
82267490	Granted	6108782	6/24/1997	8/22/2000	08/882207	US	DISTRIBUTED REMOTE MONITORING (DRMON) FOR NETWORKS

PATENT
REEL: 038498 FRAME: 0467

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82267559	Granted	5937169	10/29/1997	8/10/1999	08/960238	US	OFFLOAD OF TCP SEGMENTATION TO A SMART ADAPTER
82267565	Granted	6246683	5/1/1998	6/12/2001	09/071692	US	Receive Processing With Network Protocol Bypass
82267568	Granted	6956853	3/22/2001	10/18/2005	09/814619	US	Receive Processing With Network Protocol Bypass
82267607	Granted	6208714	6/2/1998	3/27/2001	09/088580	US	Telephone Answering Apparatus For Indicating The Presence of A Power Cycle
82267610	Granted	6643358	5/27/1998	11/4/2003	09/085278	US	Telephone Answering Apparatus And Method For Confirming An Acoustic Command Signal
82267619	Granted	6208716	6/2/1998	3/27/2001	09/088751	US	Telephone Answering Apparatus And Method For Determining The Time Of Message Reception
82267625	Granted	5982768	7/25/1997	11/9/1999	08/900320	US	Dual Band Modem For High Bandwidth Communications
82267628	Granted	6002682	7/25/1997	12/14/1999	08/900971	US	Dual Band Bypass Modem
82267634	Granted	6182172	8/31/1998	1/30/2001	09/144156	US	REINTIALIZATION CIRCUIT FOR A DATA COMMUNICATIONS INTERFACE
82267733	Granted	6212206	3/5/1998	4/3/2001	09/035727	US	Methods And Computer Executable Instructions For Improving Communications In A Packet Switching Network
82267739	Granted	5991337	11/24/1997	11/23/1999	08/976698	US	METHOD AND APPARATUS FOR IMPROVING THE SIGNAL-TO-NOISE RATION OF LOW-MAGNITUDE IMPUT SIGNALS IN MODEMS
82267742	Granted	6282177	3/4/1998	8/28/2001	09/034653	US	METHOD AND APPARATUS FOR DYNAMICALLY CONTROLLING THE BIAS CURRENT IN A RECEIVER IN RESPONSE TO THE TRANSMITTER POWER
82267745	Granted	6173405	5/29/1998	1/9/2001	09/087307	US	SECURE COMMUNICATIONS CARD MODEM AND METHOD OF USING SAME
82267748	Granted	6240302	5/29/1998	5/29/2001	09/087557	US	Wireless Phone With Removable Personal Information Manager
82267757	Granted	5991335	6/25/1999	11/23/1999	08/950217	US	METHOD AND SYSTEM FOR LINE ISOLATION
82267799	Granted	6151636	2/5/1998	11/21/2000	09/018872	US	Data And Media Communication Through A Lossy Channel Using Signal Conversion
82267805	Granted	6105068	2/10/1998	8/15/2000	09/021491	US	Method And Apparatus For Determining A Protocol Type On A Network Connection Using Error Detection Values Stored Within Internetworking Devices
82267808	Granted	6012953	8/5/1997	1/11/2000	08/906023	US	Surface Mountable Electrical Connector System
82267856	Granted	6160808	12/18/1997	12/12/2000	08/993541	US	Technique For Transmitting Incoming Multi-Link Point-To-Point (PPP) Packet Traffic Over Multiple Outgoing Links In A Multi-Link Bundle
82267862	Granted	6311218	10/28/1997	10/30/2001	08/955869	US	Method And Apparatus For Providing Security In A Star Network Connection Using Public Key Cryptography
82267919	Granted	6029186	1/20/1998	2/22/2000	09/009069	US	High Speed Calculation of Cyclical Redundancy Check Sums
82267931	Granted	6230181	11/3/1997	5/8/2001	08/963402	US	Management ShutDown And Reset Of Embedded Systems

PATENT
REEL: 038498 FRAME: 0468

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82267937	Granted	5999109	6/9/1997	12/7/1999	08/871220	US	FRAME-BASED SPECTRAL SHAPING METHOD AND APPARATUS
82268009	Granted	6255967	12/7/1999	7/3/2001	09/457433	US	FRAME-BASED SPECTRAL SHAPING METHOD AND APPARATUS
82268045	Granted	6009121	10/24/1997	12/28/1999	08/957698	US	Method And Device For Generating Signal Constellations in PCM Space For High Speed Data Communications
82268051	Granted	5986596	10/24/1997	11/16/1999	08/958702	US	CONCISE STORAGE AND EXPANSION OF SIGNAL CONSTELLATIONS IN PCM SPACE FOR HIGH SPEED DATA COMMUNICATION
82268057	Granted	6130880	3/20/1998	10/10/2000	09/044958	US	Method And Apparatus For Adaptive Prioritization Of Multiple Information Types In Highly Congested Communication Devices
82268114	Granted	6704317	5/27/1998	3/9/2004	09/085907	US	MULTI-CARRIER LAN MODEM SERVER
82268120	Granted	6891887	6/20/2001	5/10/2005	09/885220	US	MULTI-CARRIER LAN ADAPTER DEVICE USING INTERPOLATIVE EQUALIZER
82268123	Granted	6044150	8/21/1997	3/28/2000	08/918516	US	METHOD AND APPARATUS FOR A HOST-BASED PERSONAL COMPUTER SPEAKERPHONE
82268129	Granted	6130916	7/10/1997	10/10/2000	08/889970	US	Method And Apparatus For Improving A Transmission Data Rate OF Baseband Data In A Wireless Network
82268189	Granted	6463479	11/30/1998	10/8/2002	09/201368	US	APPARATUS FOR TRUNKING IN STACKED COMMUNICATION DEVICES
82268195	Granted	6801953	8/15/2002	10/5/2004	10/219743	US	Trunking In Stacked Communication Devices
82268198	Granted	6212563	10/1/1998	4/3/2001	09/164744	US	Method and System for Setting and Managing Externally Provided Internet Protocol Addresses Using the Dynamic Host Configuration Protocol
82268231	Granted	6172980	9/11/1997	1/9/2001	08/927913	US	Multiple Protocol Support
82268234	Granted	5991299	9/11/1997	11/23/1999	08/927649	US	High Speed Header Translation Processing
82268249	Granted	6118768	9/26/1997	9/12/2000	08/938573	US	APPARATUS AND METHODS FOR USE THEREIN FOR AN ISDN LAN MODEM UTILIZING BROWSER-BASED CONFIGURATION WITH ADAPTION OF NETWORK PARAMETERS
82268252	Granted	6028848	9/26/1997	2/22/2000	08/938373	US	Apparatus And Methods For Use Therein For An ISDN LAN Modem Utilizing Internal DNS And DHCP Servers For Transparent Translation Of Local Host Names To IP Addresses
82268255	Granted	6108330	9/26/1997	8/22/2000	08/938370	US	Apparatus And Methods For Use Therein For An ISDN LAN Modem That Selects Among A Plurality Of DNS Servers For Responding To A DNS Query

PATENT
REEL: 038498 FRAME: 0469

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82268258	Granted	6029203	9/26/1997	2/22/2000	08/938369	US	APPARATUS AND METHODS FOR USE THEREIN FOR AN ISDN LAN MODEM THAT PROVIDES ENHANCED NETWORK ACTIVITY
82268261	Granted	6023724	9/26/1997	2/8/2000	08/938852	US	Apparatus And Methods For Use Therein For An ISDN LAN Modem That Displays Fault Information To Local Hosts Through Interception Of Host DNS Request Messages
82268303	Granted	6182149	1/11/1999	1/30/2001	09/228208	US	System for Managing Dynamic Processing Resources In A Network
82268306	Granted	6421734	11/28/2000	7/16/2002	09/728148	US	System for Managing Dynamic Processing Resources In A Network
82268312	Granted	6175871	10/1/1997	1/16/2001	08/942446	US	Method And Apparatus For Real Time Communication Over Packet Networks
82268369	Granted	6538997	6/24/1998	3/25/2003	09/103789	US	LAYER-2 TRACE METHOD AND NODE
82268372	Granted	6587454	5/28/1998	7/1/2003	09/086103	US	NETWORK ADAPTOR FOR TELEPHONE AND DATA TRAFFIC
82268375	Granted	6658098	9/9/2002	12/2/2003	10/238944	US	Power Transfer Apparatus for Use by Network devices Including Telephone Equipment
82268378	Granted	6006271	2/27/1998	12/21/1999	09/032125	US	Method And Protocol For Complete Collision Avoidance Contention Resolution In Local Area Networks
82268381	Granted	6116927	3/2/1998	9/12/2000	09/033270	US	Electrical Connector For Use Between Media Connectors And Computer Communications Cards
82268384	Granted	6112245	4/7/1998	8/29/2000	09/056258	US	SESSION ESTABLISHMENT FOR STATIC LINKS IN POINT-TO -- POINT PROTOCOL SESSIONS
82268420	Granted	6058421	2/4/1998	5/2/2000	09/018784	US	Method and system for addressing network host interfaces from a cable modem using DHCP
82268432	Granted	6147997	11/7/1997	11/14/2000	08/965737	US	Mechanism To Support An Utopia Interface Over A Backplane
82268444	Granted	6016513	2/19/1998	1/18/2000	09/025960	US	METHOD OF PREVENTING PACKET LOSS DURING TRANSFERS OF DATA PACKETS BETWEEN A NETWORK INTERFACE CARD AND AN OPERATING SYSTEM OF A COMPUTER
82268447	Granted	6377683	5/29/1998	4/23/2002	09/087001	US	Low Complexity Frequency Domain Echo Canceller For DMT Transceivers
82268483	Granted	6367018	6/28/2000	4/2/2002	09/019462	US	METHOD FOR DETECTING DEDICATED LINK BETWEEN AN END STATION AND A NETWORK DEVICE
82268489	Granted	6070246	2/4/1998	5/30/2000	09/018756	US	Method And System For Secure Cable Modem Initialization
82268492	Granted	6170061	2/4/1998	1/2/2001	09/018372	US	Method And System For Secure Cable Modem Registration
82268495	Granted	6049826	2/4/1998	4/11/2000	09/018400	US	Method And System For Cable Modem Initialization Using Dynamic Servers
82268501	Granted	6185607	5/26/1998	2/6/2001	09/085395	US	Method For Managing Network Data Transfers With Minimal Host Processor Involvement

PATENT
REEL: 038498 FRAME: 0470

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82268504	Granted	6097720	4/7/1998	8/1/2000	09/056284	US	ENABLING MULTICAST DISTRIBUTION EFFICIENCIES IN A DIALUP ACCESS ENVIRONMENT
82268510	Granted	6243846	4/17/1998	6/5/2001	09/062435	US	FORWARD ERROR CORRECTION SYSTEM FOR PACKET BASED DATA AND REAL TIME MEDIA, USING CROSS-WISE PARITY CALCULATION
82268546	Granted	6775276	5/27/1998	8/10/2004	09/085555	US	METHOD AND SYSTEM FOR SEAMLESS ADDRESS ALLOCATION IN A DATA-OVER-CABLE SYSTEM
82268555	Granted	6147874	12/18/1998	11/14/2000	09/215102	US	Backplate for Securing Printed Circuit Card to a Computer Chassis
82268558	Granted	6442141	8/31/1998	8/27/2002	09/143803	US	Network Delay And Loss Simulator
82268567	Granted	6195332	8/28/1998	2/27/2001	09/143036	US	RATE-BASED FLOW CONTROL PROTOCOL ON AN ETHERNET-OVER-RING COMMUNICATIONS NETWORK
82268609	Granted	6363416	8/28/1998	3/26/2002	09/141829	US	SYSTEM AND METHOD FOR AUTOMATIC ELECTION OF A REPRESENTATIVE NODE WITHIN A COMMUNICATIONS NETWORK WITH BUILT-IN REDUNDANCY
82268624	Granted	6151627	11/6/1998	11/21/2000	09/186656	US	Monitoring Of a communication link utilizing history-based compression algorithms
82268669	Granted	6510162	5/27/1998	1/21/2003	09/090593	US	System and Method For Managing Channel Usage In A Data Over Cable System
82268675	Granted	6212188	5/1/1998	4/3/2001	09/071065	US	Method Of Source Routing In An Asynchronous Transfer Mode Network When A Node Is In An Overload State
82268681	Granted	6192043	5/1/1998	2/20/2001	09/071067	US	Method Of Caching Routes In Asynchronous Transfer Mode PNNI Networks
82268684	Granted	6178172	3/24/1998	1/23/2001	09/047068	US	METHOD OF TOPOLOGY DATABASE SYNCHRONIZATION IN AN ASYNCHRONOUS TRANSFER MODE NETWORK
82268687	Granted	6279037	8/10/1998	8/21/2001	09/131717	US	METHODS AND APPARATUS FOR MONITORING COLLECTING STORING PROCESSING AND USING NETWORK TRAFFIC DATA OF OVERLAPPING TIME PERIODS
82268693	Granted	6272107	5/12/1998	8/7/2001	09/076686	US	Method Of Path Restoration In An ATM Network Utilizing Point To Point Switched Virtual Circuits
82268735	Granted	6222876	12/19/1997	4/24/2001	08/994866	US	Detecting Valid Data Patterns For Adapting Equalization Gain And Offset for Data Transmissions
82268738	Granted	6192071	12/19/1997	2/20/2001	08/994519	US	DETECTING OVEREQUALIZATION FOR ADAPTING EQUALIZATION AND OFFSET FOR DATA TRANSMISSIONS
82268741	Granted	6118815	12/19/1997	9/12/2000	08/994862	US	ADAPTING EQUALIZATION GAIN AND OFFSET FOR DATA TRANSMISSIONS
82268744	Granted	6205150	5/28/1998	3/20/2001	09/086394	US	Method Of Scheduling Higher And Lower Priority Data Packets
82268747	Granted	6208623	4/13/1998	3/27/2001	09/059658	US	METHOD OF COMBINING PNNI AND E-IISP IN AN ASYNCHRONOUS TRANSFER MODE NETWORK

PATENT
REEL: 038498 FRAME: 0471

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82268756	Granted	6205146	5/28/1998	3/20/2001	09/086423	US	Method Of Dynamically Routing To A Well Known Address In A Network
82268759	Granted	6269076	5/28/1998	7/31/2001	09/086104	US	METHOD OF RESOLVING SPLIT VIRTUAL LANS UTILIZING A NETWORK MANAGEMENT SYSTEM
82268795	Granted	6636485	5/14/1998	10/21/2003	09/079323	US	METHOD AND SYSTEM FOR PROVIDING QUALITY-OF-SERVICE IN A DATA-OVER-CABLE SYSTEM
82268798	Granted	6223222	5/14/1998	4/24/2001	09/079322	US	METHOD AND SYSTEM FOR PROVIDING QUALITY-OF-SERVICE IN A DATA-OVER-CABLE SYSTEM USING CONFIGURATION PROTOCOL MESSAGING
82268801	Granted	6195349	1/28/1998	2/27/2001	09/014547	US	Scalable Logical Lan
82268810	Granted	6055585	5/29/1998	4/25/2000	09/087627	US	SYSTEM FOR OPERATING A UNIVERSAL ASYNCHRONOUS SYSTEM/TRANSMITTER (UART) AT SPEEDS HIGHER THAN 115,200 BPS WHILE MAINTAINING FULL SOFTWARE AND HARDWARE BACKWARD COMPATIBILITY
82268813	Granted	6065049	2/4/1998	5/16/2000	09/018814	US	Method And System For Resolving Addresses For Network Host Interfaces From A Cable Modem
82268816	Granted	6191626	8/2/1999	2/20/2001	09/365010	US	METHOD AND APPARATUS FOR COMPENSATING INPUT THRESHOLD VARIATIONS ON INPUT BUFFERS
82268864	Granted	6311276	8/25/1998	10/30/2001	09/139625	US	Secure System For Remote Management and Wake-Up Commands
82268867	Granted	6606709	10/29/2001	8/12/2003	10/075103	US	Secure System For Remote Management And Wake-up Commands
82268876	Granted	6216339	3/9/2000	4/17/2001	09/074743	US	Tool-Actuated Ejector Mechanism For Extracting Electronic Modular Components
82268882	Granted	6202081	7/21/1998	3/13/2001	09/119987	US	METHOD AND PROTOCOL FOR SYNCHRONIZED TRANSFER-WINDOW BASED FIREWALL TRAVERSAL
82268918	Granted	6754622	5/24/1999	6/22/2004	09/317588	US	Method For Network Address Table Maintenance In A Data-Over-Cable System Using Destination Reachability
82268921	Granted	6654387	5/21/1999	11/25/2003	09/316614	US	METHOD FOR NETWORK ADDRESS TABLE MAINTENANCE IN A DATA-OVER-CABLE SYSTEM USING A NETWORK DEVICE REGISTRATION PROCEDURE
82268927	Granted	6058116	4/15/1998	5/2/2000	09/060606	US	INTERCONNECTED TRUNK CLUSTER ARRANGEMENT
82268933	Granted	6161134	10/30/1998	12/12/2000	09/181431	US	Method, Apparatus And Communications System For Companion Information And Network Appliances
82268936	Granted	6883023	10/10/2000	4/19/2005	09/686124	US	METHOD APPARATUS AND COMMUNICATIONS SYSTEM FOR COMPANION INFORMATION AND NETWORK APPLIANCES
82268939	Granted	6330229	11/9/1998	12/11/2001	09/188852	US	SPANNING TREE WITH RAPID FORWARDING DATABASE UPDATES
82268984	Granted	6172606	6/4/1999	1/9/2001	09/326769	US	Network Security

PATENT
REEL: 038498 FRAME: 0472

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82269044	Granted	6247082	11/3/1998	6/12/2001	09/186209	US	Method And Circuit For Providing Handshaking To Transact Information Across Multiple Clock Domains
82269047	Granted	6055594	8/24/1998	4/25/2000	09/139148	US	Byte Accessible Memory Interface Using Reduced Memory Control Pin Count
82269050	Granted	6115760	8/24/1998	9/5/2000	09/138943	US	INTELLIGENT SCALEABLE FIFO BUFFER CIRCUIT FOR INTERFACING BETWEEN DIGITAL DOMAINS
82269053	Granted	6268999	4/14/1998	7/31/2001	09/060456	US	Computer Peripheral Device With Integral Ground Clip
82269059	Granted	6098139	5/27/1998	8/1/2000	09/085606	US	Frequency Independent Asynchronous Clock Crossing FIFO
82269062	Granted	6148350	5/29/1998	11/14/2000	09/087345	US	SYSTEM FOR ALLOCATING AN INTEGER UNIT OF MEMORY GREATER THAN A REQUESTED SIZE AND FILLING THE EXTRA SPACE DUE TO DIFFERENCE IN SIZES WITH EXTRANEOUS DATA
82269068	Granted	6266732	8/18/2000	7/24/2001	09/087484	US	Interrupt Events Chaining
82269071	Granted	6055580	5/29/1998	4/25/2000	09/087347	US	System For Transferring Length Round Down To Cache Line Multiple Capable To Determine Type of Read Request Which Selects and Reads Portion Of Prefetched Data In Memory
82269107	Granted	6222851	5/29/1998	4/24/2001	09/087624	US	ADAPTIVE TREE-BASED CONTENTION RESOLUTION MEDIA ACCESS CONTROL PROTOCOL
82269119	Granted	6269401	8/28/1998	7/31/2001	09/143486	US	Integrated Computer System And Network Performance Monitoring
82269245	Granted	6922410	4/6/1999	7/26/2005	09/286469	US	ORGANIZATION OF DATABASES IN NETWORK SWITCHES FOR PACKET-BASED DATA COMMUNICATIONS NETWORKS
82269257	Granted	6643340	2/13/2002	11/4/2003	10/074780	US	Carrier Phase Derived Symbol Timing
82269260	Granted	6650658	4/7/1999	11/18/2003	09/288066	US	Controlled Aliasing to Simplify Service Selection
82269293	Granted	5980322	9/1/1998	11/9/1999	09/144898	US	Electrical Connector Having A Fusible Link For Use Between Media Connectors And Computer Communications Cards
82269302	Granted	6120307	4/5/1999	9/19/2000	09/286284	US	Modular Connector With Printed Circuit Board
82269305	Granted	6898279	11/30/1998	5/24/2005	09/201673	US	Methods and Computer Readable Media for Creating Dialing Strings Useful in an International Dial-up Session for Transferring Data
82269308	Granted	6102714	3/17/1999	8/15/2000	09/271620	US	Electrical Connectors Having Dual Biased Contact Pins
82269311	Granted	6217352	6/27/2000	4/17/2001	09/604205	US	Electrical Connectors Having Dual Biased Contact Pins
82269314	Granted	6139342	10/30/1998	10/31/2000	09/183830	US	MEDIA JACK WITH SWITCH FOR LAN AND MODEM CONNECTION
82269356	Granted	6137188	5/28/1999	10/24/2000	09/322837	US	METHOD FOR SHARED VOLTAGE REGULATION WITH MULTIPLE DEVICES
82269359	Granted	6363053	2/8/1999	3/26/2002	09/246606	US	Method and Apparatus for Measurement-Based Conformance Testing of Service Level Agreements in Networks

PATENT
REEL: 038498 FRAME: 0473

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82269374	Granted	7460534	2/4/1999	12/2/2008	09/245442	US	Method For Statistical Switching
82269431	Granted	6654366	2/25/1999	11/25/2003	09/257326	US	Use Of Virtual Gateway In H.323 System
82269434	Granted	6135786	11/30/1998	10/24/2000	09/201679	US	Removable Modular Connector For Connecting An Electronic Device To A Communications Card
82269485	Granted	7032242	3/17/1999	4/18/2006	09/270967	US	METHOD AND SYSTEM FOR DISTRIBUTED NETWORK ADDRESS TRANSLATION WITH NETWORK SECURITY FEATURES
82269548	Granted	6366297	3/1/1999	4/2/2002	09/260150	US	System And Method For Displaying Modem Information On A Graphical User Interface Display
82269554	Granted	6771674	12/28/1998	8/3/2004	09/221752	US	Method and System for Forward Error Correction Based on Parallel Streams
82269560	Granted	6618393	8/26/1998	9/9/2003	09/140363	US	Method And Apparatus For Transparent Support Of Network Protocols With Header Translation
82269569	Granted	6147971	11/18/1998	11/14/2000	09/195342	US	OPTIMIZED ROUTING METHOD BASED ON MINIMAL HOP COUNT FOR USE IN PNNI BASED ASYNCHRONOUS TRANSFER MODE NETWORKS
82269626	Granted	6205509	12/17/1999	3/20/2001	09/464263	US	METHOD FOR IMPROVING INTERRUPT RESPONSE TIME
82269635	Granted	6282626	12/17/1999	8/28/2001	09/465891	US	NO STALL READ ACCESS-METHOD FOR HIDING LATENCY IN PROCESSOR MEMORY ACCESSES
82269668	Granted	6678250	2/19/1999	1/13/2004	09/252840	US	Method and System for Monitoring and Management of the Performance of Real-Time Networks
82269671	Granted	7453815	12/15/2003	11/18/2008	10/735982	US	Method and System for Monitoring and Management of the Performance of Real-Time Networks
82269677	Granted	6785299	5/29/1999	8/31/2004	09/322886	US	OPTIMIZED HIGH-LEVEL DATA LINK CONTROL ENCODING/DECODING
82269689	Granted	6785261	5/28/1999	8/31/2004	09/322816	US	Method And System for Forward Error Correction With Different Frame Sizes
82269692	Granted	6751202	4/30/1999	6/15/2004	09/303044	US	FILTERED TRANSMIT CANCELLATION IN A FULL-DUPLEX MODEM DATA ACCESS ARRANGEMENT (DAA).
82269695	Granted	7386119	5/13/2004	6/10/2008	10/845449	US	Filtered Transmit Cancellation in a Full-Duplex Modem Data Access Arrangement (DAA)
82269743	Granted	6661790	8/6/1999	12/9/2003	09/369326	US	Packet Multicasting In A Ring Architecture
82269752	Granted	6411656	4/30/1999	6/25/2002	09/303046	US	Echo Cancelling Softmodem
82269800	Granted	6633617	5/21/1999	10/14/2003	09/316516	US	DEVICE AND METHOD FOR COMPENSATING OR CREATING DOPPLER EFFECT USING DIGITAL SIGNAL PROCESSING
82269803	Granted	6557108	5/28/1999	4/29/2003	09/322953	US	System And Method In A Modem For Providing A Shortened Reset Pulse Upon Receipt Of An External Reset Pulse
82269818	Granted	6700387	5/30/2003	3/2/2004	10/449636	US	Systems and Methods For Impedance Synthesis
82269821	Granted	6859051	6/2/2003	2/22/2005	10/452373	US	Systems and Methods For Impedance Synthesis
82269857	Granted	6071130	11/30/1998	6/6/2000	09/203222	US	Surface Mounted Contact Block

PATENT
REEL: 038498 FRAME: 0474

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82269860	Granted	6257905	12/15/1999	7/10/2001	09/461137	US	Surface Mounted Contact Block
82269878	Granted	6128658	10/22/1998	10/3/2000	09/177706	US	SELF-INITIATED SYSTEM EVENT USING NETWORK RESOURCES
82269917	Granted	6434606	5/28/1999	8/13/2002	09/322561	US	System For Real Time Communication Buffer Management
82269920	Granted	6366959	5/28/1999	4/2/2002	09/322836	US	Method And Apparatus For Real Time Communication System Buffer Size And Error Correction Coding Selection
82269923	Granted	6186462	5/7/1999	2/13/2001	09/307578	US	Adjustable Stand Apparatus
82269929	Granted	6529589	5/20/1999	3/4/2003	09/314990	US	Method And System For Monitoring And Controlling Automation Equipment By Modem
82270004	Granted	6189067	2/26/1999	2/13/2001	09/258514	US	SYSTEM AND METHOD FOR DYNAMICALLY SELECTING INTERRUPT QUANTITY THRESHOLD PARAMETERS
82270007	Granted	6351785	1/26/1999	2/26/2002	09/237995	US	Interrupt Optimization Using Varying Quantity Threshold
82270055	Granted	6657991	12/21/1998	12/2/2003	09/218793	US	METHOD AND SYSTEM FOR PROVISIONING NETWORK ADRESSES IN A DATA-OVER-CABLE SYSTEM
82270058	Granted	6732314	5/26/2000	5/4/2004	09/579921	US	Method and Apparatus for L2TP Forward Error Correction
82270067	Granted	6654463	5/28/1999	11/25/2003	09/322572	US	Round Trip Delay Estimator And Compensator For The Echo Canceller
82270109	Granted	6633277	5/30/2000	10/14/2003	09/580709	US	Compact 3-state Data Entry Device
82270118	Granted	6141126	4/28/1999	10/31/2000	09/300855	US	Wave Division Multiplexing Based Optical Switch
82270121	Granted	6826160	7/7/1999	11/30/2004	09/348983	US	DYNAMIC BANDWIDTH ALLOCATION THROUGH MULTI-CHANNEL TIME SLOT ASSIGNMENT AND MIGRATION FOR BROADBAND ACCESS
82270127	Granted	6785347	4/22/1999	8/31/2004	09/298498	US	Nonlinear-Least Squares Based Method and Apparatus For FSK Signal Decoding
82270130	Granted	6577653	4/28/1999	6/10/2003	09/300884	US	APPARATUS FOR AND METHOD OF ESTABLISHING A ROUTE UTILIZING MULTIPLE PARALLEL SEGMENTS IN AN ASYNCHRONOUS TRANSFER MODE NETWORK
82270169	Granted	6259409	7/22/1999	7/10/2001	09/359990	US	Retractable Sliding Antenna Assembly For Wireless Communication
82270187	Granted	6526446	4/27/1999	2/25/2003	09/300537	US	Hardware Only Transmission Control Protocol Segmentation For a High Performance Network Interface Card
82270232	Granted	6542504	5/28/1999	4/1/2003	09/322845	US	Profile Based Method For Packet Header Compression In A Point To Point Link
82270235	Granted	6690666	5/29/1999	2/10/2004	09/322888	US	Packet Modulation For DSL
82270250	Granted	6728808	2/7/2000	4/27/2004	09/499504	US	MECHANISM FOR OPTIMIZING TRANSACTION RETRIES WITHIN A SYSTEM UTILIZING A PCI BUS ARCHITECTURE
82270370	Granted	6771610	10/12/1999	8/3/2004	09/416827	US	SPANNING TREE WITH PROTOCOL FOR BYPASSING PORT STATE TRANSITION TIMERS

PATENT
REEL: 038498 FRAME: 0475

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82270373	Granted	6934263	1/30/2004	8/23/2005	10/769177	US	SPANNING TREE WITH PROTOCOL FOR BYPASSING PORT STATE TRANSITION TIMERS
82270418	Granted	6216158	1/25/1999	4/10/2001	09/237609	US	System And Method Using A Palm Sized Computer To Control Network Devices
82270427	Granted	6765914	4/7/2000	7/20/2004	09/544806	US	GENERIC SWITCH ARCHITECTURE TO SUPPORT FLEXIBLE SUBNETS ACROSS LAYER-3 DEVICES
82270430	Granted	6731642	5/3/1999	5/4/2004	09/303832	US	Internet Telephony Using Network Address Translation
82270433	Granted	7573873	4/28/2004	8/11/2009	10/834418	US	Internet Telephony Using Network Address Translation
82270436	Granted	6246589	5/28/1999	6/12/2001	09/321968	US	RETENTION CLIP FOR RETAINING A COMPACT FLASH DRIVE ON A PC BOARD
82270478	Granted	6785292	5/28/1999	8/31/2004	09/322513	US	Method For Detecting Radio Frequency Impairments In A Data-Over-Cable System
82270496	Granted	6594272	11/23/1999	7/15/2003	09/447281	US	Simple Wireless Network With Store And Forward Methods, Incorporating Anti-looping Codes
82270499	Granted	6717919	11/23/1999	4/6/2004	09/447280	US	IMPRINTING METHOD FOR AUTOMATED REGISTRATION AND CONFIGURATION OF NETWORK DEVICES
82270541	Granted	6667983	5/27/1999	12/23/2003	09/321068	US	SCALEABLE PRIORITY ARBITER FOR ARBITRATING BETWEEN MULTIPLE FIFO ENTRY POINTS OF A NETWORK INTERFACE CARD
82270556	Granted	5890126	3/10/1997	3/30/1999	08/815318	US	Audio Data Decompression and Interpolation Apparatus and Method
82270559	Granted	6111958	3/21/1997	8/29/2000	08/822302	US	Audio Spatial Enhancement Apparatus and Methods
82270562	Granted	6078669	7/14/1997	6/20/2000	08/896283	US	Audio Spatial Localization Apparatus and Methods
82270568	Granted	5744742	2/28/1997	4/28/1998	08/808676	US	Parametric Signal Modeling Musical Synthesizer
82270607	Granted	6763023	4/6/2000	7/13/2004	09/544542	US	Network Switch with Self-Learning Routing Facility
82270619	Granted	6244953	5/25/1999	6/12/2001	09/318165	US	Electronic Device Fan Mounting System
82270622	Granted	6618395	5/27/1999	9/9/2003	09/321448	US	Physical Coding Sub-layer For Transmission Of Data Over Multi-channel Media
82270667	Granted	6771287	2/4/2000	8/3/2004	09/498833	US	Graphically Distinguishing A Path Between Two Points On A Network
82270679	Granted	6691256	3/17/2000	2/10/2004	09/527635	US	Network Problem Indication
82270685	Granted	6701327	11/22/1999	3/2/2004	09/447096	US	Merging Network Data Sets Comprising Data Acquired By Interrogation Of A Network
82270736	Granted	6785349	5/28/1999	8/31/2004	09/321993	US	Correlation Based Method of Determining Frame Boundaries of Data Frames That Are Periodically Extended
82270745	Granted	6735255	2/29/2000	5/11/2004	09/515800	US	Correlation Based Method of Determining Frame Boundaries of Data Frames That Are Periodically Extended
82270751	Granted	6160354	7/22/1999	12/12/2000	09/358676	US	Led Matrix Current Control System
82270754	Granted	6135793	8/26/1999	10/24/2000	09/383713	US	Coupler For Grounding Of A Modular Transceiver Housing

PATENT
REEL: 038498 FRAME: 0476

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82270796	Granted	6614756	8/20/1999	9/2/2003	09/379141	US	Method Of Detecting And Recovering From Signaling Congestion In An Asynchronous Transfer Mode Network
82270808	Granted	7451220	3/7/2006	11/11/2008	11/371213	US	TECHNIQUES FOR PROVIDING SECURE ACCESS TO A COMMUNICATION SYSTEM
82270811	Granted	6393570	5/28/1999	5/21/2002	09/322378	US	Low-Power apparatus For Power Management Enabling
82270814	Granted	6678728	12/3/1999	1/13/2004	09/454783	US	Method And Apparatus For Automatically Loading Device Status Information Into A Network Device
82270817	Granted	6640262	12/20/1999	10/28/2003	09/467724	US	Method And Apparatus For Automatically Configuring A Configurable Integrated Circuit
82270856	Granted	6678277	11/9/1999	1/13/2004	09/436893	US	EFFICIENT MEANS TO PROVIDE BACK PRESSURE WITHOUT HEAD OF LINE BLOCKING IN A VIRTUAL OUTPUT QUEUED FORWARDING SYSTEM
82270859	Granted	6625148	11/18/1999	9/23/2003	09/444353	US	Self Routing Interconnect Cross-Switch
82270868	Granted	6714558	8/31/1999	3/30/2004	09/386742	US	System For Implementing Network Protocols Between Devices On A Printed Circuit Board
82270880	Granted	6507303	5/31/2000	1/14/2003	09/584459	US	DIRECT DIGITAL CONVERSION OF BASEBAND SIGNALS TO SUPER-NYQUIST FREQUENCIES
82270928	Granted	6646656	3/17/2000	11/11/2003	09/528415	US	Graphical Representation of the Connections between Network devices and Their configuration
82270937	Granted	6643259	11/12/1999	11/4/2003	09/438238	US	Method for Optimizing Data Transfer in a Data Network
82270940	Granted	6643710	9/17/1999	11/4/2003	09/398351	US	Architecture To Fragment Transmitted TCP Packets To A Requested Window Size
82270943	Granted	6654792	2/28/2000	11/25/2003	09/514108	US	Method and Architecture for Logical Aggregation of Multiple Servers
82270946	Granted	7299301	9/8/2003	11/20/2007	10/657778	US	Method and Architecture for Logical Aggregation of Multiple Servers
82271003	Granted	6874047	6/9/2000	3/29/2005	09/591044	US	System and Method For Implementing An SMBUS/I2C Interface On A Network Interface Card
82271006	Granted	6681244	6/9/2000	1/20/2004	09/591579	US	SYSTEM AND METHOD FOR OPERATING A NETWORK ADAPTER WHEN AN ASSOCIATED NETWORK COMPUTING SYSTEM IS IN A LOW-POWER STATE
82271042	Granted	7706362	10/29/1999	4/27/2010	09/430267	US	METHOD AND APPARATUS FOR SELECTION OF AN ENDPOINT DEVICE IN A POINT TO POINT LINK
82271051	Granted	5884041	3/13/1996	3/16/1999	08/617515	US	METHOD AND APPARATUS FOR MONITORING AUTO-NEGOTIATION PROGRESS
82271060	Granted	5844439	3/13/1996	12/1/1998	08/596885	US	DC Restoration Circuit For Multi-Level Transmission Signals
82271123	Granted	6212195	12/1/1998	4/3/2001	09/203542	US	Telecommunication Apparatus And Method For Forwarding Packets Using Separate Collision Domains
82271195	Granted	6262979	1/4/2001	7/17/2001	09/204107	US	Telecommunication Conferencing System And Method

PATENT
REEL: 038498 FRAME: 0477

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82271237	Granted	6847693	5/16/2000	1/25/2005	09/573498	US	Method and Device Providing Data Derived Timing Recovery For Multicarrier Communications
82271240	Granted	6834079	10/20/2000	12/21/2004	09/693498	US	Efficient Implementation for Equalization of Multicarrier Channels
82271258	Granted	6744759	9/27/1999	6/1/2004	09/405283	US	SYSTEM AND METHOD FOR PROVIDING USER-CONFIGURED TELEPHONE SERVICE IN A DATA NETWORK TELEPHONY SYSTEM
82271291	Granted	6523068	8/27/1999	2/18/2003	09/385118	US	METHOD FOR ENCAPSULATING AND TRANSMITTING A MESSAGE IINCLUDES PRIVATE AND FORWARDING NETWORK ADDRESSES WITH A PAYLOAD TO AN END OF A TUNNELING ASSOCIATION
82271294	Granted	6448672	2/29/2000	9/10/2002	09/515799	US	Intelligent Power Supply Control For Electronic Systems Requiring Multiple Voltages
82271297	Granted	6781982	10/26/1999	8/24/2004	09/426839	US	Method and System for Allocating Persistent Private Network Addresses Between Private Networks
82271303	Granted	6680908	10/13/1999	1/20/2004	09/416939	US	Network Switch Including Bandwidth Allocation Controller
82271360	Granted	6665543	10/4/2000	12/16/2003	09/684746	US	ANTENNA EXTRACTION ON REMOVAL OF STYLUS FOR HANDHELD DEVICE
82271363	Granted	6622031	10/4/2000	9/16/2003	09/684161	US	ANTENNA FLIP-UP ON REMOVAL OF STYLUS FOR HANDHELD DEVICE
82271366	Granted	6473076	4/5/2000	10/29/2002	09/542348	US	Apparatus And Method For Controlling The Power Of A Handheld Computing Device Using A Stylus
82271378	Granted	6295207	10/12/1999	9/25/2001	09/416542	US	Retractable And Removable Extensions With Edge Plated Pcb's In Thin-profile Electronic Devices
82271420	Granted	6639901	1/24/2000	10/28/2003	09/490750	US	Apparatus For and Method Of Supporting 802.1Q VLAN Tagging With Independent VLAN Learning in LAN Emulation Networks
82271432	Granted	6191743	4/5/2000	2/20/2001	09/543037	US	Multiple Antenna Ports for Electronic Devices
82271435	Granted	6711159	12/15/1999	3/23/2004	09/464527	US	Load Balancing Among Media Gateways
82271444	Granted	6683882	11/9/1999	1/27/2004	09/437592	US	METHOD AND SYSTEM FOR DIRECTING TRANSMISSION OF IPX CONTROL PACKETS TO INFLUENCE RECEPTION OF IPX DATA PACKETS
82271486	Granted	6857072	9/27/1999	2/15/2005	09/405981	US	System And Method For Enabling Encryption/Authentication On A Telephony Network
82271489	Granted	6577622	9/27/1999	6/10/2003	09/406128	US	System And Method For Using A Portable Information Device To Establish A Conference Call On A Telephony Network
82271507	Granted	6857021	2/29/2000	2/15/2005	09/515796	US	PROXIMITY-BASED REGISTRATION ON A DATA NETWORK TELEPHONY SYSTEM

PATENT
REEL: 038498 FRAME: 0478

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82271540	Granted	7020212	1/16/2001	3/28/2006	09/761519	US	Method and System FOr A Multiple Dimensional Adaptive Frequency Domain NOise Canceller for DMT Transceivers
82271549	Granted	6772123	11/30/2000	8/3/2004	09/727990	US	METHOD AND SYSTEM FOR PERFORMING SPEECH RECOGNITION FOR AN INTERNET APPLIANCE USING A REMOTELY LOCATED SPEECH RECOGNITION APPLICATION
82271555	Granted	6836862	4/24/2000	12/28/2004	09/557944	US	Method of Indicating Wireless Connection Integrity
82271558	Granted	6674743	12/30/1999	1/6/2004	09/475855	US	Method and Apparatus for Providing Policy-Based Services for Internal Applications
82271561	Granted	6768743	10/26/1999	7/27/2004	09/426616	US	Method and System for Address Server Redirection for Multiple Address Networks
82271567	Granted	6708219	10/26/1999	3/16/2004	09/426614	US	Method and System for Dual-Network Address Utilization
82271603	Granted	6810420	1/31/2000	10/26/2004	09/494401	US	ALLOCATION OF IP ADDRESS BY PROXY TO DEVICE IN A LOCAL AREA NETWORK
82271624	Granted	6661803	12/30/1999	12/9/2003	09/475310	US	Network Switch Including Bandwidth Controller
82271672	Granted	6259418	1/20/2000	7/10/2001	09/488670	US	Modified Monopole Antenna
82271678	Granted	6601180	4/14/2000	7/29/2003	09/549873	US	METHOD AND SYSTEM FOR PROVIDING LINK DETECTION TO A PC CARD FOR POWER MANAGEMENT
82271684	Granted	6687751	1/28/2000	2/3/2004	09/493563	US	Multi-point Link Aggregation Spoofing
82271687	Granted	6804721	12/18/2003	10/12/2004	10/742353	US	Multi-point Link Aggregation Spoofing
82271690	Granted	6621790	12/30/1999	9/16/2003	09/475896	US	Link Aggregation Repeater Process
82271693	Granted	6853622	7/30/2003	2/8/2005	10/630960	US	Link Aggregation Repeater Process
82271741	Granted	7275093	4/26/2000	9/25/2007	09/559883	US	Methods and Device for Managing Message Size Transmitted Over a Network
82271750	Granted	6636092	9/14/2000	10/21/2003	09/661044	US	digital receive phase lock loop with cumulative phase error correction
82271756	Granted	6701140	9/14/2000	3/2/2004	09/661691	US	digital receive phase lock loop with cumulative phase error correction and dynamically programmable correction rate
82271798	Granted	6829314	8/10/2000	12/7/2004	09/636047	US	ADAPTER FOR NEAR END CROSSTALK AND ECHO CANCELLER FOR BI-DIRECTIONAL DIGITAL COMMUNICATIONS
82271810	Granted	7133446	10/19/2000	11/7/2006	09/693679	US	Performance Indicator For Wireless Digital Signal Reception
82271819	Granted	6760309	3/28/2000	7/6/2004	09/535769	US	Method of Dynamic Prioritization of Time Sensitive Packets Over A Packet Based Network
82271858	Granted	6882661	9/14/2000	4/19/2005	09/662157	US	SYSTEM FOR DETECTION OF ASYNCHRONOUS PACKET RATES AND MAINTENANCE OF MAXIMUM THEORETICAL PACKET RATE
82271870	Granted	6684258	4/12/2000	1/27/2004	09/547759	US	STACKABLE RING NETWORK INCLUDING BURST TRANSMISSION OF DATA PACKET

PATENT
REEL: 038498 FRAME: 0479

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82271882	Granted	6625684	9/25/2000	9/23/2003	09/668301	US	APPLICATION SPECIFIC INTEGRATED CIRCUIT WITH DUAL-MODE SYSTEM FOR EXTERNALLY ACCESSIBLE DATA BUSES AND VISIBILITY BUSES
82271930	Granted	6694369	3/30/2000	2/17/2004	09/539923	US	Tag Echo Discovery Protocol To Detect Reachability Of Clients
82271945	Granted	6735210	2/18/2000	5/11/2004	09/507256	US	Transmit Queue Caching
82271981	Granted	6795717	5/4/2000	9/21/2004	09/564197	US	COMMUNICTIONS DEVICE HAVING RETRACTABLE DISPLAY MEANS
82271984	Granted	6643265	5/10/2000	11/4/2003	09/569606	US	Apparatus For And Method Of Releasing Stuck Virtual Circuits In An Asynchronous Transfer Mode Network
82271987	Granted	6694388	5/31/2000	2/17/2004	09/584582	US	Dynamic Queuing System Incorporating Multiple Queues Sharing A Single Memory
82271996	Granted	6675308	5/9/2000	1/6/2004	09/568862	US	Methods of Determining Whether A Network Interface Card Entry Within The System Registry Pertains To Physical Hardware or To A Virtual Device
82271999	Granted	6735670	5/12/2000	5/11/2004	09/570204	US	Forwarding Table Incorporating Hash Table and Content Addressable Memory
82272047	Granted	5844887	11/30/1995	12/1/1998	08/564848	US	ATM Switching Fabric
82272050	Granted	6724736	5/12/2000	4/20/2004	09/570333	US	Remote Echo Cancellation In A Packet Based Network
82272053	Granted	7072337	1/25/2002	7/4/2006	10/056886	US	SYSTEM AND METHOD FOR RESOLVING NETWORK ADDRESSESS FOR NETWORK DEVICES ON DISTRIBUTED NETWORK SUBNETS
82272059	Granted	6898188	4/19/2001	5/24/2005	09/838522	US	Gatekeeper Simulator In A LAN Telephony System
82272068	Granted	6597151	10/2/2000	7/22/2003	09/679056	US	PORTABLE AUXILIARY BATTERY PACK FOR EXTENDED USE AND RECHARGING OF PERSONAL DIGITAL ASSISTANTS
82272107	Granted	7286652	5/31/2000	10/23/2007	09/584581	US	Four Channel Audio Recording In A Packet Based Network
82272113	Granted	6795946	5/5/2000	9/21/2004	09/565481	US	Fast Frame Error Checker For Multiple Byte Digital Data Frames
82272125	Granted	6683875	5/5/2000	1/27/2004	09/564792	US	Network Switch Including Restriction of Source Address Look-Ups Based on Receive Queue Length
82272131	Granted	6762995	6/14/2000	7/13/2004	09/593506	US	Network Switch Including Hysteresis in Signalling Fullness of Transmit Queues
82272164	Granted	6782428	10/13/2000	8/24/2004	09/689628	US	ALLOCATION OF ASYMMETRIC PRIORITY TO TRAFFIC FLOW IN NETWORK SWITCHES
82272170	Granted	9112768	9/15/2000	8/18/2015	09/662534	US	Discovering Non Managed Devices In A Network Such As A LAN Using HTTP
82272191	Granted	6738935	7/25/2000	5/18/2004	09/626275	US	CODING SUBLAYER FOR MULTI-CHANNEL MEDIA WITH ERROR CORRECTION
82272251	Granted	6947418	2/15/2001	9/20/2005	09/783940	US	LOGICAL MULTICAST PACKET HANDLING

PATENT
REEL: 038498 FRAME: 0480

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82272293	Granted	6766453	4/28/2000	7/20/2004	09/560396	US	Authenticated Diffie-hellman Key Agreement Protocol Where The Communicating Parties Share A Secret Key With A Third Party
82272296	Granted	7024690	4/28/2000	4/4/2006	09/561088	US	Protected Mutual Authentication Over An Unsecured Wireless Communication Channel
82272299	Granted	6920559	4/28/2000	7/19/2005	09/561416	US	Using A Key Lease In A Secondary Authentication Protocol After A Primary Authentication Protocol Has Been Performed
82272302	Granted	7480939	7/6/2001	1/20/2009	09/900617	US	Enhancement To Authentication Protocol That Uses A Key Lease
82272359	Granted	6978302	10/17/2000	12/20/2005	09/691649	US	NETWORK MANAGEMENT APPARATUS AND METHOD FOR IDENTIFYING CAUSAL EVENTS ON A NETWORK
82272365	Granted	6763001	8/17/2000	7/13/2004	09/641146	US	Discovering non Managed Devices in a Network Such as a LAN Using Telnet
82272374	Granted	6775243	9/15/2000	8/10/2004	09/662536	US	Graphically Distinguishing a Path Between Two Points On A Network
82272380	Granted	6928059	9/15/2000	8/9/2005	09/662533	US	EFFICIENT METHOD OF DEDUCING NETWORK TOPOLOGY INCLUDING ENDSTATIONS
82272416	Granted	6788682	8/2/2000	9/7/2004	09/630492	US	MAPPING OF PACKETS BETWEEN LINKS OF TRUNK GROUPS USING MUX/DEMUX DEVICES
82272419	Granted	D451501	10/10/2000	12/4/2001	29/130851	US	PCMCIA CARD WITH EXTENDABLE ANTENNA
82272431	Granted	6856683	2/28/2001	2/15/2005	09/795991	US	Method For Reducing Noise From A Non-Linear Device That Shares A Customer Loop With An Asymmetric Digital Subscriber Line Modem
82272479	Granted	6912206	9/15/2000	6/28/2005	09/662532	US	DISCOVERY OF PHONES ON A NETWORK, SUCH AS A LAN
82272485	Granted	7194534	4/4/2001	3/20/2007	09/825707	US	Display of Phones on a Map of a Network
82272491	Granted	7570608	1/23/2006	8/4/2009	11/337777	US	Echo Canceller Disabler for Modulated Data Signals
82272506	Granted	D461466	9/21/2000	8/13/2002	29/129818	US	Enclosure For Electonic Circuitry
82272548	Granted	6954785	8/17/2000	10/11/2005	09/641407	US	A SYSTEM FOR IDENTIFYING DEVICES THAT HAVE THE HIGHEST TOTAL VOLUME DATA
82272554	Granted	6718346	8/17/2000	4/6/2004	09/641084	US	GENERATING SUMMARY DATA FOR A REQUESTED TIME PERIOD HAVING A REQUESTED START TIME AND END TIME FROM A PLURALITY OF DATA RECORDS
82272611	Granted	6741586	5/31/2000	5/25/2004	09/584927	US	System and Method For Sharing Computer Screens Over A Telephony Network
82272617	Granted	6701442	5/9/2000	3/2/2004	09/568195	US	A POWER MANAGEMENT CIRCUIT FOR SELECTIVELY APPLYING POWER TO NETWORK
82272668	Granted	6999453	7/9/2001	2/14/2006	09/901403	US	Distributed Switch Fabric Arbitration
82272680	Granted	6650546	2/27/2001	11/18/2003	09/794515	US	CHIP COMPONENT ASSEMBLY

PATENT
REEL: 038498 FRAME: 0481

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82272692	Granted	6870830	11/30/2000	3/22/2005	09/726993	US	System and Method For Performing Messaging Services Using A Data Communications Channel in a Data Network Telephone System
82272728	Granted	6966003	1/12/2001	11/15/2005	09/760434	US	System and method for switching security associations
82272737	Granted	6807437	1/31/2001	10/19/2004	09/775022	US	WIRELESS COMMUNICATION APPARATUS FOR PORTABLE ELECTRONIC DEVICES
82272740	Granted	6795688	1/19/2001	9/21/2004	09/765905	US	METHOD AND SYSTEM FOR PERSONAL AREA NETWORK (PAN) DEGREES OF MOBILITY - BASED CONFIGURATION
82272746	Granted	6865223	2/5/2001	3/8/2005	09/777083	US	Equalizer Adapter for a Pulse Amplitude Modulation Receiver
82272749	Granted	6996062	2/28/2001	2/7/2006	09/795549	US	POLICY-BASED WEIGHTED RANDOM EARLY DETECTION METHOD FOR AVOIDING CONGESTION IN INTERNET TRAFFIC
82272755	Granted	6703954	12/20/2002	3/9/2004	10/327448	US	DIRECT DIGITAL CONVERSION OF BASEBAND SIGNALS TO SUPER-NYQUIST FREQUENCIES
82272812	Granted	6917592	1/22/2001	7/12/2005	09/767048	US	LNS High Availability and Load Balancing with LNS-to-LNS State Offloading
82272863	Granted	6829309	2/5/2001	12/7/2004	09/777080	US	PHASE DETECTOR FOR BAUD RATE-SAMPLED MULTI-STATE SIGNAL RECEIVER
82272926	Granted	6938079	9/19/2000	8/30/2005	09/665050	US	System and Method for automatically configuring a client device
82272944	Granted	6732323	10/12/2000	5/4/2004	09/689367	US	Method Of Selecting Initialization Parameters For Multi-channel Data Communication With Forward Error Correction
82272998	Granted	7366168	4/3/2001	4/29/2008	09/824241	US	TCP Control Packet Differential Service
82273040	Granted	6954786	12/8/2000	10/11/2005	09/732977	US	METHOD AND ARCHITECTURE FOR A HIGH PERFORMANCE CACHE FOR DISTRIBUTED, WEB-BASED MANAGEMENT SOLUTIONS
82273043	Granted	7088678	8/27/2001	8/8/2006	09/941280	US	System and Method for Traffic Shaping Based on Generalized Congestion and Flow Control
82273103	Granted	D464623	1/8/2001	10/22/2002	29/135211	US	Adapter (Design)
82273106	Granted	6952428	1/26/2001	10/4/2005	09/772095	US	SYSTEM AND METHOD FOR A SPECIALIZED DYNAMIC HOST CONFIGURATION PROTOCOL PROXY IN A DATA-OVER-CABLE NETWORK
82273109	Granted	7009952	5/24/2001	3/7/2006	09/865120	US	Method And Apparatus For Seamless Mobility With Layer Two Assistance
82273115	Granted	6457992	4/27/2001	10/1/2002	09/845078	US	Visual Feedback System For Electronic Device
82273124	Granted	7068597	11/27/2000	6/27/2006	09/722980	US	SYSTEM AND METHOD FOR AUTOMATIC LOAD BALANCING IN A DATA-OVER-CABLE NETWORK
82273172	Granted	6819680	3/26/2001	11/16/2004	09/816313	US	Link Aggregation Control For Network Devices

PATENT
REEL: 038498 FRAME: 0482

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82273190	Granted	6973513	4/9/2001	12/6/2005	09/829644	US	METHOD FOR EFFICIENT USE OF A TRANSMIT ENGINE
82273226	Granted	6665748	12/28/2000	12/16/2003	09/752495	US	SPECIALIZED PCMCIA HOST ADAPTER FOR USE WITH LOW COST MICROPROCESSORS
82273238	Granted	7068654	4/18/2001	6/27/2006	09/837106	US	System and Method for Providing masquerading Using a Multiprotocol Label Switching
82273244	Granted	6646635	1/19/2001	11/11/2003	09/765895	US	Stylus apparatus and method for transmitting light
82273253	Granted	6963921	2/16/2001	11/8/2005	09/785015	US	Method And Apparatus For Hardware Assisted TCP Packet Re-Assembly
82273295	Granted	6873701	3/29/2001	3/29/2005	09/821409	US	SYSTEM AND METHOD FOR DTMF DETECTION USING LIKELIHOOD RATIOS
82273307	Granted	6868088	4/26/2001	3/15/2005	09/843660	US	AUTOMATIC DETECTOR OF MEDIA INTERFACE PROTOCOL TYPE
82273313	Granted	7340515	7/10/2001	3/4/2008	09/901010	US	Optimisation of Network Configuration
82273352	Granted	7137047	4/5/2004	11/14/2006	10/818250	US	METHOD AND APPARATUS FOR SELECTION OF ARQ PARAMETERS AND ESTIMATION OF IMPROVED COMMUNICATIONS
82273364	Granted	6751700	4/2/2001	6/15/2004	09/822244	US	Data Processor And Storage System Including A Set Associative Cache With Memory Aliasing
82273376	Granted	7010588	7/2/2001	3/7/2006	09/897212	US	A SYSTEM USING A SERIES OF EVENT PROCESSORS FOR PROCESSING NETWORK EVENTS TO REDUCE NUMBER OF EVENTS TO BE DISPLAYED
82273421	Granted	6718411	6/29/2001	4/6/2004	09/893659	US	ASIC SYSTEM ARCHITECTURE INCLUDING DATA AGGREGATION TECHNIQUE
82273439	Granted	6877145	8/2/2001	4/5/2005	09/919806	US	Automatic Generation of Interconnect Logic Components
82273484	Granted	7577857	8/29/2001	8/18/2009	09/942789	US	HIGH SPEED NETWORK INTERFACE WITH AUTOMATIC POWER MANAGEMENT WITH AUTO-NEGOTIATION
82273487	Granted	8046614	7/20/2009	10/25/2011	12/505590	US	AN INTEGRATED CIRCUIT HAVING A NETWORKING INTERFACE MODULE SUPPORTING A PLURALITY OF PROTOCOLS
82273496	Granted	7392518	2/21/2002	6/24/2008	10/080931	US	ROBUST REMOTE FLASH ROM UPGRADE SYSTEM AND METHOD
82273541	Granted	7023809	8/3/2001	4/4/2006	09/922995	US	Intelligent Concentrator Usage
82273550	Granted	6970921	7/27/2001	11/29/2005	09/916377	US	Network Interface Supporting Virtual Paths for Quality of Service
82273562	Granted	6745333	1/31/2002	6/1/2004	10/062871	US	METHOD FOR DETECTING UNAUTHORIZED NETWORK ACCESS BY HAVING A NIC MONITOR FOR PACKETS PURPORTING TO BE FROM ITSELF
82273601	Granted	6642801	8/21/2001	11/4/2003	09/933654	US	Oscillator Using Virtual Stages For Multi-Gigabit Clock Recovery

PATENT
REEL: 038498 FRAME: 0483

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82273604	Granted	7225236	8/7/2001	5/29/2007	09/923895	US	LOAD BALANCING BETWEEN LNSS USING VIRTUAL LNS WITH MINIMAL LAC CONFIGURATION
82273613	Granted	6724637	7/16/2003	4/20/2004	10/621219	US	APPARATUS AND METHOD FOR HARNESSING OPTICAL FIBER TO A CIRCUIT BOARD
82273625	Granted	8014339	2/25/2003	9/6/2011	10/374826	US	Methods For Providing Universal Network Access Within A Wireles Communication System
82273664	Granted	8346938	9/25/2002	1/1/2013	10/254395	US	EFFICIENT ESTABLISHMENT OF WIRELESS CONNECTIONS
82273676	Granted	7085364	8/20/2001	8/1/2006	09/933558	US	Advanced Conference Drop
82273682	Granted	7073066	8/28/2001	7/4/2006	09/942176	US	Offloading Cryptographic Processing From An Access Point To An Access Point Server Using OTWAY-REES Key Distribution
82273685	Granted	7299287	2/27/2002	11/20/2007	10/086009	US	SECURE NETWORK OUTLET FOR SUPPORTING IP DEVICE ADDRESS ASSIGNING FUNCTIONALITY
82273691	Granted	7194251	2/22/2002	3/20/2007	10/082422	US	INTELLIGENT GATE DISTRIBUTED USE AND DEVICE NETWORK ACCESS MANAGEMENT ON PERSONAL AREA NETWORK
82273733	Granted	D465772	9/28/2001	11/19/2002	29/148797	US	Printed Circuit Board
82273745	Granted	D466095	9/28/2001	11/26/2002	29/148798	US	Electronic Extender
82273751	Granted	7340536	1/22/2002	3/4/2008	10/054422	US	Method and Apparatus For Determining Unmanaged Network Devices in the Topology of a Network
82273793	Granted	7424532	2/15/2002	9/9/2008	10/077824	US	METHOD AND SYSTEM FOR AUTOMATIC NETWORK RESOURCE SELECTION AND CONFIGURATION IN A NETWORK ENVIRONMENT
82273796	Granted	7746834	3/17/2003	6/29/2010	10/390052	US	Method of Dynamically Locating and Connecting to a Wireless Device
82273814	Granted	7042889	3/4/2002	5/9/2006	10/086890	US	Network Switch With Parallel Working Of Look-up Engine And Network Processor
82273862	Granted	6612856	12/17/2001	9/2/2003	10/023009	US	Apparatus and Methods for Preventing Cable-Discharge Damage to Electronic Equipment
82273865	Granted	7274703	7/16/2002	9/25/2007	10/195503	US	STACKABLE NETWORK UNITS WITH RESILIENCY FACILITY
82273871	Granted	7249183	6/4/2002	7/24/2007	10/163139	US	METHOD TO ENABLE CONTINUOUS MOBILITY ACROSS WIRED AND WIRELESS NETWORK INTERFACES
82273874	Granted	7564861	8/22/2002	7/21/2009	10/225986	US	SYSTEMS AND METHODS FOR COMPRESSING DATA
82273919	Granted	7289496	2/8/2002	10/30/2007	10/067738	US	Cascade System For Network Units
82273925	Granted	8213420	9/19/2007	7/3/2012	11/857512	US	Cascade System For Network Units
82273931	Granted	7123615	3/11/2002	10/17/2006	10/093506	US	STACKED NETWORK ROUTERS
82273976	Granted	6880020	2/22/2002	4/12/2005	10/082496	US	METHOD AND SYSTEM FOR INSTALLING DIFFERENT COMMUNICATIONS JACKS INTO AN INTELLIGENT DATA CONCENTRATOR
82273982	Granted	8116285	9/19/2002	2/14/2012	10/246827	US	INTELLIGENT WIRELESS ACCESS POINT SELECTION

PATENT
REEL: 038498 FRAME: 0484

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82273988	Granted	8307063	6/25/2002	11/6/2012	10/179496	US	Method And Apparatus For Managing Data Traffic Associated With A User On A Network
82274000	Granted	7062566	10/24/2002	6/13/2006	10/279364	US	System and Method for Using Virtual Local Area Network Tags with a Virtual Private Network
82274045	Granted	8107496	4/23/2010	1/31/2012	12/766292	US	System And Method For Roaming Between Wireless Networks
82274048	Granted	6833712	9/27/2002	12/21/2004	10/256772	US	Differentiating Between Board-Insertion Power-On and Chassis Power-On
82274051	Granted	7280554	7/23/2002	10/9/2007	10/201876	US	COMPUTER IMPLEMENTED METHOD FOR ASSIGNING A BACK-OFF INTERVAL TO AN INTERMEDIARY NETWORK ACCESS DEVICE
82274063	Granted	6882217	9/27/2002	4/19/2005	10/259108	US	Cubic Spline Predistortion, Algorithm and Training, For a Wireless LAN System
82274066	Granted	7283543	11/27/2002	10/16/2007	10/306328	US	System and Method for Operating Echo Cancellers with Networks Having Insufficient Levels of Echo Return Loss
82274108	Granted	7603486	11/26/2002	10/13/2009	10/304218	US	NETWORK MANAGEMENT SYSTEM PROVIDING LOGIC SIGNALS OVER COMMUNICATION LINES FOR DETECTING PERIPHERAL DEVICES
82274114	Granted	7463620	9/10/2002	12/9/2008	10/243642	US	ARCHITECTURE AND METHOD FOR CONTROLLING FEATURES AND SERVICES IN PACKET-BASED NETWORKS
82274120	Granted	7274750	9/27/2002	9/25/2007	10/259082	US	Gain and Phase Imbalance Compensation for OFDM Systems
82274123	Application		10/30/2003		10/696922	US	Method And System For Facilitating Real-time Monitoring Of Voice Messages Being Left At A Messaging Platform
82274162	Granted	7724740	8/27/2002	5/25/2010	10/228488	US	Computer System And Network Interface Supporting Class Of Service Queues
82274165	Granted	8358655	4/9/2010	1/22/2013	12/757294	US	Computer System And Network Interface Supporting Class Of Service Queues
82274168	Granted	7307998	8/27/2002	12/11/2007	10/229361	US	Computer System And Network Interface Supporting Dynamically Optimized Receive Buffer Queues
82274186	Granted	7433918	6/19/2003	10/7/2008	10/465282	US	Computer Network And Method Of Operating Same To Preload Content Of Selected Web Pages
82274189	Granted	7613771	8/28/2008	11/3/2009	12/200084	US	Computer Network And Method Of Operating Same To Preload Content Of Selected Web Pages
82274192	Granted	8510408	9/17/2009	8/13/2013	12/561457	US	Computer Network And Method Of Operating Same To Preload Content Of Selected Web Pages
82274231	Granted	7490155	3/13/2003	2/10/2009	10/389518	US	Management and Control for Interactive Media Sessions
82274255	Granted	7522589	1/7/2003	4/21/2009	10/337299	US	Network Units For Use In And Organisation Of Cascade Systems

PATENT
REEL: 038498 FRAME: 0485

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82274288	Granted	7359370	2/27/2003	4/15/2008	10/375709	US	Method of Communicating Between Network Devices Through Gateways Using Call Discrimination Options
82274294	Granted	7480723	4/8/2003	1/20/2009	10/409294	US	Method and System For Providing Directory Based Services
82274312	Granted	7155622	11/14/2003	12/26/2006	10/477603	US	System and method for the management of power supplied over data lines
82274351	Granted	8321676	12/21/2009	11/27/2012	12/642942	US	METHOD FOR ESTABLISHING SECURE AD HOC WIRELESS LAN
82274354	Granted	7317722	8/20/2003	1/8/2008	10/644155	US	System and method for distributed multicast routing
82274360	Granted	7720066	11/16/2007	5/18/2010	11/941316	US	System and method for distributed multicast routing
82274378	Granted	7483394	12/20/2004	1/27/2009	11/018712	US	SYSTEM AND METHOD FOR AUTOMATICALLY MANAGING A NETWORK PORT BASED ON A CALENDAR FUNCTION
82274420	Granted	7916757	12/8/2008	3/29/2011	12/329776	US	Stackable Routers Employing A Routing Protocol
82274432	Granted	8327026	7/1/2004	12/4/2012	10/883148	US	Method and system for selecting a data compression technique for data transfer through a data network
82274441	Granted	7440440	12/12/2003	10/21/2008	10/734560	US	METHOD AND SYSTEM FOR DEVICE-BASED CALL PARK AND PICK-UP
82274477	Granted	8023495	11/20/2007	9/20/2011	11/943297	US	Method and System for WLAN Synchronization
82274480	Granted	8792475	3/11/2005	7/29/2014	11/078017	US	Method And System For Providing Pass Through Web Configuration On An Internet Protocol (IP) Telephone
82274483	Granted	9036618	3/11/2005	5/19/2015	11/078955	US	Method And System For Providing Voice Assisted Configuration On An Internet Protocol (IP) Telephone
82274486	Granted	7386103	12/14/2004	6/10/2008	11/014099	US	Method and system for providing prompt navigation in interactive voice response (IVR) system
82274495	Published		12/23/2009		12/645548	US	Method And Apparatus For Controlling Traffic Between Different Entities On A Network
82274504	Granted	7596614	7/29/2005	9/29/2009	11/192774	US	NETWORK INCLUDING SNOOPING
82274555	Granted	7480300	2/22/2005	1/20/2009	11/064258	US	Content Addressable Memory organized to share entries between different entities such as ports of a network Unit
82274561	Granted	7843910	2/28/2005	11/30/2010	11/069798	US	Deciphering Encapsulated And Enciphered UDP Datagrams
82274567	Granted	7672941	2/22/2005	3/2/2010	11/064257	US	Pattern matching using deterministic finite automata and organization of such automata
82274603	Granted	7818564	5/3/2005	10/19/2010	11/121231	US	DECIPHERING OF FRAGMENTED ENCIPHERED DATA PACKETS
82274609	Granted	8060546	8/31/2007	11/15/2011	11/848302	US	Header DFA And Header DFA Graph + Header DFA Prior To Pattern Matching [combining Two Ideas In JH 2/10/05 Email]
82274615	Granted	8331404	10/25/2007	12/11/2012	11/923869	US	Signature Checking Using Deterministic Finite State Machines

PATENT
REEL: 038498 FRAME: 0486

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82274621	Granted	7827398	10/27/2005	11/2/2010	11/260728	US	Method For Offloading Encryption And Decryption Of A Message Received At A Message Server To Remote End Devices
82274624	Granted	7978686	1/3/2006	7/12/2011	11/324638	US	System And Method For Feature-based Services Control Using SIP
82274669	Granted	D451091	9/20/2000	37222	29/129721	US	Bezel for a Telephone Base
82274672	Granted	D450687	9/20/2000	11/20/2001	29/129719	US	Scroll Wheel for a Telephone Base
82274681	Granted	8266329	5/31/2007	9/11/2012	11/756022	US	Apparatus And Method For Accessing Command Line Interface Information From A Device
82274684	Application		2/27/2006		11/363422	US	METHOD AND APPARATUS FOR EXCHANGING SRTP KEYS OVER AN UNSECURED SIGNALING CHANNEL
82274687	Granted	7359962	4/30/2002	4/15/2008	10/136889	US	Network Security System Integration
82274690	Granted	7590855	4/30/2002	9/15/2009	10/136896	US	STEGANOGRAPHICALLY AUTHENTICATED PACKET TRAFFIC
82274726	Granted	7451489	8/31/2004	11/11/2008	10/930392	US	Active Network Defense System and Method
82274729	Granted	7454792	8/31/2004	11/18/2008	10/930922	US	Active Network Defense System and Method
82274786	Granted	7773739	2/7/2006	8/10/2010	11/348818	US	Self-configurable Telephony Architecture
82274792	Published		2/6/2006		11/347893	US	DYNAMIC NETWORK TUNER FOR THE AUTOMATED CORRELATION OF NETWORKING DEVICE FUNCTIONALITY AND NETWORK-RELATED PERFORMANCE
82274795	Granted	8199754	5/30/2006	6/12/2012	11/443490	US	Intrusion Prevention System Edge Controller
82274798	Granted	7532474	2/21/2006	5/12/2009	11/358384	US	Apparatus for Dissipating Heat from Electronic Components in an Enclosed Housing
82274804	Published		12/8/2006		11/636340	US	Bi-planar Network Architecture
82274861	Granted	8259715	7/25/2007	9/4/2012	11/782840	US	SYSTEM AND METHOD FOR TRAFFIC LOAD BALANCING TO MANAGE MULTIPLE PROCESSORS
82274870	Granted	8132233	7/27/2007	3/6/2012	11/829462	US	Dynamic Network Access Control Method And Apparatus
82274873	Published		10/10/2008		12/249244	US	Method And System For Controlling A Delay Of Packet Processing Using Loop Paths
82274879	Granted	8347384	7/29/2008	1/1/2013	12/181400	US	METHODS AND SYSTEMS FOR USING INCREMENTAL OPERATION FOR PROCESSING REGULAR EXPRESSIONS IN INTRUSTION-PREVENTION SYSTEMS
82274915	Granted	8448249	7/29/2008	5/21/2013	12/181511	US	Methods and Systems for Using Lambda Transitions for Processing Regular Expressions In Intrusion-Prevention Systems
82274921	Granted	8024802	7/30/2008	9/20/2011	12/182262	US	METHODS AND SYSTEMS FOR USING STATE RANGES FOR PROCESSING REGULAR EXPRESSIONS IN INTRUSION-PREVENTION SYSTEMS

PATENT
REEL: 038498 FRAME: 0487

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82274927	Application		7/30/2008		12/182391	US	METHODS AND SYSTEMS FOR USING KEYWORD PREPROCESSING, BOYER-MOORE ANALYSIS, AND HYBRIDS THEREOF, FOR PROCESSING REGULAR EXPRESSIONS IN INTRUSION-PREVENTION SYSTEMS
82274975	Granted	8138838	8/1/2008	3/20/2012	12/184693	US	Electron Beam Switch
82274978	Granted	8205102	1/5/2009	6/19/2012	12/348697	US	Intelligent Power Management of an Intermediate Network Device Switching Circuitry and PoE Delivery
82274984	Granted	7982336	2/16/2009	7/19/2011	12/371763	US	Power Sharing With Stackable Switches
82274993	Granted	8270420	12/15/2009	41170	12/638954	US	Iscsi To Fcoe Gateway
82274996	Published		2/22/2010		12/710223	US	Intelligent Network Security Resource Deployment System
82275002	Granted	8782787	10/26/2010	7/15/2014	12/911912	US	DISTRIBUTED PACKET FLOW INSPECTION AND PROCESSING
82275227	Granted	5705949	9/13/1996	1/6/1998	08/712927	US	Compensation Method For I/Q Channel Imbalance Errors
82275287	Granted	6157649	10/31/1997	12/5/2000	08/961981	US	Method And System For Coordination And Control Of Data Streams That Terminate At Different Termination Units Using Virtual Tunneling
82275290	Granted	5819215	10/13/1995	10/6/1998	08/543205	US	METHOD AND APPARATUS FOR WAVELET BASED DATA COMPRESSION HAVING ADAPTIVE BIT RATE CONTROL FOR COMPRESSION OF DIGITAL AUDIO OR OTHER SENSORY DATA
82275353	Granted	5831678	8/9/1996	11/3/1998	08/689401	US	VIDEO ENCODER/DECODER SYSTEM
82275371	Granted	6212272	9/9/1998	4/3/2001	09/149982	US	SUBSCIBER LINE INTERFACE CIRCUIT (SLIC) SIMULATOR
82275377	Granted	5797771	8/16/1996	8/25/1998	08/689714	US	Cable Connector
82275419	Granted	5931704	2/27/1997	8/3/1999	08/808508	US	MEDIA CONNECTOR INTERFACE WITH TAPERED CONTACT WIRES FOR USE WITH A THIN-ARCHITECTURE COMMUNICATIONS CARD
82275428	Granted	5987568	7/15/1999	11/16/1999	08/853068	US	APPARATUS AND METHOD FOR OPERABLY CONNECTING A PROCESSOR CACHE AND A CACHE CONTROLLER TO A DIGITAL SIGNAL PROCESSOR
82275434	Granted	6125448	5/2/1997	9/26/2000	08/850089	US	Power Subsystem For A Communication Network Containing A Power Bus
82275437	Granted	6243818	9/6/2000	6/5/2001	09/655955	US	Power Subsystem For A Communication Network Containing A Power Bus
82275440	Granted	6405247	4/16/2001	37418	09/835712	US	METHOD AND APPARATUS FOR OPERATING THE INTERNET PROTOCOL OVER A HIGH-SPEED SERIAL BUS
82275542	Granted	8374904	11/15/2010	2/12/2013	12/946367	US	Market Forecasting
82275545	Published		12/15/2010		12/968929	US	TARGET LEVEL SETTING
82275554	Allowed		5/31/2011		13/149493	US	EXTERNAL CACHE OPERATION BASED ON CLEAN CASTOUT MESSAGES

PATENT
REEL: 038498 FRAME: 0488

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82275617	Granted	8886795	1/27/2011	11/11/2014	13/015300	US	METHOD AND SYSTEM FOR DETERMINING RESPONSE TIME OF A SERVER
82275623	Published		1/27/2011		13/015459	US	ESTIMATING A FUTURE PROJECT CHARACTERISTIC BASED ON THE SIMILARITY OF PAST PROJECTS
82275626	Published		1/25/2011		13/013473	US	DATA ISOLATION WHILE SHARING INFORMATION BY A PLURALITY OF USERS WHEN EVALUATING PERFORMANCE OF A SERVER
82275668	Granted	9009719	12/16/2010	4/14/2015	12/970824	US	COMPUTER WORKLOAD CAPACITY ESTIMATION USING PROXIMITY TABLES (as amended)
82275671	Published		7/14/2011		13/182840	US	AUTOMATIC DISCOVERY OF APPLICATION INFRASTRUCTURE
82275677	Published		1/21/2011		13/011194	US	SYSTEM AND METHOD FOR PRESENTING DEVICES THROUGH A SAS INITIATOR-CONNECTED DEVICE
82275689	Granted	8589406	3/3/2011	11/19/2013	13/040216	US	DEDUPLICATION WHILE REBUILDING INDEXES
82275725	Granted	8667340	3/29/2011	3/4/2014	13/074795	US	METHOD AND SYSTEM FOR DISTRIBUTED PROCESSING OF ALERTS
82275734	Granted	8829735	1/28/2011	41891	13/016850	US	LOW FREQUENCY RESTORATION
82275743	Granted	8724932	1/31/2011	5/13/2014	13/018301	US	FIBER-OPTIC MODULATORS
82275785	Granted	8519803	10/29/2010	8/27/2013	12/915598	US	RESONATOR SYSTEMS AND METHODS FOR TUNING RESONATOR SYSTEMS
82275794	Granted	8793427	2/10/2011	7/29/2014	13/024619	US	REMOTE MEMORY FOR VIRTUAL MACHINES
82275797	Granted	8638600	4/22/2011	41667	13/092789	US	RANDOM-ACCESS MEMORY WITH DYNAMICALLY ADJUSTABLE ENDURANCE AND RETENTION
82275800	Granted	8892808	4/23/2011	11/18/2014	13/092911	US	RETENTION-VALUE ASSOCITED MEMORY
82275803	Granted	9094466	4/7/2011	7/28/2015	13/082223	US	MAINTAINING CACHES OF OBJECT LOCATION INFORMATION IN GATEWAY COMPUTING DEVICES USING MULTICAST MESSAGES
82275806	Published		4/23/2011		13/092912	US	ADAPTIVE MEMORY SYSTEM
82275809	Published		1/26/2011		13/014694	US	STORAGE OF DATA OBJECTS BASED ON A TIME OF CREATION
82275815	Granted	8639968	1/17/2011	41667	13/007741	US	COMPUTING SYSTEM RELIABILITY
82275860	Granted	9009428	7/8/2011	4/14/2015	13/179261	US	DATA STORE PAGE RECOVERY
82275863	Granted	8595151	6/8/2011	11/26/2013	13/155570	US	Selecting Sentiment Attributes for Visualization
82275869	Granted	9124515	11/22/2010	9/1/2015	12/951748	US	ELEPHANT FLOW DETECTION IN A COMPUTING DEVICE
82275875	Granted	8660979	3/3/2011	2/25/2014	13/040171	US	Event Prediction
82275878	Published		1/31/2011		13/018018	US	OPTICAL SYSTEMS IMPLIMENTED WITH THERMALLY CONTROLLED SUB-WAVELENGTH GRATINGS
82276127	Granted	D642581	7/29/2010	7/13/2011	29/366783	US	SERVER

PATENT
REEL: 038498 FRAME: 0489

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82276352	Granted	7653153	5/19/2003	1/26/2010	10/440399	US	QAM Receiver And Method For Constellations Having At Least Sixteen Symbols
82276490	Granted	7650498	4/14/2004	1/19/2010	10/825596	US	SECURE DATA PROVISION METHOD AND APPARATUS AND DATA RECOVERY METHOD AND SYSTEM
82276619	Granted	7835724	9/9/2003	11/16/2010	10/657237	US	METHOD AND APPARATUS FOR AUTHENTICATING SERVICE TO A WIRELESS COMMUNICATIONS DEVICE
82276925	Granted	7441261	6/6/2003	10/21/2008	10/455405	US	VIDEO SYSTEM VARYING OVERALL CAPACITY OF NETWORK OF VIDEO SERVERS FOR SERVING SPECIFIC VIDEO
82276931	Published		4/2/2004		10/817333	US	METHOD OF PURCHASING INSURANCE OR VALIDATING AN ANONYMOUS TRANSACTION
82276979	Allowed		6/9/2003		10/457091	US	Propagation Of Viruses Through An Information Technology Network
82277123	Granted	7321660	3/3/2003	1/22/2008	10/379455	US	METHOD AND APPARATUS FOR ENCRYPTING/DECRYPTING DATA USING TIMED-RELEASE KEYS
82277306	Granted	7536471	4/1/2004	39952	10/815512	US	Use Of Nodes To Monitor Or Manage Peer To Peer Networks
82277369	Granted	7761418	5/19/2004	40379	10/848570	US	METHOD AND PRODUCT FOR SHARING LOGGED DATA OBJECTS WITHIN A DISTRIBUTED STORAGE SYSTEM
82277726	Granted	7296272	5/23/2003	11/13/2007	10/444096	US	A SYSTEM IN WHICH A FIRST PROGRAM WRITTEN IN ONE PROGRAMMING LANGUAGE CAN INTERACT AND ACCESS A SECOND PROGRAM WRITTEN IN A DIFFERENT PROGRAMMING LANGUAGE
82277789	Granted	7324636	10/23/2003	39476	10/690663	US	Multiple Voice Channel Communications
82277804	Granted	7142658	7/2/2003	39049	10/610588	US	DTMF Control
82281299	Allowed		2/28/2003		10/375198	US	Managing Target Computer Using Encapsulated File
82281305	Granted	6552672	3/18/2002	37733	10/100897	US	Method, System And Program Storage Device For Providing A Backup Of Data Of A Memory To At Least One Storage Medium
82281425	Granted	7840850	4/11/2005	40505	11/911317	US	Data processing system for logging memory access data
82390914	Granted	8745503	10/16/2010	6/3/2014	12/906090	US	Graphical Interface For Managing Server Environment
82391252	Granted	8429376	5/21/2008	4/23/2013	12/989350	US	TRANSLATION LOOK-ASIDE BUFFER
82400886	Published		6/19/2008		12/999713	US	Multi-blade Interconnector
82405286	Granted	8611758	5/7/2008	12/17/2013	12/991107	US	ARRAYS, SYSTEM AND METHOD FOR BI-DIRECTIONAL DATA TRANSMISSION
82405526	Granted	8797017	5/28/2008	8/5/2014	12/994997	US	IMPEDANCE STABILIZATION
82405612	Granted	8521023	5/8/2008	8/27/2013	12/991665	US	Hierarchical Passive Networks
82467396	Published		1/14/2011		13/007229	US	System and Method for Component Substitution
82467398	Published		1/14/2011		13/007252	US	System deconstruction for component substitution
82467404	Published		1/14/2011		13/007073	US	SYSTEM AND METHOD FOR SUPPLYING MISSING IMPACT FACTORS IN A DATABASE

PATENT
REEL: 038498 FRAME: 0490

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0491

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82467409	Published		1/14/2011		13/007175	US	Sub-tree similarity for component substitution
82467413	Published		1/14/2011		13/007125	US	System and Method for Tree Creation
82467421	Granted	8730843	1/14/2011	5/20/2014	13/007152	US	System and Method for Tree Assessment
82467475	Published		3/4/2011		13/040748	US	CAPPING DATA CENTER POWER CONSUMPTION
82467842	Granted	8836536	7/29/2011	9/16/2014	13/194161	US	DEVICE CHARACTERIZATION SYSTEM AND METHODS
82559520	Granted	8612662	6/1/2008	12/17/2013	12/995481	US	Queue Sharing And Reconfiguration In PCI Express Links
82559532	Granted	8595723	6/10/2008	11/26/2013	12/997002	US	Method And Apparatus For Configuring A Hypervisor During A Downtime State
82559561	Granted	8208778	11/15/2010	41086	12/946804	US	Planar Layer With Optical Path
82573258	Granted	8458449	1/27/2011	6/4/2013	13/015032	US	Component Drivers for a Component of a Device
82573269	Published		7/2/2008		12/997478	US	Verification Of Remote Copies Of Data
82573280	Granted	8469607	5/9/2011	6/25/2013	13/103575	US	OPTO-ELECTRONICS WITH COMPLIANT ELECTRICAL CONTACTS
82573930	Published		4/21/2011		13/091444	US	Virtual Address for Virtual Port
82573982	Granted	8794017	6/30/2008	8/5/2014	13/000012	US	Cooling Medium Distribution Over A Network Of Passages
82573993	Granted	8727227	6/30/2008	41779	13/000322	US	Optimizing Fluid Flow Distribution In A Structure
82576206	Allowed		6/12/2009		12/997818	US	IMPROVEMENTS IN OR RELATING TO COMMUNICATIONS
82576208	Granted	8390959	3/24/2011	3/5/2013	13/070885	US	ACTUATOR WITH NON-MOVING MASS
82576698	Published		3/28/2011		13/073028	US	AGGREGATING INFORMATION OF DISTRIBUTED JOBS
82576724	Granted	9135409	5/18/2011	9/15/2015	13/110479	US	DISTRIBUTING UPDATE INFORMATION BASED ON VALIDATED LICENSE INFORMATION
82576738	Granted	8788865	7/7/2011	7/22/2014	13/177576	US	METHOD AND SYSTEM FOR REDEPLOYING POWERED DEVICES FROM A POWER SOURCING EQUIPMENT WITH INSUFFICIENT POWER CAPACITY TO ANOTHER POWER SOURCING EQUIPMENT WITH EXCESS POWER CAPACITY (as amended)
82576902	Published		7/12/2011		13/181059	US	Visually Representing How a Sentiment Score is Computed
82576918	Granted	D732547	1/31/2011	6/23/2015	29/384499	US	BEZEL WITH DOCKING RECESS
82576933	Granted	D647903	1/31/2011	40848	29/384498	US	PORTABLE SERVER MONITOR
82577036	Granted	8842119	11/17/2010	9/23/2014	12/948538	US	DISPLAYING SYSTEM PERFORMANCE INFORMATION
82577119	Granted	8730809	1/19/2011	5/20/2014	13/009548	US	METHODS FOR PACKET FORWARDING THROUGH A COMMUNICATION LINK OF A DISTRIBUTED LINK AGGREGATION GROUP USING MESH TAGGING
82577231	Published		12/10/2010		12/965457	US	Communication-Link-Attached Persistent Memory System
82578699	Granted	8670310	12/21/2010	3/11/2014	12/974767	US	Dynamic Balancing Priority Queue Assignments for Quality-of-Service Network Flows
82578745	Granted	7792802	3/2/2007	40428	11/681738	US	Archiving Logs with Snapshots for Data Recovery
82578805	Granted	6657868	11/21/2001	12/2/2003	09/990106	US	Electronic Device Mount Assembly

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0492

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82578819	Granted	7093278	5/8/2002	8/15/2006	10/142398	US	Remote Console for Monitor and Control of System Firmware
82578822	Granted	7111157	5/8/2002	9/19/2006	10/142402	US	Spurious Input Detection for Firmware
82578836	Granted	7100089	9/6/2002	38958	10/237432	US	Determining Differences Between Snapshots
82578839	Granted	7155635	2/6/2004	39077	10/773699	US	Handling Link Failures in Remote Mirroring Applications Using Snapshots
82578850	Granted	7058957	7/12/2002	38874	10/194710	US	Cluster Event Notification System
82578854	Granted	7032093	8/6/2003	38825	10/636145	US	On-Demand Allocation Of Physical Storage For Virtual Volumes
82578857	Granted	6823442	5/7/2004	38314	10/840956	US	THIN-PROVISIONING WITH SNAPSHOT TECHNOLOGY
82578862	Granted	7502903	11/7/2005	3/10/2009	11/269399	US	Method and Apparatus for Managing Data Storage Systems
82578871	Granted	7622945	12/20/2006	40141	11/614031	US	Mix Mode Driver for Traces of Different Lengths
82578902	Granted	7953899	8/21/2002	5/31/2011	10/227077	US	Universal Diagnostic Hardware Space Access System for Firmware
82578913	Granted	7836329	12/29/2000	11/16/2010	09/751649	US	Communication Link Protocol Optimized for Storage Architectures
82578916	Granted	8037026	7/1/2005	10/11/2011	11/173101	US	Protected User-Controllable Volume Snapshots
82578917	Granted	7823003	1/23/2007	10/26/2010	11/626265	US	VOLTAGE REFERENCING CLOCK FOR SOURCE-SYNCHRONOUS MULTI-LEVEL SIGNAL BUSES
82578922	Granted	8244930	5/5/2010	8/14/2012	12/774280	US	Mechanisms for Synchronizing Data Transfers Between Non-Uniform Memory Architecture Computers
82578928	Granted	7886119	2/27/2007	40582	11/679728	US	Time and Space Efficient Technique for Creating Virtual Volume Copies
82578996	Granted	8533775	6/13/2008	9/10/2013	12/997605	US	Hierarchical Policy Management
82579206	Granted	7376969	12/2/2002	39588	10/308415	US	Real Time Monitoring And Analysis Of Events From Multiple Network Security Devices
82579220	Granted	7788722	12/2/2002	8/31/2010	10/308548	US	Modular Agent For Network Security Intrusion Detection System
82579228	Granted	7899901	12/2/2002	3/1/2011	10/308416	US	Method And Apparatus For Exercising And Debugging Correlations For Network Security System
82579234	Granted	8365278	9/10/2009	41303	12/557229	US	Displaying Information Regarding Time-Based Events
82579249	Granted	7219239	12/2/2002	5/15/2007	10/308585	US	Method For Batching Events For Transmission By Software Agent
82579260	Granted	7861299	8/9/2007	40540	11/836251	US	Threat Detection In A Network Security System
82579266	Granted	8230512	6/26/2009	7/24/2012	12/493012	US	Timestamp Modification In A Network Security System
82579271	Granted	7333999	10/30/2003	2/19/2008	10/698814	US	Expression Editor
82579283	Granted	8528077	4/9/2004	41520	10/821459	US	Comparing Events From Multiple Network Security Devices
82579286	Granted	7509677	5/4/2004	3/24/2009	10/839613	US	Pattern Discovery In A Network Security System
82579317	Granted	7644438	10/27/2004	1/5/2010	10/975962	US	Security Event Aggregation At Software Agent
82579332	Granted	7809131	12/23/2004	10/5/2010	11/021601	US	Adjusting Sensor Time In A Network Security System

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82579337	Granted	7844999	3/1/2005	11/30/2010	11/070024	US	Message Parsing In A Network Security System
82579378	Published		10/24/2007		11/923502	US	Tracking Changing State Data to Assist in Computer Network Security
82579397	Granted	8108550	10/24/2007	1/31/2012	11/923513	US	Real-Time Identification Of An Asset Model And Categorization Of An Asset To Assist In Computer Network Security
82580851	Granted	7571225	6/28/2007	8/4/2009	11/770454	US	STANDARD OPERATING PROCEDURE AUTOMATION IN DATABASE ADMINISTRATION
82580955	Granted	8565933	7/31/2008	10/22/2013	13/056105	US	Heatsink With A Plurality Of Fans
82580994	Allowed		3/14/2011		13/046848	US	ZONE-BASED NETWORK TRAFFIC ANALYSIS
82580998	Granted	8881110	3/14/2011	11/4/2014	13/047209	US	ROLE-BASED AUTOMATION SCRIPTS
82581166	Granted	7975306	12/10/2004	7/5/2011	11/009572	US	APPARATUS AND METHOD FOR MONITORING SECURE SOFTWARE
82581189	Granted	8528093	4/11/2007	9/3/2013	11/734114	US	Apparatus and Method for Performing Dynamic Security Testing with Static Analysis Data
82581207	Granted	8209646	11/2/2007	6/26/2012	11/934717	US	Apparatus and Method for Analyzing Source Code Using Path Analysis and Boolean Satisfiability
82581212	Granted	8527975	11/2/2007	9/3/2013	11/934722	US	Apparatus and Method for Analyzing Source Code Using Memory Operation Evaluation and Boolean Satisfiability
82581269	Published		3/11/2011		13/046400	US	DATABASE DATA LOCALIZATION
82581324	Granted	8884966	8/24/2011	11/11/2014	13/216477	US	VISUALIZING A SCATTER PLOT USING REAL-TIME BACKWARD REWRITE
82581329	Published		10/21/2011		13/278183	US	DISPLAYING ITEMS IN SORTED ORDER, AND DISPLAYING EACH ITEM IN MANNER CORRESPONDING TO OR BASED ON ITEM'S RELEVANCE SCORE
82581555	Published		3/29/2011		13/074720	US	METHODS, APPARATUS AND ARTICLES OF MANUFACTURE TO AUTOCOMPLETE APPLICATION LIFECYCLE MANAGEMENT ENTITIES
82581579	Granted	8762502	10/25/2011	6/24/2014	13/281038	US	INSTALLATION OF SERVER-STORED DISK IMAGE ON CLIENT
82582735	Granted	8806372	11/7/2010	8/12/2014	12/941064	US	Displaying Network Properties In A Graphical User Interface
82585205	Granted	8291579	1/24/2011	10/23/2012	13/012504	US	Geared Insertion Apparatus For a PCA
82585280	Published		3/31/2011		13/077367	US	MULTILEVEL INDEXING SYSTEM
82585282	Granted	8868855	2/28/2011	10/21/2014	13/036948	US	Efficiently and Effectively Managing Request Throughput in a Distributed Systems Environment
82585288	Granted	8671086	3/3/2011	3/11/2014	13/039423	US	PREFETCHING CONTENT OF A DIRECTORY BY EXECUTING A DIRECTORY ACCESS COMMAND
82585626	Granted	9014203	12/15/2010	4/21/2015	12/969286	US	Space Time Power Scheduling For Wireless Networks

PATENT
REEL: 038498 FRAME: 0493

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82585683	Granted	8725904	8/18/2011	5/13/2014	13/212727	US	Management Processors, Methods and Articles of Manufacture
82585740	Published		5/3/2011		13/099851	US	ZONE GROUP MANAGER VIRTUAL PHY
82586622	Published		7/1/2008		12/999209	US	Virtualizing A Video Controller
82586665	Granted	8966210	4/4/2011	2/24/2015	13/079554	US	ZONE GROUP CONNECTIVITY INDICATOR
82588205	Granted	8144716	12/17/2010	3/27/2012	12/972084	US	Method And System For Providing Telecommunication Subscriber Services Without Provisioning Or Maintenance
82595313	Granted	9049034	2/2/2011	6/2/2015	13/019310	US	Multicast Flow Monitoring
82595359	Granted	9122809	7/1/2008	9/1/2015	13/000246	US	Segmenting Bus Topology
82595413	Granted	8959233	2/23/2011	2/17/2015	13/033250	US	NETWORK BOTTLENECKS
82595418	Granted	9110591	4/22/2011	8/18/2015	13/092471	US	MEMORY RESOURCE PROVISIONING USING SAS ZONING
82595670	Granted	8369665	7/14/2008	2/5/2013	13/002763	US	Hybrid Guided-Mode Resonance Filter And Method Employing Distributed Bragg Reflection
82595711	Published		11/4/2011		13/288996	US	Managing Chip Multi-Processors Through Virtual Domains
82595719	Granted	9110703	6/7/2011	8/18/2015	13/155165	US	VIRTUAL MACHINE PACKET PROCESSING
82595725	Allowed		10/17/2011		13/275030	US	Method of and Apparatus for Managing Non-Congestion-Controlled Messge Traffic in a Datacenter
82595731	Granted	8661298	4/29/2011	2/25/2014	13/098172	US	CONTROLLING NANOSTORE OPERATION BASED ON MONITORED PERFORMANCE
82603067	Published		1/7/2011		12/986676	US	Decision Support
82604267	Granted	8799916	2/2/2011	8/5/2014	13/019529	US	DETERMINING AN ALLOCATION OF RESOURCES FOR A JOB
82613092	Granted	9009281	7/1/2011	42108	13/175211	US	Composition of Services
82615979	Granted	9094316	1/28/2011	7/28/2015	13/015896	US	DYNAMIC NAME GENERATION
82618107	Published		3/31/2011		13/077137	US	Grouping Data
82618416	Granted	8751205	6/29/2011	6/10/2014	13/172553	US	GENERATING DISCRETE EVENT SIMULATION DATA
82618418	Granted	8805870	7/27/2011	8/12/2014	13/192373	US	Multi-Input, Multi-Output-Per-Input User-Defined-Function-Based Database Operations
82618421	Granted	8700822	7/8/2011	4/15/2014	13/179188	US	PARALLEL AGGREGATION SYSTEM
82620394	Granted	8774625	8/8/2008	41828	13/058024	US	Method And Systems For Implementing High-radix Switch Topologies On Relatively Lower-radix Switch Physical Networks
82629490	Granted	8924639	8/8/2008	12/30/2014	13/058048	US	Independently Controllable And Reconfigurable Virtual Memory Devices In Memory Modules That Are Pin-compatible With Standard Memory Modules
82629550	Granted	8812886	8/13/2008	41870	13/058067	US	Dynamic Utilization Of Power-down Modes In Multi-core Memory Modules
82631635	Published		7/31/2008		13/056101	US	Multi-layer Reconfigurable Switches
82635041	Published		7/31/2008		13/056096	US	GEARED LATCH APPARATUS

PATENT
REEL: 038498 FRAME: 0494

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82636541	Granted	8990405	4/1/2011	3/24/2015	13/078636	US	METHODS, SYSTEMS AND ARTICLES OF MANUFACTURE TO RESUME A REMOTE DESKTOP SESSION
82638140	Granted	8845188	1/31/2011	9/30/2014	13/018101	US	Apparatus State Determination Method And System
82640047	Granted	8505009	2/4/2011	41492	13/020813	US	MANAGING EXCLUSIVE ACCESS TO SYSTEM RESOURCES
82640499	Granted	9069780	5/23/2011	6/30/2015	13/113413	US	PROPAGATING A SNAPSHOT ATTRIBUTE IN A DISTRIBUTED FILE SYSTEM
82640505	Published		5/2/2011		13/098785	US	REDUCING A NOISE COMPONENT ASSOCIATED WITH MOVEMENT OF A MOVEABLE PART
82644413	Granted	8560679	2/18/2011	10/15/2013	13/031079	US	Method And Apparatus For Exercising And Debugging Correlations For Network System
82653962	Published		8/29/2011		13/220238	US	COMMUNICATIONS PATH DISCOVERY
82654165	Published		8/19/2009		13/060487	US	Method And Apparatus For Storing And Verifying Data
82654171	Granted	8166171	3/26/2005	41023	13/045216	US	Provision Of Resource Allocation Information
82654416	Granted	8549219	12/7/2010	10/1/2013	12/961778	US	PREVENTING HARD DRIVE FAILURE AND DATA LOSS DUE TO VIBRATION
82654460	Granted	8655124	9/4/2008	2/18/2014	13/061449	US	DIELECTRIC WAVEGUIDE INTERSECTION WITH REDUCED LOSSES
82656102	Published		10/30/2008		13/124831	US	Supply And Demand Consolidation In Employee Resource Planning
82660164	Granted	8656194	3/7/2011	2/18/2014	13/042086	US	Method And System For Distributing Power To Networked Devices
82662329	Published		5/20/2011		13/112677	US	DETERMINING WORKLOAD COST
82663153	Published		10/11/2011		13/270512	US	IDENTIFYING USERS THROUGH A PROXY
82663233	Published		6/16/2011		13/162063	US	PARSING AN IMAGE OF A VISUALLY STRUCTURED DOCUMENT
82663244	Published		7/15/2011		13/183715	US	REFLECTING CHANGES TO GRAPH-STRUCTURED DATA
82663247	Published		8/5/2011		13/198893	US	SYSTEM AND METHOD FOR MANAGING ENVIRONMENT CONFIGURATION USING SNAPSHOTS
82663259	Published		6/22/2011		13/166385	US	CONSTRAINT DEFINITION FOR CAPACITY MANGEMENT
82663408	Granted	8918571	6/1/2011	12/23/2014	13/151009	US	EXPOSING EXPANDERS IN A DATA STORAGE FABRIC
82664014	Published		10/18/2011		13/275340	US	MAPPING SOFTWARE MODULES TO SOURCE CODE
82664833	Published		10/31/2011		13/285973	US	Methods and Apparatus to Control Generation of Memory Access Requests
82664848	Published		10/11/2011		13/270785	US	METHODS, APPARATUS, AND ARTICLES OF MANUFACTURE TO MANAGE MEMORY
82664887	Granted	8788904	10/31/2011	7/22/2014	13/285742	US	METHODS AND APPARATUS TO PERFORM ERROR DETECTION AND CORRECTION

PATENT
REEL: 038498 FRAME: 0495

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0496

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82664931	Granted	8478900	5/18/2011	41457	13/110423	US	DETERMINING MISCONNECTION OF AN ELECTRONIC DEVICE TO A NETWORK DEVICE USING ZONE INFORMATION
82670355	Granted	9069470	4/1/2011	6/30/2015	13/078449	US	Zone Group Reassignment Using Storage Device Signatures
82671800	Granted	8938759	9/3/2009	1/20/2015	13/063431	US	Program Guide And Apparatus
82671980	Granted	8975902	12/9/2008	3/10/2015	13/133267	US	Power Circuit
82671986	Published		12/15/2008		13/133314	US	Detecting An Unreliable Link In A Computer System
82671992	Granted	8515916	9/28/2011	8/20/2013	13/247716	US	DATA ARCHIVING METHODS AND DATA ARCHIVING APPARATUS
82672012	Granted	8650145	10/7/2008	2/11/2014	13/121713	US	Creating Snapshots Of Data Using A Selected One Of Different Snapshot Algorithms
82672032	Granted	8676765	7/12/2011	41716	13/181014	US	DATABASE ARCHIVING PERFORMANCE BENEFIT DETERMINATION
82672040	Granted	8582246	10/15/2008	41590	13/121738	US	Individually Adjusting A Position Of An Access Head Element On A Head Assembly
82672067	Published		6/30/2011		13/173862	US	CAPTURING AN ARCHIVING SNAPSHOT
82674162	Granted	8843667	6/29/2011	9/23/2014	13/171995	US	DATA STORAGE METHODS AND DATA STORAGE SYSTEMS
82674193	Granted	8732365	6/7/2011	5/20/2014	13/154611	US	INPUT/OUTPUT SYSTEM AND METHODS TO COUPLE A STORAGE DEVICE TO THE SAME SERVER AFTER MOVEMENT IN AN INPUT/OUTPUT SYSTEM
82674211	Granted	8831785	10/30/2008	9/9/2014	13/127233	US	MULTI-STAGE HUMIDITY CONTROL SYSTEM AND METHOD
82675347	Granted	8634963	11/13/2009	41660	13/132866	US	Data Centre And Apparatus And Method For Data Centre Cooling
82675356	Published		8/11/2011		13/208316	US	System And Method For Analysis Of Large-scale Resource Contention Across Enterprise Activities
82675358	Granted	8875301	10/12/2011	41940	13/271538	US	Software License Incompatibility Determination
82675561	Granted	8178842	3/12/2009	41044	13/063430	US	NANOWIRE BOLOMETER PHOTODETECTOR
82675581	Granted	8635389	5/24/2011	1/21/2014	13/114676	US	Variable Depth Buffer
82676529	Allowed		4/7/2011		13/082130	US	Minimal Synchronized Network Operations
82676540	Published		10/14/2008		13/123644	US	Managing Event Traffic In A Network System
82676557	Granted	9161239	4/6/2011	42290	13/080898	US	Network Access Point Management
82676586	Granted	8620908	10/15/2008	12/31/2013	13/123686	US	Retrieving Configuration Records From A Configuration Management Database
82676607	Granted	8635498	10/16/2008	41660	13/123702	US	PERFORMANCE ANALYSIS OF APPLICATIONS
82677093	Granted	8780730	5/2/2011	41835	13/098491	US	LOAD-BALANCING GATEWAYS
82677110	Granted	8719478	8/11/2011	41765	13/207839	US	DEADLOCK PREVENTION
82678313	Granted	8547727	12/12/2008	41548	13/119932	US	Memristive Device
82678315	Granted	8659510	12/16/2008	41695	13/119934	US	Spatial Light Modulator

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82678321	Granted	8780606	12/23/2008	41835	13/120904	US	Memristive Device Having A Porous Dopant Diffusion Element
82678327	Granted	8582344	12/30/2008	11/12/2013	13/120903	US	Multiplexer/de-multiplexer Memristive Device
82678579	Granted	8373584	5/16/2011	41317	13/108530	US	COMPRESSING AND DECOMPRESSING DATA
82680227	Granted	9142224	10/24/2008	42269	13/124646	US	Magnetic-tape Drive And Magnetic-tape Head Compatible With Multiple Tape Formats
82681103	Published		10/31/2011		13/285888	US	ACCESS TO HETEROGENEOUS DATA SOURCES
82682134	Granted	9054593	6/2/2011	6/9/2015	13/151939	US	IMPEDANCE CONTROL FOR A POWER CONVERTER
82683611	Granted	8582422	4/5/2011	11/12/2013	13/080404	US	Access Point Configuration Propagation
82683616	Granted	8611358	4/6/2011	12/17/2013	13/081310	US	Mobile Network Traffic Management
82683628	Granted	8856580	4/7/2011	10/7/2014	13/081934	US	Controller Election
82687401	Granted	8819636	3/24/2011	8/26/2014	13/070499	US	Testing Compatibility Of A Computer Application
82689078	Granted	8539113	6/16/2011	41534	13/161894	US	INDICATORS FOR STREAMS ASSOCIATED WITH MESSAGES
82689167	Granted	8766228	10/29/2008	7/1/2014	13/121133	US	Electrically Actuated Device And Method Of Controlling The Formation Of Dopants Therein
82689169	Allowed		7/21/2011		13/187800	US	SENDING REQUEST MESSAGES TO NODES INDICATED AS UNRESOLVED
82689173	Granted	8908711	11/1/2011	12/9/2014	13/286391	US	TARGET ISSUE INTERVALS
82689187	Granted	8605483	12/23/2008	12/10/2013	13/120905	US	Memristive Device And Methods Of Making And Using The Same
82690020	Granted	9112820	7/31/2012	42234	13/562901	US	DELAY QUEUES BASED ON DELAY REMAINING
82690028	Granted	8830838	9/14/2011	9/9/2014	13/232645	US	NODE INTERFACE INDICATORS
82690114	Published		6/9/2011		13/157009	US	Time Encoding Using Integrate and Fire Sampler
82690125	Published		9/1/2011		13/224090	US	COMBINING DATA VALUES THROUGH ASSOCIATIVE OPERATIONS
82690137	Published		5/19/2011		13/111740	US	Storing Events From a Datastream
82690143	Published		10/27/2011		13/282870	US	MAINTAINING A BUFFER STATE IN A DATABASE QUERY ENGINE
82690151	Published		8/23/2011		13/215322	US	CONSTRUCTING AN ASSOCIATION DATA STRUCTURE TO VISUALIZE ASSOCIATION AMONG CO-OCCURRING TERMS
82690318	Published		10/15/2008		13/123563	US	Locating A Head Element Of A Tape Storage Device Using Servo Information In A Data Track
82693706	Published		7/28/2011		13/193292	US	SYSTEMS AND METHODS OF ACCELERATING DELIVERY OF REMOTE CONTENT
82695681	Granted	9003247	4/28/2011	42101	13/066976	US	Remapping Data with Pointer
82714717	Granted	8140779	5/4/2011	40988	13/100435	US	Method Of Storing Data On A Secondary Storage Device
82715747	Granted	8752175	10/31/2008	41800	13/126335	US	Method And Apparatus For Network Intrusion Detection
82716617	Published		10/30/2008		13/126032	US	BIT Inversion For Communication Interface
82716672	Published		10/31/2008		13/126848	US	DEVICE FOR OPTICALLY COUPLING PHOTONIC ELEMENTS

PATENT
REEL: 038498 FRAME: 0497

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0498

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82716721	Granted	8687961	10/31/2008	4/1/2014	13/126840	US	Optical Broadcast With Buses With Shared Optical Interfaces
82716732	Granted	8542961	10/31/2008	9/24/2013	13/126845	US	Optical Beam Couplers And Splitters
82718595	Published		1/27/2010		13/146726	US	REVERSE CHARGE CALLING IN A COMMUNICATIONS NETWORK
82718607	Granted	D685373	5/6/2011	7/2/2013	29/391362	US	Computing Device Protector
82728107	Published		12/19/2008		13/140603	US	Redundant Data Storage For Uniform Read Latency
82734651	Granted	8291208	5/6/2011	10/16/2012	13/102365	US	Bios Bootable Raid Support
82734703	Granted	8611042	1/29/2009	12/17/2013	13/146933	US	HANDLING OF STORAGE MEDIA CARTRIDGES
82734766	Granted	8268534	5/4/2011	9/18/2012	13/100458	US	SELF-ALIGNED, SUB-WAVELENGTH OPTICAL LITHOGRAPHY
82734768	Granted	8202755	5/16/2011	41079	13/108733	US	PHOTODIODE MODULE AND APPARATUS INCLUDING MULTIPLE PHOTODIODE MODULES
82740324	Granted	8315169	6/1/2011	11/20/2012	13/150830	US	Loadbalancing Network Traffic Across Multiple Remote Inspection Devices
82741095	Published		5/13/2011		13/107108	US	AUTOMATED NEGOTIATION
82744692	Published		1/12/2009		13/143162	US	Reducing Propagation Of Message Floods In Computer Networks
82744716	Published		6/9/2011		13/156869	US	Power Sharing With Stackable Switches
82744758	Granted	9047606	9/29/2011	6/2/2015	13/248706	US	SOCIAL AND CONTEXTUAL RECOMMENDATIONS
82746396	Published		12/30/2008		13/139762	US	Storing Network Flow Information
82747673	Granted	8502188	1/29/2009	8/6/2013	13/142504	US	Electrically Actuated Device
82747675	Granted	8605484	1/29/2009	41618	13/130822	US	Self-repairing Memristor And Method
82747687	Granted	8461565	1/29/2009	6/11/2013	13/130811	US	Electrically Actuated Devices
82747695	Granted	8878342	1/26/2009	11/4/2014	13/130801	US	USING ALLOY ELECTRODES TO DOPE MEMRISTORS
82747724	Granted	8431921	1/13/2009	4/30/2013	13/130827	US	Memristor Having A Triangular Shaped Electrode
82747727	Granted	9041157	1/14/2009	5/26/2015	13/130808	US	Method For Doping An Electrically Actuated Device
82747729	Granted	8614432	6/14/2011	41632	13/139557	US	Crystalline Silicon-Based Memristive Device with Multiple Mobile Dopant Species
82748351	Allowed		10/28/2011		13/284570	US	DISPLAYING A VISUALIZATION OF A PORTION OF A ROLLING HORIZON TIME SERIES
82749072	Published		8/31/2011		13/222182	US	Automating Software Testing
82749110	Published		7/1/2011		13/175613	US	SURROGATE KEY GENERATION
82749118	Granted	9135071	8/19/2011	42262	13/213582	US	SELECTING PROCESSING TECHNIQUES FOR A DATA FLOW TASK
82749143	Granted	8594096	10/31/2011	41604	13/285498	US	DYNAMIC HARDWARE ADDRESS ASSIGNMENT TO NETWORK DEVICES IN A SWITCH MESH
82749161	Granted	8239599	6/16/2011	41128	13/162348	US	System And Method For Handling Data Streams
82750088	Published		6/30/2011		13/173500	US	HINGED BEZEL HAVING A PORTABLE DISPLAY DOCK

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82752143	Published		10/28/2011		13/284581	US	EXPANDER TO ENABLE VIRTUAL STORAGE UNITS CORRESPONDING TO SUBDIVISIONS WITHIN A PHYSICAL STORAGE UNIT
82752147	Published		10/12/2011		13/271563	US	PERFORMANCE ASSIST STORAGE VOLUMES
82752184	Granted	8547967	6/21/2011	41548	13/165535	US	Method And Apparatus For Pstn-based IP Active Call Recovery And Re-routing
82752441	Published		7/27/2011		13/192010	US	SAS VIRTUAL TAPE DRIVE
82753492	Granted	8769609	7/5/2011	7/1/2014	13/176581	US	Protecting File Entities
82753552	Granted	8620987	9/10/2011	12/31/2013	13/229710	US	Multi-Regime Detection in Streaming Data
82753560	Granted	8683125	11/1/2011	41723	13/286681	US	TIER IDENTIFICATION (TID) FOR TIERED MEMORY CHARACTERISTICS
82753566	Granted	8688620	9/23/2011	4/1/2014	13/243476	US	Anomaly detection in data centers
82753580	Granted	8988258	10/31/2011	42087	13/285492	US	HARDWARE COMPRESSION USING COMMON PORTIONS OF DATA
82753586	Granted	8954599	10/28/2011	2/10/2015	13/284389	US	DATA STREAM OPERATIONS
82753595	Published		10/31/2011		13/285675	US	MANAGING A VERSION OF A NON-VOLATILE HEAP (as amended)
82753686	Granted	8838854	6/22/2011	9/16/2014	13/166032	US	A SWITCH THAT PROCESSES A TERMINAL DATA STREAM
82754557	Granted	8275956	6/24/2011	9/25/2012	13/168455	US	Parallel Memory Device Rank Selection
82755123	Published		9/28/2011		13/247266	US	TRANSLATING NATURAL LANGUAGE QUERIES
82755135	Published		10/19/2011		13/276803	US	USING A DATABASE TO TRANSLATE A NATURAL KEY TO A SURROGATE KEY
82755911	Granted	9014519	10/14/2011	42115	13/273983	US	OPTOELECTRONIC INTERFACE
82756289	Granted	8368118	12/16/2008	41310	13/133370	US	SEMICONDUCTOR STRUCTURE HAVING AN ELOG ON A THERMALLY AND ELECTRICALLY CONDUCTIVE MASK
82756380	Granted	8537596	10/21/2011	9/17/2013	13/278882	US	OVERWRITING A MEMORY ARRAY
82756415	Granted	8856151	9/30/2011	41919	13/249482	US	OUTPUT FIELD MAPPING OF USER DEFINED FUNCTIONS IN DATABASES
82757135	Granted	8589200	6/28/2011	11/19/2013	13/171145	US	MANAGING AN INFORMATION TECHNOLOGY SYSTEM
82761681	Published		10/28/2011		13/284608	US	ESTABLISHING A CONNECTION WITH A USER DEVICE
82772023	Granted	9032478	1/29/2009	5/12/2015	13/146112	US	Managing Security In A Network
82772046	Granted	8793479	1/29/2009	7/29/2014	13/145226	US	Loading A Plurality Of Appliances Into A Blade
82774491	Granted	8578023	7/29/2011	11/5/2013	13/194505	US	COMPUTER RESOURCE UTILIZATION MODELING FOR MULTIPLE WORKLOADS
82775035	Published		10/31/2011		13/285884	US	Transaction Commitment and Replication in a Storage System

PATENT
REEL: 038498 FRAME: 0499

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82775043	Granted	8773886	8/19/2011	7/8/2014	13/213412	US	MEMORY ARRAY WITH CO-PLANAR WAVEGUIDE BASED MEMORY ELEMENT SELECTION
82775055	Granted	8710865	10/26/2011	41758	13/281438	US	Field-programmable analog array with memristors
82775144	Granted	8880493	9/28/2011	41947	13/246947	US	Multi-streams analytics
82775152	Published		10/15/2011		13/274314	US	MODIFIED FLOW GRAPH DEPICTION
82775160	Granted	8972308	10/31/2011	3/3/2015	13/284990	US	Combining multivariate time-series prediction with motif discovery
82775164	Granted	8896605	10/7/2011	11/25/2014	13/268050	US	PROVIDING AN ELLIPSOID HAVING A CHARACTERISTIC BASED ON LOCAL CORRELATION OF ATTRIBUTES
82775172	Granted	8918358	10/15/2011	12/23/2014	13/274317	US	INFORMATION INTEGRATION FLOW FRESHNESS COST
82775180	Published		10/15/2011		13/274316	US	USER SELECTED FLOW GRAPH MODIFICATION
82775192	Granted	9078629	9/19/2011	42199	13/235556	US	Detecting Regime Change in Streaming Data
82775515	Granted	8583655	10/17/2011	41590	13/274841	US	USING AN INVERTED INDEX TO PRODUCE AN ANSWER TO A QUERY
82775635	Granted	8578111	10/11/2011	11/11/2013	13/270360	US	BACKUP OPTIMIZATION
82779992	Granted	8473599	6/29/2011	41450	13/172354	US	COMMUNICATION NETWORK LIST MANAGEMENT SENDING UPDATED MEMBER DATA FROM A PROVISIONING SYSTEM TO A LIST MANAGER AND THEN TO AN APPLICATION SERVER
82781006	Granted	8455852	1/26/2009	6/4/2013	13/142583	US	CONTROLLED PLACEMENT OF DOPANTS IN MEMRISTOR ACTIVE REGIONS
82781063	Granted	8483996	6/30/2011	7/9/2013	13/173963	US	Controlled Cooling Of A Data Center
82781069	Granted	8507968	1/30/2009	8/13/2013	13/142581	US	MEMRISTIVE TRANSISTOR MEMORY
82781077	Granted	8437172	1/30/2009	5/7/2013	13/142580	US	Decoders Using Memristive Switches
82788276	Published		9/15/2011		13/233992	US	GEOGRAPHICALLY PARTITIONED ONLNE SEARCH SYSTEM
82788288	Published		9/15/2011		13/233878	US	GEOGRAPHICALLY PARTITIONED ONLINE CONTENT SERVICES
82790060	Granted	8781319	1/9/2009	41835	13/143905	US	CONFIGURABLE POINT-TO-POINT OPTICAL COMMUNICATIONS SYSTEM BETWEEN SERVERS
82790122	Published		7/9/2011		13/179484	US	AUTOMATED BUSINESS PROCESS MODEL DISCOVERY
82790818	Granted	8732703	1/23/2009	5/20/2014	13/146119	US	VERIFYING VIRTUAL MACHINES
82795246	Granted	8503396	8/4/2011	41492	13/198084	US	Network Apparatus Enabling Roaming Across Subnets
82795406	Granted	8264795	7/15/2011	41163	13/183440	US	Flexible Circuit For Use With A Magnetic Head
82799838	Published		9/21/2011		13/238430	US	MATCHING OF CASES BASED ON ATTRIBUTES INCLUDING AN ATTRIBUTE RELATING TO FLOW OF ACTIVITIES
82801048	Published		7/27/2011		13/191852	US	TRANSMISSION OF CONFIGURATION TO A DEVICE FOR PROVISIONING IN A NETWORK
82801074	Granted	8862577	8/15/2011	10/14/2014	13/209739	US	Visualizing Sentiment Results with Visual Indicators Representing User Sentiment and Level of Uncertainty

PATENT
REEL: 038498 FRAME: 0500

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82802471	Granted	8996805	10/26/2011	3/31/2015	13/282223	US	SHARED CACHE MODULE AND METHOD THEREOF
82811453	Published		1/29/2009		13/146934	US	CONNECTING PORTS OF ONE OR MORE ELECTRONIC DEVICES TO DIFFERENT SUBSETS OF NETWORKS BASED ON DIFFERENT OPERATING MODES
82816014	Granted	D686624	10/21/2011	41478	29/404536	US	LATCH FOR A SERVER
82816019	Granted	D670294	10/21/2011	11/6/2012	29/404542	US	DOOR FOR COMPUTER RACK CABINET
82816048	Granted	9141914	10/31/2011	9/22/2015	13/286150	US	SYSTEM AND METHOD FOR RANKING ANOMALIES
82816571	Granted	8879616	10/31/2011	11/4/2014	13/285195	US	RECEIVER WITH DECISION FEEDBACK EQUALIZER
82816583	Granted	9077663	8/12/2011	42192	13/209176	US	Router Aggregation
82816660	Published		2/23/2009		13/148582	US	Social Networking Of Mobile Devices
82817345	Granted	8275669	8/4/2011	9/25/2012	13/197993	US	AUCTION METHOD AND APPARATUS
82817467	Granted	8798078	3/13/2009	8/5/2014	13/147792	US	A PLURALITY OF SENSORS COUPLED TO A SERIES OF SWITCHING DEVICES
82818876	Granted	8738657	9/27/2011	41786	13/246715	US	DISTRIBUTION OF KEY VALUES
82818908	Published		10/24/2011		13/280031	US	Performing Sentiment Analysis
82819014	Granted	8732508	3/31/2009	5/20/2014	13/254144	US	DETERMINING POWER TOPOLOGY OF A PLURALITY OF COMPUTER SYSTEMS
82819631	Granted	8719201	10/7/2011	5/6/2014	13/269470	US	Making a Recommendation to a User That is Currently Generating Events Based on a Subset of Historical Event Data
82821369	Published		6/1/2009		13/375125	US	System And Method For Collecting Application Performance Data
82821655	Granted	8432892	8/23/2011	4/30/2013	13/215937	US	Method and System for WLAN Synchronization
82821664	Granted	D678273	10/25/2011	3/19/2013	29/404733	US	Hard Drive Carrier
82827698	Granted	8656195	8/30/2011	2/18/2014	13/221840	US	ENERGY EFFICIENT ETHERNET CONTROL.
82828050	Published		10/28/2011		13/283940	US	POWER SUPPLIES WITH LAGGING POWER-FACTOR
82828079	Granted	9015516	2/29/2012	4/21/2015	13/407845	US	STORING EVENT DATA AND A TIME VALUE IN MEMORY WITH AN EVENT LOGGING MODULE
82829630	Granted	8272520	9/12/2011	9/25/2012	13/230765	US	Standalone Open Frame
82829676	Granted	8725005	2/23/2009	5/13/2014	13/202940	US	DYNAMIC IMPEDANCE PHOTODETECTOR RECEIVER CIRCUIT
82832430	Published		8/26/2011		13/219485	US	PROCESS REFINEMENT
82832501	Granted	8793538	1/30/2012	41849	13/361102	US	SYSTEM ERROR RESPONSE
82833005	Granted	8984606	12/22/2011	42080	13/335035	US	RE-AUTHENTICATION
82833735	Granted	8886679	10/11/2011	11/11/2014	13/271036	US	Mining Web Applications
82833764	Allowed		2/27/2012		13/406099	US	USE AND STATE BASED POWER MANAGEMENT (as amended)
82833778	Published		4/12/2012		13/445691	US	ESTIMATING A METRIC RELATED TO A SERVICE DEMAND USING A DEFINED FRAMEWORK

PATENT
REEL: 038498 FRAME: 0501

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82833792	Published		4/30/2012		13/460572	US	Defining an Overall Sustainability Metric for Services based on User Inputs
82833807	Published		1/31/2012		13/362942	US	REAL-TIME SERVER MANAGEMENT
82833858	Published		10/26/2011		13/282399	US	SPOT PRICING TO REDUCE WORKLOAD IN A DATA CENTER
82835644	Granted	8611133	1/9/2012	41625	13/346219	US	STATEFUL NEGATIVE DIFFERENTIAL RESISTANCE DEVICES
82836740	Granted	8687983	11/2/2011	4/1/2014	13/287555	US	LASER COMMUNICATION SYSTEM
82836832	Granted	8671091	8/2/2006	3/11/2014	11/461937	US	QUERY OPTIMIZER
82836843	Granted	8214352	11/24/2009	41093	12/625482	US	MODULAR QUERY OPTIMIZER
82836860	Granted	8290931	6/16/2010	10/16/2012	12/816770	US	DATABASE DESIGNER
82836864	Published		6/7/2011		13/155232	US	SIDEWAYS INFORMATION PASSING
82837107	Published		1/17/2012		13/351660	US	DELIVERING AN ITEM OF INTEREST
82837112	Published		2/27/2012		13/406478	US	Methods and Systems for Processing Data Arrays Using Bloom Filters
82837187	Published		9/23/2011		13/243369	US	INTELLIGENT AIR MOVER APPARATUS
82837256	Granted	8826398	9/29/2011	41884	13/248494	US	PASSWORD CHANGING
82837273	Granted	8390323	4/30/2009	3/5/2013	13/256234	US	DENSE NANOSCALE LOGIC CIRCUITRY
82837281	Granted	8935260	5/12/2009	1/13/2015	13/264806	US	Document Key Phrase Extraction Method
82837287	Granted	8605488	6/12/2009	12/10/2013	13/256239	US	CAPACITIVE CROSSBAR ARRAYS
82837290	Granted	8885422	6/12/2009	41954	13/256242	US	HIERARCHICAL ON-CHIP MEMORY
82837299	Granted	8750024	6/18/2009	6/10/2014	13/256245	US	MEMCAPACITOR
82837359	Granted	8437072	6/30/2009	5/7/2013	13/256256	US	INDIVIDUALLY ADDRESSABLE NANO-SCALE MECHANICAL ACTUATORS
82838094	Granted	9148348	10/31/2011	42276	13/285842	US	Generating Network Topologies
82842024	Granted	9053319	9/29/2011	6/9/2015	13/248981	US	CONTEXT-SENSITIVE TAINT PROCESSING FOR APPLICATION SECURITY
82843020	Granted	8739026	10/23/2011	5/27/2014	13/279283	US	MARKUP LANGUAGE SCHEMA ERROR CORRECTION
82844169	Granted	8471270	3/23/2009	6/25/2013	13/257393	US	INDIRECT-BANDGAP-SEMICONDUCTOR, LIGHT-EMITTING DIODE
82844217	Granted	8650302	9/14/2011	41681	13/232379	US	Communication In Multiprocessor Using Proxy Sockets
82844228	Granted	8599557	4/29/2009	12/3/2013	13/258521	US	Printed Circuit Board Cooling Assembly
82846309	Granted	8635484	3/18/2009	1/21/2014	13/256278	US	EVENT BASED CORRELATION OF POWER EVENTS
82846416	Granted	8780471	10/27/2011	7/15/2014	13/283359	US	Linking Errors to Particular Tapes or Particular Tape Drives
82846968	Granted	D673161	10/13/2011	41268	29/404003	US	A Perforation Pattern for A Cover Plate for A Computing Device
82847452	Granted	8732381	11/9/2011	5/20/2014	13/292882	US	SAS EXPANDER FOR COMMUNICATION BETWEEN DRIVERS
82847475	Published		12/22/2011		13/335861	US	SERVICE PROVIDER SELECTION
82848213	Granted	8689044	11/16/2011	4/1/2014	13/298099	US	SAS HOST CONTROLLER CACHE TRACKING
82848374	Granted	8755612	12/15/2011	41807	13/327393	US	IDENTIFYING TRUNCATED CHARACTER STRINGS
82848431	Published		3/20/2012		13/424844	US	AUTOMATED CONFIGURATION CHANGE AUTHORIZATION

PATENT
REEL: 038498 FRAME: 0502

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82849057	Granted	8645610	6/29/2009	41674	13/257271	US	Organizing And Managing A Memory Blade With Super Pages And Buffers
82850126	Granted	8799192	2/28/2012	41856	13/406843	US	Deriving a Nested Chain of Densest Subgraphs from a Graph
82850134	Published		4/30/2012		13/460167	US	Mapping Long Names in a Filesystem
82850142	Published		5/11/2012		13/469641	US	JOIN ORDER RESTRICTIONS
82850157	Published		12/23/2011		13/336170	US	Segregating Storage by Virtual Segment to Efficiently Re-balance Data Across a Large Scale, Distributed Database Cluster
82850160	Granted	8805811	4/30/2012	8/12/2014	13/459760	US	EXECUTING USER-DEFINED FUNCTION ON A PLURALITY OF DATABASE TUPLES
82850163	Granted	9116947	3/15/2012	8/25/2015	13/421761	US	Data-Record Pattern Searching
82850166	Published		2/9/2012		13/369990	US	ASSESSING COMPRESSED-DATABASE RAW SIZE
82850174	Granted	8887160	11/21/2011	11/11/2014	13/301301	US	Mapping Tasks to Execution Threads
82850182	Granted	8538954	2/1/2012	41534	13/364155	US	AGGREGATE FUNCTION PARTITIONS FOR DISTRIBUTED PROCESSING
82850186	Granted	8732720	12/22/2011	41779	13/335847	US	Job Scheduling Based On Map Stage And Reduce Stage Duration
82850194	Granted	8983979	1/13/2012	42080	13/349996	US	CONTROLLING ACCESS TO STORED INFORMATION
82850202	Granted	8638981	2/1/2012	41667	13/363597	US	PLACING TEMPORALLY ALIGNED AND VARIABLY SIZED PIXELS IN DISCRETE RINGS IN A GRAPHICAL VISUALIZATION
82850206	Published		2/1/2012		13/363602	US	PLACING PIXELS ACCORDING TO ATTRIBUTE VALUES IN POSITIONS IN A GRAPHICAL VISUALIZATION THAT CORRESPOND TO GEOGRAPHIC LOCATIONS
82850222	Granted	8949264	1/30/2012	2/3/2015	13/361326	US	DISAMBIGUATING ASSOCIATIONS
82850245	Granted	8711693	2/21/2012	4/29/2014	13/401111	US	Gateway Channel Utilization
82850249	Published		12/20/2011		13/331815	US	APPLICATION SECURITY TESTING
82850417	Granted	8844015	1/31/2012	9/23/2014	13/362290	US	APPLICATION-ACCESS AUTHENTICATION AGENT
82850426	Published		12/20/2011		13/331777	US	APPLICATION SECURITY TESTING
82851196	Granted	8983676	9/25/2011	3/17/2015	13/244516	US	SYSTEM FOR COOLING A HEAT-GENERATING DEVICE (as amended)
82852160	Granted	8601463	12/1/2009	12/3/2013	13/258380	US	Firmware Management
82852232	Granted	8664605	4/28/2009	3/4/2014	13/258424	US	COVERT LABEL STRUCTURE
82852246	Granted	9094317	6/18/2009	7/28/2015	13/258903	US	PROCESSOR TOPOLOGY SWITCHES
82852261	Granted	8799700	7/31/2009	8/5/2014	13/379276	US	PROVIDING FAULT-TOLERANT SPREAD SPECTRUM CLOCK SIGNALS IN A SYSTEM
82852266	Granted	8793481	12/10/2009	7/29/2014	13/258400	US	Managing Hardware Resources For Soft Partitioning
82852330	Granted	8625280	10/30/2009	1/7/2014	13/260066	US	COOLING MEMORY MODULES USING COLD PLATE BLADES COUPLED TO THE MEMORY MODULES VIA CLIPS

PATENT
REEL: 038498 FRAME: 0503

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82852332	Granted	8843815	1/18/2010	9/23/2014	13/258484	US	System And Method For Automatically Extracting Metadata From Unstructured Electronic Documents
82852406	Published		7/31/2009		13/382247	US	Compression Of XML Data
82852868	Granted	8959205	7/31/2009	2/17/2015	13/384671	US	Method And System To Recognize And Inventory Applications
82852890	Granted	8763005	7/24/2009	6/24/2014	13/259590	US	Virtual-machine-based Application-service Provision Of Front-End Versions Of Back-End Applications (as amended)
82852930	Published		7/2/2009		13/379161	US	METHOD AND APPARATUS FOR SUPPORTING A COMPUTER-BASED PRODUCT
82852934	Granted	8692683	8/9/2009	4/8/2014	13/258548	US	Illuminable Indicator Of Electronic Device Being Enabled Based At Least On User Presence
82853005	Published		10/15/2009		13/258970	US	Information Technology System Change Planning
82853019	Allowed		10/15/2009		13/259498	US	HETEROGENEOUS DATA SOURCE MANAGEMENT
82853022	Granted	8575585	7/13/2009	11/5/2013	13/382281	US	MEMRISTIVE DEVICE
82853030	Granted	8661283	3/25/2009	2/25/2014	13/259118	US	POWER DISTRIBUTION UNIT-DEVICE CORRELATION
82853097	Granted	8779848	8/28/2009	41835	13/383981	US	TWO TERMINAL MEMCAPACITOR DEVICE
82853099	Published		10/6/2009		13/260127	US	Icons With Subparts Presenting Information About A System
82853122	Granted	8787176	10/29/2009	41842	13/259551	US	SWITCH THAT MONITORS FOR FINGERPRINTED PACKETS
82853145	Granted	9036991	10/30/2009	5/19/2015	13/259833	US	TRANSMITTER AND RECEIVER ARRANGEMENTS FOR TESTING AN OPTICAL FIBER
82853154	Granted	9032517	10/31/2009	5/12/2015	13/259307	US	MALICIOUS CODE DETECTION
82853162	Granted	8745357	11/30/2009	41793	13/259593	US	REMAPPING FOR MEMORY WEAR LEVELING
82853237	Granted	8546898	10/29/2009	10/1/2013	13/259196	US	OPTOELECTRONIC LIGHT EXPOSURE MEMORY
82853239	Published		1/29/2010		13/259857	US	MULTIMODE VERTICAL-CAVITY SURFACE-EMITTING LASER ARRAYS
82853248	Published		1/29/2010		13/259402	US	NON-PERIODIC GRATINGS FOR SHAPING REFLECTED AND TRANSMITTED LIGHT IRRADIANCE PROFILES
82853254	Granted	8952403	1/29/2010	2/10/2015	13/259886	US	OPTICAL DEVICES BASED ON NON-PERIODIC SUB-WAVELENGTH GRATINGS
82853260	Published		10/30/2009		13/259202	US	HARD DISK DRIVE HAVING REGIONS CORRESPONDING TO DIFFERENT SPEEDS AT WHICH STORAGE SURFACE ROTATES
82853262	Granted	8537634	11/13/2009	41534	13/259128	US	PARALLELIZED CHECK POINTING USING Mats AND THROUGH SILICON Vias (tsvs)
82853266	Published		10/31/2009		13/259216	US	Determining Probability Than An Object Belongs To A Topic Using Sample Items Selected From Object And Probability Distribution Profile Of The Topic
82853801	Granted	8225341	9/30/2011	7/17/2012	13/250724	US	Data Storage Means

PATENT
REEL: 038498 FRAME: 0504

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82853812	Published		9/14/2010		13/260293	US	Automatic Selection Of Agent-based Or Agentless Monitoring
82853898	Published		2/23/2010		13/260261	US	SIMULATING SUPPLY AND DEMAND REALIZATION IN WORKFORCE PLAN EVALUATION
82853904	Published		2/26/2010		13/260258	US	ELICITING CUSTOMER PREFERENCE FROM PURCHASING BEHAVIOR SURVEYS
82853946	Granted	8667235	2/11/2010	3/4/2014	13/259739	US	DATA DE-DUPLICATION FOR SERIAL-ACCESS STORAGE MEDIA
82853976	Granted	8774638	7/31/2009	7/8/2014	13/260095	US	PHOTONIC QUANTUM SYSTEM ALIGNMENT USING MULTIPLE BEAMS
82854047	Granted	8917616	10/28/2009	12/23/2014	13/260162	US	METHODS AND APPARATUS FOR DETECTION OF A NAT DEVICE
82854053	Granted	9037876	1/31/2010	5/19/2015	13/260175	US	METHOD FOR MITIGATING FALSE POWERED DEVICE DETECTION
82854055	Granted	8751642	1/31/2010	6/10/2014	13/260181	US	METHOD AND SYSTEM FOR MANAGEMENT OF SAMPLED TRAFFIC DATA
82855510	Granted	8649167	6/19/2009	2/11/2014	13/320607	US	Pivoting Mounts For Media Drives
82856223	Granted	8345372	1/9/2012	1/1/2013	13/346058	US	MEDIUM FOR USE IN A TAPE DRIVE APPARATUS
82856365	Granted	8706101	6/1/2010	4/22/2014	13/375881	US	METHOD AND APPARATUS FOR ASSOCIATING A SUBSCRIBER DIRECTORY IDENTIFIER TO A SUBSCRIBER IDENTIFIER
82858610	Published		4/30/2012		13/459523	US	MEMORY ACCESS UNLOCK
82859749	Granted	8665704	11/25/2011	3/4/2014	13/304463	US	Parallelly Coupled Stackable Network Switching Device
82859772	Granted	8817491	4/27/2009	8/26/2014	13/263658	US	Electric Power Conversion System Having An Adaptable Transformer Turns Ratio For Improved Efficiency
82859781	Published		4/29/2012		13/459199	US	Forward Counter Block
82859794	Granted	8645726	4/30/2009	2/4/2014	13/263693	US	Method And System For Load Sharing In A Multiple Power Supply System
82861999	Granted	8682846	10/24/2011	41723	13/279335	US	CONTENT ITEM RECONCILLIATION
82862591	Published		11/4/2011		13/289747	US	PROJECT COMPLIANCE ASSESSMENT
82864729	Granted	8730627	6/8/2009	5/20/2014	13/263942	US	DECREASING VOLTAGE DETECTION WITH CONTROL SIGNALING
82868328	Published		11/3/2011		13/288488	US	Method and System for Providing Community Networking Services in an Organization
82871734	Published		2/9/2012		13/370018	US	Storage Configuration Discovery
82881395	Granted	8595528	11/8/2011	41604	13/291301	US	System And Method For Implementing An Integrated Circuit Having A Dynamically Variable Power Limit
82882010	Published		3/8/2012		13/414962	US	Systems and Methods for Service Delivery of Automatic Service Level Agreements
82884043	Granted	8582287	6/19/2009	11/12/2013	13/320736	US	Drive Carrier With Pivoting Handle

PATENT
REEL: 038498 FRAME: 0505

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0506

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82884500	Granted	8661456	6/1/2011	2/25/2014	13/285939	US	Extendable Service Oriented Event Correlation Open Platform Architecture
82892261	Granted	8626429	2/15/2012	1/7/2014	13/397280	US	Allocation of Flight Legs to Dispatcher Positions
82892275	Published		3/8/2012		13/415803	US	INTERPRETING REQUESTS AND PROVIDING RESPONSES IN THE CONTEXT OF A PROCESS
82893480	Granted	8863122	7/31/2009	41926	13/383506	US	REMOTE CONTROL OF A PLURALITY OF VIRTUAL MACHINES USING ACTIONS FACILITATED THROUGH A GRAPHIC USER INTERFACE (AS AMENDED)
82894965	Granted	8331364	11/21/2011	41254	13/301088	US	HIGHLY FLEXIBLE AND EFFICIENT MAC TO PHY INTERFACE
82894971	Granted	8738995	9/10/2009	5/27/2014	13/384678	US	Memory Subsystem Having A First Portion To Store Data With Error Correction Code Information And A Second Portion To Store Data Without Error Correction Code Information
82895034	Published		8/11/2009		13/384666	US	Enclosure Airflow Controller
82895043	Granted	8838907	10/7/2009	9/16/2014	13/384700	US	Notification Protocol Based Endpoint Caching Of Host Memory
82899663	Published		2/28/2012		13/407125	US	DISTRIBUTION TREES WITH STAGES
82899677	Granted	9087052	4/30/2012	7/21/2015	13/459256	US	BATCH DBMS STATEMENT PROCESSING SUCH THAT INTERMEDIATE FEEDBACK IS PROVIDED PRIOR TO COMPLETION OF PROCESSING
82899689	Published		3/30/2012		13/435106	US	INDICATORS FOR STORAGE CELLS
82899712	Published		9/27/2012		13/628886	US	SESSION KEY ASSOCIATED WITH COMMUNICATION PATH
82899734	Granted	8737007	3/28/2012	41786	13/432130	US	REDUCTION OF DEGRADATION OF MAGNETIC TAPE APPARATUS
82900158	Granted	9008954	4/30/2012	4/14/2015	13/460230	US	PREDICTING IMPACT OF A TRAFFIC INCIDENT ON A ROAD NETWORK
82900189	Allowed		5/31/2012		13/485730	US	GENERATION OF EXPLANATORY SUMMARIES
82900193	Granted	8688728	2/27/2012	4/1/2014	13/406090	US	SYSTEM AND METHOD OF SEARCHING A CORPUS
82900213	Published		3/30/2012		13/434938	US	ENCRYPTED PAYMENT IMAGE
82900564	Published		2/21/2012		13/400673	US	DETERMINATION OF EXPERTISE AUTHORITY
82900633	Granted	8918660	2/28/2012	12/23/2014	13/406593	US	POWER SOURCING NETWORK PORT RESET
82900690	Published		3/26/2012		13/429741	US	INTENTION STATEMENT VISUALIZATION
82900694	Granted	9064009	3/28/2012	6/23/2015	13/432639	US	ATTRIBUTE CLOUD
82900788	Granted	9081818	3/13/2012	42199	13/418405	US	SAS FABRIC DISCOVERY
82900919	Published		9/20/2012		13/623335	US	DATA PACKET STREAM FINGERPRINT
82901638	Granted	8654473	1/12/2012	2/18/2014	13/348802	US	TAPE HEAD LENGTH ADJUSTMENT
82901661	Granted	9098325	2/28/2012	42220	13/407050	US	PERSISTENT VOLUME AT AN OFFSET OF A VIRTUAL BLOCK DEVICE OF A STORAGE SERVER
82901684	Published		5/31/2012		13/484895	US	Calculating A Misconduct Prediction Value
82901999	Published		6/12/2012		13/494761	US	Hybrid Memory Module

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82902027	Granted	8822275	4/30/2012	41884	13/459924	US	COMPOSITE WAFER INCLUDING A MOLDED WAFER AND A SECOND WAFER
82903375	Granted	8995271	4/30/2012	3/31/2015	13/459949	US	COMMUNICATIONS FLOW ANALYSIS
82904455	Published		5/29/2012		13/482533	US	SERVER MANAGEMENT CONNECTIONS
82904463	Published		2/29/2012		13/408544	US	MIGRATION OF PROFILES BETWEEN VIRTUAL CONNECT DOMAINS
82904478	Published		1/27/2012		13/360076	US	METHOD AND SYSTEM FOR OPTIMUM ROUTING
82910274	Allowed		6/10/2010		13/382105	US	Data Center Cooler with Chiller and Cooling Tower (as amended)
82911239	Published		4/30/2012		13/459264	US	SERVICE PROVIDER-HOSTED VIRTUAL MACHINE INSTANTIATION BY HOSTER USER FOR USE BY END USERS
82911256	Granted	8990646	5/31/2012	3/24/2015	13/485824	US	MEMORY ERROR TEST ROUTINE
82911822	Published		4/30/2012		13/459917	US	FEED-FORWARD ARBITRATION
82911826	Published		3/19/2012		13/423916	US	COOLING AN ELECTRONIC ASSEMBLY USING POSITION VARIABLE FLOW RESTRICTORS
82911834	Granted	8665936	2/15/2012	3/4/2014	13/397158	US	DESIGN OF EXPERIMENTS TRANSMITTER TRAINING SYSTEMS AND METHOD
82913148	Granted	8656200	12/29/2011	2/18/2014	13/340311	US	System For Reducing Power Consumption In An Electronic Chip
82914270	Granted	9037551	3/7/2012	5/19/2015	13/413818	US	REDUNDANT ATTRIBUTE VALUES
82914685	Granted	8665559	3/19/2012	41702	13/423761	US	MAGNETIC HEAD
82915504	Granted	8775414	4/16/2012	7/8/2014	13/447737	US	System And Method For Executing Queries
82916233	Published		2/24/2012		13/404619	US	ACTIVE NON-VOLATILE MEMORY POST-PROCESSING
82916237	Published		4/30/2012		13/459970	US	Distributed Active Data Storage Sytstem
82916253	Published		3/26/2012		13/430673	US	REDUCING CABLING COSTS IN A DATACENTER NETWORK
82916257	Granted	8938599	3/15/2012	42024	13/421651	US	Distributed Graph Storage System
82916265	Granted	8966204	2/29/2012	2/24/2015	13/408276	US	Data Migration between Memory Locations
82916273	Published		11/30/2012		13/690426	US	RATE LIMIT MANAGERS TO ASSIGN NETWORK TRAFFIC FLOWS
82916296	Granted	8813042	4/6/2012	41870	13/441656	US	Identifying Globally Consistent States in a Multithreaded Program
82916308	Published		4/30/2012		13/460344	US	USING A CACHE IN A DISAGGREGATED MEMORY ARCHITECTURE
82918884	Published		1/13/2012		13/350485	US	Controlling Access To Communication Services
82919274	Published		6/15/2010		13/384136	US	Method And System For Verifying Data Accuracy
82919402	Granted	8365292	1/17/2012	1/29/2013	13/352088	US	Methods And Systems For Managing A Potential Security Threat To A Network
82922672	Published		4/30/2012		13/460591	US	ANTENNA
82922683	Granted	8569900	7/20/2009	10/29/2013	13/383183	US	NANOWIRE SENSOR WITH ANGLED SEGMENTS THAT ARE DIFFERENTLY FUNCTIONALIZED

PATENT
REEL: 038498 FRAME: 0507

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0508

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82923475	Published		7/8/2010		13/383594	US	Resource Assignment For Jobs In A System Having A Processing Pipeline
82923487	Granted	8750062	7/30/2010	41800	13/383602	US	MEMORY ELEMENT AND METHOD FOR DETERMINING THE DATA STATE OF A MEMORY ELEMENT
82924163	Granted	8705265	4/30/2010	4/22/2014	13/383614	US	IONIC DEVICES CONTAINING A MEMBRANE BETWEEN LAYERS
82924165	Granted	8735858	4/30/2010	5/27/2014	13/383616	US	IONIC DEVICES WITH INTERACTING SPECIES
82924182	Published		1/29/2010		13/383634	US	MEMRISTOR WITH CONTROLLED ELECTRODE GRAIN SIZE
82924186	Granted	8530873	1/29/2010	41527	13/383994	US	ELECTROFORMING FREE MEMRISTOR AND METHOD FOR FABRICATING THEREOF (as amended)
82924188	Granted	8904092	2/10/2010	12/2/2014	13/383641	US	IDENTIFYING A LOCATION CONTAINING INVALID DATA IN A STORAGE MEDIA
82924272	Published		2/1/2010		13/384977	US	Deep Sleep Mode Management For A Network Switch
82925145	Published		10/29/2009		13/384931	US	NETWORK SWITCH CONNECTED TO A SENSOR
82925886	Granted	8564867	12/10/2009	41569	13/386382	US	Fair Token Arbitration Systems And Methods
82926132	Published		11/23/2009		13/384838	US	System And Method For Object Relationship Identification In A User Interface
82929144	Published		3/13/2010		13/386402	US	SELECTING SUPPLIERS TO PERFORM SERVICES FOR AN ENTERPRISE
82929158	Published		3/30/2012		13/436541	US	ANALYZING SOCIAL MEDIA
82929166	Published		9/6/2012		13/605665	US	Computer Cluster with Objectives-Based Resource Sharing
82929186	Published		4/24/2012		13/454693	US	Query Engine Communication
82929204	Granted	8972415	4/30/2012	42066	13/460015	US	Similarity Search Initialization
82929212	Published		4/9/2012		13/442358	US	DETERMINING AN ALLOCATION OF RESOURCES TO ASSIGN TO JOBS OF A PROGRAM
82930243	Published		9/23/2009		13/386053	US	PROVIDING IN RUSH CURRENT TOLERANCE TO AN ELECTRONIC DEVICE
82930446	Granted	8879300	4/22/2010	11/4/2014	13/384853	US	SWITCHABLE TWO-TERMINAL DEVICES WITH DIFFUSION/DRIFT SPECIES
82930514	Granted	9052463	6/22/2010	6/9/2015	13/384861	US	COUPLING OF A LASER SOURCE TO AN OPTICAL DATA DISTRIBUTING DEVICE
82930554	Granted	8681579	4/30/2010	3/25/2014	13/384885	US	PROGRAMMABLE CURRENT-LIMITED VOLTAGE BUFFER, INTEGRATED-CIRCUIT DEVICE AND METHOD FOR CURRENT-LIMITING A MEMORY ELEMENT
82931175	Published		3/10/2010		13/384837	US	Data Protection
82931425	Granted	8781276	1/29/2010	41835	13/387025	US	GRATING-BASED OPTICAL FIBER-TO-WAVEGUIDE INTERCONNECTS
82931436	Granted	9093819	1/29/2010	42213	13/387030	US	VERTICAL-CAVITY SURFACE-EMITTING LASERS WITH NON-PERIODIC GRATINGS

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0509

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82932592	Granted	8521918	11/10/2009	8/27/2013	13/386608	US	Selectively Hiding An Interface Controller From An Operating System
82933778	Allowed		1/28/2010		13/386573	US	TEACHING A NETWORK DEVICE USING UNSOLICITED TEACHING MESSAGES
82934041	Published		10/26/2009		13/386436	US	SPARSE INDEX BIDDING AND AUCTION BASED STORAGE
82934109	Granted	8832348	1/29/2010	9/9/2014	13/386989	US	Methods And Systems For An Interposer Board
82937588	Granted	9134783	3/24/2010	42262	13/386639	US	Power Capping Feedback Normalization
82938235	Granted	9013073	4/22/2010	42115	13/387169	US	System And Method For Balancing Input Current With Parallel Power Supplies
82938243	Granted	8677159	11/6/2009	41716	13/387054	US	SYSTEM AND METHOD FOR EXTENDING THE USB POWER SIGNAL
82938258	Granted	8982552	12/28/2009	3/17/2015	13/387085	US	A SYSTEM FOR PROVIDING PHYSICALLY SEPARATED COMPUTE AND I/O RESOURCES IN THE DATACENTER TO ENABLE SPACE AND POWER SAVINGS
82938271	Granted	8799545	2/26/2010	41856	13/387186	US	RESTORING STABILITY TO AN UNSTABLE BUS
82938283	Granted	8854809	3/22/2010	10/7/2014	13/387092	US	MODULAR DATA CENTER
82938289	Granted	9013200	12/4/2009	42115	13/387654	US	CIRCUITRY FOR HOT-SWAPPABLE CIRCUIT BOARDS
82938297	Published		12/2/2009		13/387671	US	SIGNAL SENSING DEVICES AND CIRCUIT BOARDS
82938681	Granted	8843422	3/31/2010	9/23/2014	13/386771	US	CLOUD ANOMALY DETECTION USING NORMALIZATION, BINNING AND ENTROPY DETERMINATION
82939728	Granted	8654980	1/28/2011	2/18/2014	13/387361	US	QUANTUM KEY DISTRIBUTION METHOD AND APPARATUS
82939734	Granted	8737113	2/8/2010	41786	13/387063	US	MEMORY RESISTOR HAVING MULTI-LAYER ELECTRODES
82944481	Published		3/29/2012		13/434581	US	TRADE-IN OPTION LEVEL
82947624	Granted	7177904	5/17/2001	2/13/2007	09/861094	US	TECHNIQUES FOR SHARING CONTENT INFORMATION WITH MEMBERS OF A VIRTUAL USER GROUP IN A NETWORK ENVIRONMENT WITHOUT COMPROMISING USER PRIVACY
82947629	Granted	7469246	5/18/2001	39805	09/860646	US	METHOD AND SYSTEM FOR CLASSIFYING OR CLUSTERING ONE ITEM INTO MULTIPLE CATEGORIES
82947632	Granted	7945600	3/4/2005	40680	11/073338	US	TECHNIQUES FOR ORGANIZING DATA TO SUPPORT EFFICIENT REVIEW AND ANALYSIS
82947637	Granted	7877388	10/31/2007	1/25/2011	11/931004	US	METHOD AND SYSTEM FOR GUIDED CLUSTER BASED PROCESSING PROTOTYPES
82947641	Granted	7664821	1/26/2007	40225	11/627886	US	SYSTEMS AND METHODS FOR DETERMINING COMMUNICATION CHAINS BASED ON MESSAGES
82947652	Published		8/27/2010		12/870733	US	CLUSTERING OF NEAR-DUPLICATE DOCUMENTS
82947660	Granted	8244767	5/21/2010	41135	12/785113	US	COMPOSITE LOCALITY SENSITIVE HASH BASED PROCESSING OF DOCUMENTS
82947664	Granted	8484221	5/25/2010	41464	12/787119	US	ADAPTIVE ROUTING OF DOCUMENTS TO SEARCHABLE INDEXES

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82948095	Granted	5893095	3/28/1997	36256	08/829791	US	SIMILARITY ENGINE FOR CONTENT-BASED RETRIEVAL OF IMAGES
82948096	Granted	5915250	3/28/1997	6/22/1999	08/829790	US	A VISUAL IMAGE DATABASE SEARCH ENGINE WHICH ALLOWS FOR DIFFERENT SCHEMA
82948101	Granted	5983237	8/21/1997	36473	08/916904	US	VISUAL DICTIONARY
82948110	Granted	6084595	2/24/1998	36711	09/028279	US	INDEXING METHOD FOR IMAGE SEARCH ENGINE
82948115	Granted	7093191	12/21/2001	8/15/2006	10/032042	US	VIDEO CATALOGER SYSTEM WITH SYNCHRONIZED ENCODERS
82948118	Granted	6463444	8/14/1998	10/8/2002	09/134498	US	VIDEO CATALOGER SYSTEM WITH EXTENSIBILITY
82948122	Granted	7295752	2/5/2002	11/13/2007	10/067550	US	VIDEO CATALOGER SYSTEM WITH AUDIO TRACK EXTRACTION
82948130	Granted	6833865	7/29/1999	38342	09/363973	US	EMBEDDED METADATA ENGINES IN DIGITAL CAPTURE DEVICES
82948135	Granted	7222163	4/6/2001	5/22/2007	09/827772	US	SYSTEM AND METHOD FOR HOSTING OF VIDEO CONTENT OVER A NETWORK
82948136	Granted	7769827	5/22/2007	8/3/2010	11/752206	US	INTERACTIVE VIDEO APPLICATION HOSTING
82948141	Granted	8495694	5/12/2011	7/23/2013	13/106283	US	VIDEO-ENABLED COMMUNITY BUILDING
82948147	Granted	8548978	8/21/2007	41548	11/842740	US	NETWORK VIDEO GUIDE AND SPIDERING
82948270	Granted	5778364	1/2/1996	35983	08/581853	US	EVALUATION OF CONTENT OF A DATA SET USING MULTIPLE AND/OR COMPLEX QUERIES
82948284	Granted	6457047	5/8/2000	9/24/2002	09/566675	US	APPLICATION CACHING SYSTEM AND METHOD
82948301	Granted	6910026	8/27/2001	6/21/2005	09/940365	US	METHOD AND APPARATUS FOR DETERMINING CLASSIFIER FEATURES WITH MINIMAL SUPERVISION
82948434	Granted	7085771	5/17/2002	8/1/2006	10/150795	US	System and Method for Automatically Discovering a Hierarchy of Concepts from a Corpus of Documents
82948545	Granted	8688695	5/26/2011	4/1/2014	13/116763	US	COMPUTERIZED SEARCHABLE DOCUMENT REPOSITORY USING SEPARATE METADATA AND CONTENT STORES AND FULL TEXT INDEXES
82948554	Granted	8788601	5/26/2011	7/22/2014	13/116330	US	RAPID NOTIFICATION SYSTEM
82948559	Granted	8442950	8/16/2010	5/14/2013	12/857368	US	Data surrogate generation for data management
82948602	Granted	8276016	2/1/2010	9/25/2012	12/697990	US	ENTERPRISE SERVICE AVAILABILITY THROUGH IDENTITY PRESERVATION
82948605	Granted	7917475	8/7/2006	3/29/2011	11/500806	US	ENTERPRISE SERVICE AVAILABILITY THROUGH IDENTITY PRESERVATION
82948608	Granted	8275749	8/7/2006	41177	11/500821	US	ENTERPRISE SERVICE AVAILABILITY THROUGH IDENTITY PRESERVATION
82948611	Published		10/2/2006		11/541963	US	RETRO-FITTING SYNTHETIC FULL COPIES OF DATA
82948614	Granted	8271436	10/2/2006	9/18/2012	11/541857	US	RETRO-FITTING SYNTHETIC FULL COPIES OF DATA
82948617	Granted	8812433	10/2/2006	8/19/2014	11/541891	US	DYNAMIC BULK-TO-BRICK TRANSFORMATION OF DATA
82948620	Granted	8799206	10/2/2006	41856	11/541858	US	DYNAMIC BULK-TO-BRICK TRANSFORMATION OF DATA

PATENT
REEL: 038498 FRAME: 0510

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82948636	Granted	6754647	9/26/2000	6/22/2004	09/670478	US	Method and apparatus for hierarchically decomposed bot scripts
82948648	Granted	6532401	6/14/2001	3/11/2003	09/883129	US	Methods for automatically verifying the performance of a virtual robot
82948651	Granted	6604090	2/3/1998	8/5/2003	09/018213	US	System and method for selecting responses to user input in an automated interface program
82948654	Granted	6314410	4/27/1998	11/6/2001	09/067322	US	System and method for identifying the context of a statement Made to a virtual robot
82948657	Granted	6629087	3/18/1999	9/30/2003	09/271665	US	Methods for creating and editing topics for virtual robots conversing in natural language
82949650	Granted	8473686	5/5/2012	41450	13/464962	US	Computer Cache System With Stratified Replacement
82951900	Granted	7461085	11/23/2005	12/2/2008	11/286233	US	APPARATUS AND METHOD FOR PARAMETRIC GROUP PROCESSING
82951986	Granted	8669785	7/31/2012	3/11/2014	13/563167	US	LOGIC CIRCUITS USING NEURISTORS
82961641	Granted	8914663	3/28/2012	12/16/2014	13/432309	US	RESCHEDULING FAILED BACKUP JOBS
82961741	Published		6/28/2012		13/536595	US	Network Lane Reconfiguration
82961767	Granted	8966296	7/17/2012	2/24/2015	13/550669	US	TRANSITIONING A PERFORMANCE STATE OF A PROCESSOR
82961772	Allowed		5/18/2012		13/475677	US	DATA SWITCH WITH POWER BUDGETING
82961795	Granted	8898514	6/25/2012	11/25/2014	13/532287	US	SAS STORAGE DRIVE SYSTEM WITH FAILURE INFORMATION TABLE
82961892	Granted	8806464	4/26/2012	8/12/2014	13/456385	US	PROCESS FLOW OPTIMIZED DIRECTED GRAPH TRAVERSAL
82961932	Granted	8724250	4/3/2012	5/13/2014	13/438461	US	READING MAGNETIC TAPE
82961936	Granted	8780485	4/23/2012	7/15/2014	13/453738	US	Data Transfer of A Linear Tape Drive
82961958	Published		4/26/2012		13/456574	US	MULTIPLE CHANNEL PHASE DETECTION
82962497	Published		4/30/2012		13/459903	US	Data Migration
82962517	Granted	8675523	5/30/2012	3/18/2014	13/483498	US	OPTIMIZED SPANNING TREE CONSTRUCTION BASED ON PARAMETER SELECTION
82962525	Allowed		8/29/2012		13/598267	US	INSTRUCTION FORWARDING BASED ON PREDICATION CRITERIA
82962563	Granted	9128754	5/31/2012	9/8/2015	13/484464	US	Resource Starvation Management In A Computer System
82962608	Published		7/31/2012		13/562906	US	EARLY RELEASE OF TRANSACTION LOCKS BASED ON TAGS
82962662	Granted	9003091	10/18/2012	4/7/2015	13/655241	US	Flow Control for a Serial Peripheral Interface Bus
82962682	Granted	9098252	6/21/2012	8/4/2015	13/529257	US	Peripheral Component Interconnect Riser Cage Fastener
82962834	Allowed		4/23/2012		13/453238	US	Dynamic Software Updates
82962855	Published		5/30/2012		13/483785	US	Method and System For Determining Customer Conversion
82962929	Published		4/27/2012		13/458266	US	AWARDING A GROUP- TARGETED PROMOTION
82962934	Granted	8856168	4/30/2012	10/7/2014	13/459307	US	CONTEXTUAL APPLICATION RECOMMENDATIONS
82963014	Application		3/27/2012		13/431773	US	NESTED COMPLEX SEQUENCE PATTERN QUERIES OVER EVENT STREAMS
82963037	Granted	8595799	4/18/2012	11/26/2013	13/449908	US	ACCESS AUTHORIZATION

PATENT
REEL: 038498 FRAME: 0511

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82963084	Published		4/26/2012		13/456800	US	STATEFUL SIMULATION
82963089	Published		4/26/2012		13/457449	US	Open Station as Stream Analysis Operator Container
82963097	Granted	9032527	4/3/2012	5/12/2015	13/438567	US	INFERRING A STATE OF BEHAVIOR THROUGH MARGINAL PROBABILITY ESTIMATION
82963101	Published		4/26/2012		13/456384	US	Concatenation for Relations
82963378	Published		4/27/2012		13/458506	US	METHODS AND APPARATUS FOR SYSTEM PERFORMANCE MONITORING
82963387	Published		4/19/2012		13/450598	US	PROVIDING A CORRELATION RING FOR INDICATING CORRELATION BETWEEN ATTRIBUTES
82963401	Granted	8768977	7/31/2012	7/1/2014	13/562941	US	Data Management Using Writeable Snapshots in Multi-Versioned Distributed B-Trees
82963409	Allowed		4/24/2012		13/454462	US	MICRO-RING OPTICAL RESONATORS
82963413	Published		4/27/2012		13/458044	US	MANAGING A SUSTAINABLE CLOUD COMPUTING SERVICE
82963438	Granted	9009524	4/30/2012	4/14/2015	13/460807	US	Prioritizing Recovery in a Storage System Implementing RAid
82963455	Granted	8677485	7/13/2012	3/18/2014	13/548638	US	DETECTING NETWORK ANOMALY
82963459	Granted	9136894	4/30/2012	9/15/2015	13/460351	US	HYBRID PLATFORM FOR A SOFTWARE DEFINED RADIO
82963475	Published		4/28/2012		13/459143	US	Detecting Anomalies In Power Consumption Of Electrical Systems
82963487	Published		4/24/2012		13/454551	US	NETWORK MANAGEMENT
82963516	Published		4/27/2012		13/458854	US	OPTICAL SHUFFLE SYSTEM HAVING A LENS FORMED OF SUB-WAVELENGTH GRATINGS
82963533	Granted	8693195	5/1/2012	41737	13/460991	US	CHASSIS APPARATUS PROTRUDING ELECTRONIC DEVICES
82963562	Granted	8767725	4/20/2012	7/1/2014	13/451686	US	BACKPLANE MODULE
82963596	Published		4/18/2012		13/449851	US	GENERATING LOAD SCENARIOS BASED ON REAL USER BEHAVIOR
82963636	Published		4/20/2012		13/452598	US	Reputation-Based Service Valuation
82963661	Published		8/30/2012		13/599803	US	MODIFICATION OR ADDITION TO FORWARDING TABLE BASED ON ADDRESS
82963670	Granted	8856341	5/31/2012	41919	13/485079	US	BALANCING MANAGEMENT DUTIES IN A CLOUD SYSTEM
82963813	Published		4/26/2012		13/457195	US	Testing Applications
82964555	Published		4/16/2012		13/447510	US	DETERMINING A MAXIMAL SIZE OF PACKETS
82964560	Granted	8924797	4/16/2012	42003	13/447512	US	IDENTIFYING A DIMENSION ASSOCIATED WITH AN ABNORMAL CONDITION
82964698	Published		4/27/2012		13/457668	US	Eliciting A Customer's Product Preference Propensities Among Sub-Groups In A Social Network
82964712	Granted	8873369	4/25/2012	41940	13/455445	US	FIBER CHANNEL 1:N REDUNDANCY
82964744	Granted	8879458	4/23/2012	11/4/2014	13/453664	US	TRANSMISSION IN A NETWORK WITH ACTIVE AND SLEEPING CLIENTS

PATENT
REEL: 038498 FRAME: 0512

Schedule A of Patent Assignment

PATENT
REEL: 038498 FRAME: 0513

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82964789	Published		10/23/2012		13/658075	US	ADAPTIVE ANALYSIS OF SIGNALS
82964964	Published		8/29/2012		13/597689	US	Identifying a Defect Density
82965371	Granted	9148363	6/19/2012	42276	13/527226	US	MULTICAST ROUTING
82965379	Granted	8750311	7/25/2012	41800	13/557986	US	FIBRE CHANNEL HOST VIRTUALIZATION
82965396	Published		9/28/2012		13/629689	US	COMPARING TARGET EFFORT TO ACTUAL EFFORT FOR SOFTWARE DEVELOPMENT REQUIREMENTS
82965414	Granted	8608493	4/25/2012	41625	13/456147	US	KEYING MECHANISM FOR DEVICE BAY
82965428	Published		5/23/2012		13/478239	US	OVER-CURRENT PROTECTION FUSES
82965448	Granted	9036469	4/26/2012	42143	13/456292	US	DATA COMMUNICATION IN OPENFLOW NETWORKS
82965470	Granted	8966313	4/30/2012	42059	13/460796	US	SYSTEMS AND METHODS FOR A SHARED DEBUG PIN
82965502	Granted	8864388	5/1/2012	10/21/2014	13/460986	US	FACEPLATE APPARATUS AND SYSTEM FOR COUPLING TO AN ELECTRONIC DEVICE
82965508	Granted	9063884	10/23/2012	42178	13/658078	US	ANALYSIS OF HEALTH INDICATORS OF A SYSTEM
82965671	Allowed		4/27/2012		13/457770	US	Communicating with Verified Data
82969959	Granted	8914578	9/27/2012	41989	13/628575	US	CAPACITY-EXPANSION OF A LOGICAL VOLUME
82972658	Published		6/29/2012		13/537721	US	DELEGATION WITHIN A COMPUTING ENVIRONMENT
82972979	Granted	8717831	4/30/2012	41765	13/460514	US	MEMORY CIRCUIT
82976926	Published		5/29/2012		13/482066	US	NETWORK TRAFFIC MONITORING
82978166	Granted	8658463	7/30/2012	2/25/2014	13/562063	US	MEMRISTOR WITH EMBEDDED SWITCHING LAYER
82978174	Granted	9082972	7/24/2012	7/14/2015	13/557199	US	BIPOLAR RESISTIVE SWITCH HEAT MITIGATION
82978197	Granted	8587861	7/17/2012	11/19/2013	13/551373	US	MAKING A CROSS-LINKED POLYMER NETWORK
82978206	Granted	8934745	7/31/2012	42017	13/563135	US	APPARATUS FOR USE IN OPTOELECTRONICS HAVING A SANDWICHED LENS
82986335	Granted	8930704	4/10/2012	42010	13/443285	US	Digital Signature Method And System
82990637	Published		6/15/2012		13/524290	US	CONTROLLING COMMUNICATION OF DATA FOR DIFFERENT USER PERSONAS
82990649	Granted	8948180	10/18/2012	2/3/2015	13/654670	US	ROUTING ENCAPSULATED DATA PACKETS ONTO SELECTED VLANS
82990949	Published		6/20/2012		13/528590	US	Determining Sensor Placement in Distributed Networks
82990987	Published		6/29/2012		13/539090	US	IMPLEMENTING A SOFTWARE DEFINED NETWORK USING EVENT RECORDS THAT ARE TRANSMITTED FROM A NETWORK SWITCH
82990995	Granted	8819078	7/13/2012	41877	13/549112	US	EVENT PROCESSING FOR GRAPH-STRUCTURED DATA
82991015	Published		10/31/2012		13/665490	US	MEMORY ADDRESS TRANSLATIONS
82996597	Published		6/22/2012		13/531198	US	Configuring process variants for on-boarding customer information technology (IT) outsourcing
83001260	Granted	D705231	7/12/2012	41779	29/427009	US	Extended Bezel for a Blade Server
83002356	Published		4/30/2012		13/459401	US	GENERATING TRIAL WIRELESS ACCESS POINT (WAP) CONFIGURATIONS

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83010274	Published		6/21/2012		13/528913	US	COLLISION MEASUREMENT SYSTEM AND METHOD THEREOF
83010537	Granted	8861256	9/28/2012	41926	13/630897	US	Data storage in memory array with less than half of cells in any row and column in low-resistance states
83010574	Granted	9015428	9/28/2012	4/21/2015	13/630320	US	PHYSICAL AND LOGICAL COUNTERS
83010608	Allowed		1/29/2013		13/753238	US	POWER STATE TRANSITION SAVING SESSION INFORMATION
83010614	Granted	8976033	2/6/2013	42073	13/760902	US	CONTROLLER COUPLED TO VISUAL INDICATOR
83010643	Granted	8812915	9/27/2012	41870	13/628659	US	DETERMINING WHETHER A RIGHT TO USE MEMORY MODULES IN A RELIABILITY MODE HAS BEEN ACQUIRED
83010655	Allowed		7/17/2012		13/550678	US	DETERMINATION OF WHETHER STORAGE DOMAIN PATHS FOR STORAGE DEVICES INCLUDE A COMMON ROUTING MODULE
83011267	Granted	8768351	9/27/2012	7/1/2014	13/628341	US	Circuit-Switched Call Delivery
83011325	Granted	9015184	6/19/2012	42115	13/526742	US	PROTOCOL COMPLIANT ARCHIVING
83011356	Granted	D708216	6/1/2012	7/1/2014	29/423603	US	COMPUTING DEVICE DISPLAY SCREEN WITH GRAPHICAL USER INTERFACE (As Amended)
83011441	Granted	8972645	9/19/2012	42066	13/622942	US	REQUEST SENT TO STORAGE DEVICE BASED ON MOVING AVERAGE
83011717	Granted	8990509	9/24/2012	3/24/2015	13/625624	US	ACCELERATED PATH SELECTION BASED ON NUMBER OF WRITE REQUESTS AND SEQUENTIAL TREND
83011843	Granted	8779578	6/29/2012	7/15/2014	13/537404	US	Multi-chip Socket
83012317	Published		9/24/2012		13/625575	US	Filtering Access To Network Content
83012346	Published		4/14/2010		13/641054	US	Method For Keyword Extraction
83012824	Published		8/29/2012		13/597638	US	OFFLINE APPLICATION SUPPORT
83012842	Published		6/28/2012		13/536137	US	ADHESIVELY BONDING JACKETS TO CENTRAL PROCESSING UNITS
83012864	Granted	9118423	10/25/2010	42241	13/513438	US	POWER CONVERTER DEPENDENT ON A VOLTAGE RANGE THE INPUT VOLTAGE RESIDES IN (as amended)
83012867	Published		8/28/2012		13/597139	US	AUTOMATIC MOBILE APPLICATION UPDATES
83013399	Published		7/31/2012		13/562735	US	DETERMINING SUPPLIER ENVIRONMENTAL IMPACT
83013403	Published		7/31/2012		13/563030	US	KEYWORD EXTRACTION
83013411	Granted	9015725	7/31/2012	4/21/2015	13/563551	US	SYSTEMS AND METHODS FOR DISTRIBUTING A WORKLOAD IN A DATA CENTER
83013423	Published		7/31/2012		13/563595	US	DISTRIBUTED TRANSACTION PROCESSING
83013431	Granted	9104498	7/31/2012	8/11/2015	13/562764	US	MAXIMIZING SERVER UTILIZATION WITHIN A DATACENTER
83013439	Granted	9002791	8/28/2012	4/7/2015	13/596500	US	Logging Modifications to a Variable in Persistent Memory
83013454	Published		4/27/2010		13/643925	US	Method Of Extracting Named Entity
83013468	Published		7/30/2012		13/561482	US	PROVIDING A MEASURE REPRESENTING AN INSTANTANEOUS DATA CONSISTENCY LEVEL

PATENT
REEL: 038498 FRAME: 0514

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83013477	Granted	8793258	7/31/2012	41849	13/563574	US	PREDICTING SHARING ON A SOCIAL NETWORK
83013628	Granted	8867925	7/20/2012	41933	13/554246	US	REDUCING ELECTRICAL CURRENT OF A SIGNAL DRIVER FOR AN OPTICAL TRANSMITTER
83013632	Granted	8385344	6/15/2012	2/26/2013	13/524908	US	TRANSMITTING A PACKET FROM A DISTRIBUTED TRUNK SWITCH
83013635	Granted	8921960	7/27/2012	42003	13/560935	US	MEMRISTOR CELL STRUCTURES FOR HIGH DENSITY ARRAYS
83013654	Granted	8773167	7/30/2012	41828	13/561978	US	IMPLEMENTING LOGIC CIRCUITS WITH MEMRISTORS
83013675	Granted	8780610	7/27/2012	7/15/2014	13/560058	US	STORING DATA IN A NON-VOLATILE LATCH
83013771	Published		12/11/2012		13/710833	US	Determining Efficient Assortments of Products
83013775	Published		7/31/2012		13/563679	US	SYSTEMS AND METHODS FOR ANALYZING FORECASTS AND RESPONSES IN COLLABORATIVE INVENTORY MANAGEMENT SETTINGS
83013803	Published		7/31/2012		13/563658	US	EXTRACTING RELATED CONCEPTS FROM A CONTENT STREAM USING TEMPORAL DISTRIBUTION
83013823	Published		7/31/2012		13/562691	US	Queue and operator instance threads to losslessly process online input streams
83014264	Granted	8677121	7/31/2012	41688	13/563175	US	MONITORING ENCRYPTED SESSION PROPERTIES
83014347	Granted	9141341	7/16/2012	9/22/2015	13/550310	US	INVERSION OF CONTROL FOR EXECUTABLE EXTENSIONS IN A RUN-TIME ENVIRONMENT
83014378	Published		7/30/2012		13/561255	US	DEFINING RELATIONSHIPS
83014407	Published		7/10/2012		13/545038	US	ENCLOSURE TEMPERATURE SCRIPT INTERPRETER
83014438	Granted	9037910	7/30/2012	5/19/2015	13/561989	US	SAS SELF-TEST OPERATIONS
83014473	Allowed		7/31/2012		13/563628	US	Storage Array Reservation Forwarding
83014496	Granted	8856392	7/16/2012	10/7/2014	13/549964	US	DIVIDING A PORT INTO SMALLER PORTS
83014922	Granted	8879444	6/18/2012	11/4/2014	13/526251	US	CASCADE SYSTEMS FOR NETWORK UNITS
83014954	Granted	8990806	7/31/2012	3/24/2015	13/563069	US	CUSTOMIZED VIRTUAL MACHINE CREATION
83014985	Granted	9141288	7/26/2012	9/22/2015	13/559077	US	CHARGEBACK BASED STORAGE RECOMMENDATIONS FOR DATACENTERS (as amended)
83014991	Granted	8929236	7/30/2012	42010	13/561451	US	NETWORK FLOW ANALYSIS
83015813	Granted	8959387	7/31/2012	42052	13/562852	US	Tape Drive Retry
83016763	Published		9/28/2012		13/630253	US	Road Maps from Clusters of Line Segments of Multiple Sources
83016771	Granted	8781041	7/31/2012	41835	13/563707	US	Reducing noise in a sequence of data by linear and non-linear estimation
83019079	Application		6/1/2012		29/423601	US	A DISPLAY SCREEN FOR DISPLAYING COLLABORATIVE RESOURCES ON A COMPUTING DEVICE (As Amended)

PATENT
REEL: 038498 FRAME: 0515

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83019087	Granted	D732566	6/1/2012	42178	29/423602	US	COMPUTING DEVICE INCLUDING A COMPUTERGENERATED FEATURE SET FOR PROVIDING COLLABORATIVE RESOURCES.
83019099	Granted	D720361	6/1/2012	42003	29/423604	US	COMPUTING DEVICE DISPLAYING GRAPHICAL USER INTERFACE FOR PROVIDING COLLABORATIVE RESOURCES
83019141	Granted	9052956	8/30/2012	42164	13/599869	US	SELECTING EXECUTION ENVIRONMENTS
83019145	Published		11/30/2012		13/690086	US	DIVIDING AND COMBINING OPERATIONS
83027915	Granted	9064221	6/21/2012	42178	13/530012	US	SYSTEM AND METHOD FOR CABLE MONITORING
83034236	Granted	8904176	4/28/2010	12/2/2014	13/643661	US	Protecting The Information Encoded In A Bloom Filter Using Encoded Bits Of Data
83034250	Granted	9007895	4/30/2010	4/14/2015	13/643281	US	Method For Routing Data Packets In A Fat Tree Network
83034264	Published		5/19/2010		13/696625	US	SYSTEM AND METHOD FOR WEB PAGE SEGMENTATION USING ADAPTIVE THRESHOLD COMPUTATION
83034272	Granted	8942559	5/20/2010	42031	13/696631	US	SWITCHING IN A NETWORK DEVICE
83035764	Granted	8938384	7/16/2012	1/20/2015	13/550346	US	LANGUAGE IDENTIFICATION FOR DOCUMENTS CONTAINING MULTIPLE LANGUAGES
83036777	Granted	8782185	7/30/2012	7/15/2014	13/561518	US	Network Booting A Machine Coupled To The Network By A Link Aggregation Group
83037312	Granted	8725749	7/24/2012	5/13/2014	13/556684	US	MATCHING REGULAR EXPRESSIONS INCLUDING WORD BOUNDARY SYMBOLS
83037416	Published		7/31/2012		13/563018	US	ENTITY MANAGEMENT DASHBOARD
83037421	Published		8/10/2012		13/572301	US	Multicast Packet Forwarding in a Network
83037461	Published		7/31/2012		13/563416	US	CONTROLLING AN EVENT BEHAVIOR OF AN ILLUMINATION INTERFACE FOR A NETWORK DEVICE
83037476	Published		9/14/2012		13/620255	US	UPDATING SECURITY BINDINGS IN A NETWORK DEVICE
83037495	Granted	9143408	7/30/2012	42269	13/561430	US	INTERPROVIDER VIRTUAL PRIVATE NETWORK PATH IDENTIFICATION
83037501	Granted	8760327	10/25/2012	41814	13/660686	US	COORDINATE COMPRESSION USING POLYNOMIALS
83037519	Published		9/24/2012		13/625530	US	Packet Forwarding Between Packet Forwarding Elements In A Network Device
83037542	Published		7/27/2012		13/560332	US	Updating Table Data in Network Device
83037565	Granted	8892343	7/31/2012	11/18/2014	13/562490	US	DETERMINING A SPATIOTEMPORAL IMPACT OF A PLANNED EVENT ON TRAFFIC
83037576	Granted	9020271	7/31/2012	42122	13/562524	US	Adaptive hierarchical reclustering algorithm that yields higher quality clusters and simultaneously prunes corpora
83037605	Published		7/18/2012		13/551735	US	METRICS FOR NETWORK CONFIGURATION ITEMS
83037627	Published		7/26/2012		13/559255	US	LOCALIZING COMPUTER PROGRAM CODE
83038174	Granted	9015433	7/31/2012	42115	13/563223	US	RESILIENCY WITH A DESTINATION VOLUME IN A REPLICATION ENVIRONMENT

PATENT
REEL: 038498 FRAME: 0516

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83038747	Published		7/31/2012		13/562389	US	DETERMINING AN ESTIMATED QUANTITY OF A CONSTITUENT COMPONENT
83038758	Published		7/31/2012		13/563036	US	VARYING RATE OF DELETABLE BITS FOR SPREAD SPECTRUM CLOCKING
83038764	Published		7/31/2012		13/562569	US	HIERARCHICAL NAVIGATION AND REMEDIATION IN DATACENTERS
83038781	Published		7/30/2012		13/561593	US	SELECTING EQUIPMENT ASSOCIATED WITH PROVIDER ENTITIES FOR A CLIENT REQUEST
83038793	Granted	9081891	7/31/2012	7/14/2015	13/563074	US	RECONFIGURABLE CROSSBAR NETWORKS
83038881	Granted	9094817	7/26/2012	7/28/2015	13/559276	US	Mobile Device Location Authentication
83054218	Granted	8938445	3/5/2010	42024	13/522787	US	SYSTEM AND METHOD FOR ROWSET INSERTS
83057075	Granted	8724251	3/9/2010	5/13/2014	13/579481	US	Method And System For Providing Tape-format Compatibility Between Various Types Of Tape Heads
83086483	Granted	8966348	11/30/2012	42059	13/689814	US	MEMORY ERROR IDENTIFICATION BASED ON CORRUPTED SYMBOL PATTERNS
83091101	Published		4/30/2010		13/583020	US	Management Data Transfer Between Processors
83092492	Granted	8922222	6/18/2010	12/30/2014	13/698002	US	Systems And Methods For Determining Electrical Connectivity
83093234	Published		6/15/2010		13/704100	US	VOLUME MANAGEMENT
83093878	Granted	8983909	5/4/2010	42080	13/578903	US	INFORMATION MANAGEMENT ASSISTANT
83093886	Published		4/29/2010		13/579390	US	Multi-jurisdiction Retention Scheduling For Record Management
83093963	Allowed		8/21/2012		13/590323	US	QUEUE WITH SEGMENTS FOR TASK MANAGEMENT
83094379	Published		5/28/2010		13/582894	US	DISABLING A DISPLAY REFRESH PROCESS
83096096	Published		1/15/2013		13/741909	US	FILE-BASED SOCIAL RECOMMENDATIONS IN A SOCIAL NETWORK
83096196	Granted	8789139	1/11/2013	7/22/2014	13/739557	US	Automated Test to Tell Computers and Humans Apart
83096204	Granted	9106681	12/17/2012	8/11/2015	13/716781	US	Reputation of Network Address
83096915	Published		1/31/2013		13/755301	US	PROVISIONING AND MANAGING CERTIFICATES FOR ACCESSING SECURE SERVICES IN NETWORK
83097914	Published		10/29/2012		13/662849	US	CODELESS ARRAY VALIDATION
83097936	Granted	D704214	10/31/2012	41765	29/436078	US	Patient oriented hospital care approach and system
83098005	Granted	9071510	10/25/2012	42185	13/660878	US	DETERMINING ROOT CAUSES OF NETWORK ISSUES
83098389	Published		1/29/2013		13/753489	US	Expander Bypass
83098521	Application		12/19/2012		13/719284	US	TRIGGERING A HIGH AVAILABILITY FEATURE IN RESPONSE TO DETECTING IMPAIRMENT OF CLIENT EXPERIENCE
83098555	Published		12/26/2012		13/726690	US	AN ADAPTIVE BASELINE BASED ON METRIC VALUES
83098577	Published		1/7/2013		13/735675	US	FAN VIBRATION TESTING APPARATUS
83098581	Published		10/24/2012		13/659227	US	INCIDENT ASSIGNMENT
83098597	Published		11/21/2012		13/683064	US	USER INTERFACE COVERAGE

PATENT
REEL: 038498 FRAME: 0517

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83098638	Published		2/28/2013		13/781241	US	TRANSPORT SCRIPT GENERATION BASED ON A USER INTERFACE SCRIPT
83098664	Granted	9077614	12/17/2012	7/7/2015	13/717093	US	Prioritizing Network Faults
83099390	Published		1/17/2013		13/743971	US	Confidentiality of Files Using File Vectorization and Machine Learning
83099511	Granted	9024285	4/19/2010	42129	13/636814	US	NANOSCALE SWITCHING DEVICES WITH PARTIALLY OXIDIZED ELECTRODES
83099525	Published		4/26/2010		13/640420	US	NON-UNIFORM GRATING
83099531	Published		4/30/2010		13/640392	US	DEVICE FOR CONVERTING SIGNAL
83099542	Published		1/28/2013		13/751262	US	CREATING A MODEL RELATING TO EXECUTION OF A JOB ON PLATFORMS
83099983	Granted	9141791	11/19/2012	42269	13/680731	US	MONITORING FOR ANOMALIES IN A COMPUTING ENVIRONMENT
83100604	Published		12/11/2012		13/710574	US	ORGANIZING INFORMATION DIRECTORIES
83100644	Published		1/31/2013		13/755582	US	VIEWING-ANGLE IMAGING
83100736	Published		1/31/2013		13/755612	US	CLASSIFYING A SUBMISSION
83100756	Granted	9002818	1/31/2013	4/7/2015	13/755492	US	CALCULATING A CONTENT SUBSET
83100768	Granted	8681423	1/29/2013	3/25/2014	13/753464	US	LIGHT MODULATION EMPLOYING FLUID MOVEMENT
83101843	Granted	9124621	9/27/2012	9/1/2015	13/629222	US	SECURITY ALERT PRIORITIZATION
83101886	Granted	9070436	1/30/2013	42185	13/754842	US	MEMORY CONTROLLER USING CRISSCROSS ERROR-CORRECTING CODES
83101946	Granted	8966328	12/17/2012	2/24/2015	13/716992	US	DETECTING A MEMORY DEVICE DEFECT
83101989	Published		11/19/2012		13/680383	US	Manipulating Timelines
83102004	Granted	8976569	1/30/2013	3/10/2015	13/754431	US	MITIGATION OF INOPERABLE LOW RESISTANCE ELEMENTS IN PROGRAMABLE CROSSBAR ARRAYS
83102155	Granted	9161475	10/31/2012	42290	13/664849	US	MULTI-FUNCTION MODULE FOR INSERTION INTO A NETWORKING CHASSIS SLOT
83102205	Allowed		1/15/2013		13/741949	US	BALANCING THE ALLOCATION OF VIRTUAL MACHINES IN CLOUD SYSTEMS
83105756	Published		1/31/2013		13/755664	US	CHECKPOINT GENERATION
83105762	Published		1/31/2013		13/755527	US	Computer Power Management
83105783	Allowed		1/31/2013		13/755647	US	MEMCACHED SERVER REPLICATION
83106274	Granted	8935764	8/31/2012	1/13/2015	13/601050	US	NETWORK SYSTEM FOR IMPLEMENTING A CLOUD PLATFORM
83106283	Published		2/13/2013		13/766019	US	Determining Explanatoriness of Segments
83106321	Allowed		12/10/2012		13/709773	US	GENERATING TRAINING DOCUMENTS
83106326	Granted	9002102	12/21/2012	4/7/2015	13/725487	US	Generating Training Documents

PATENT
REEL: 038498 FRAME: 0518

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83108361	Published		12/14/2012		13/714871	US	VISUALIZING A RELATIONSHIP OF ATTRIBUTES USING A RELEVANCE DETERMINATION PROCESS TO SELECT FROM CANDIDATE ATTRIBUTE VALUES
83108365	Published		1/21/2013		13/745985	US	VISUALIZATION THAT INDICATES EVENT SIGNIFICANCE REPRESENTED BY A DISCRIMINATIVE METRIC COMPUTED USING A CONTINGENCY CALCULATION
83108373	Granted	9081870	12/5/2012	42199	13/705952	US	STREAMING SYSTEM PERFORMANCE OPTIMIZATION
83108381	Published		12/14/2012		13/714702	US	RELEVANCE MAP LINKING
83108390	Published		1/3/2013		13/733274	US	PRODUCT DETERMINATION FOR A PORTFOLIO
83108421	Granted	8867406	4/7/2010	41933	13/583709	US	SYSTEM AND METHOD FOR AUTOMATED DISCOVERY OF CUSTOMER-EDGE DEVICES AND INTERFACE CONNECTIONS IN A VIRTUAL-PRIVATE-NETWORKING ENVIRONMENT
83108482	Granted	8938437	4/9/2010	42024	13/636412	US	Method And System For Comparing And Locating Projects
83108499	Published		4/9/2010		13/637814	US	PROJECT CLUSTERING AND RELATIONSHIP VISUALIZATION
83108891	Published		1/30/2013		13/753686	US	OBJECTIVES OF OPERATIONS EXECUTING ACROSS ENVIRONMENTS
83111668	Allowed		6/22/2010		13/641567	US	STORING DATA IN ANY OF A PLURALITY OF BUFFERS IN A MEMORY CONTROLLER
83114187	Published		4/19/2010		13/634772	US	Selecting Products For Retailer To Offer For Sale To Consumers
83114212	Published		5/30/2010		13/634786	US	Residual Value Warranty
83114227	Granted	8799238	10/8/2010	41856	13/634757	US	DATA DEDUPLICATION
83114418	Published		4/23/2010		13/642376	US	UPDATING A USER INTERFACE
83115166	Granted	8990524	9/27/2012	3/24/2015	13/628474	US	MANAGEMENT OF DATA ELEMENTS OF SUBGROUPS
83115738	Granted	9063767	12/20/2012	42178	13/723109	US	CONFIGURATION SPACE WITH PSEUDO DEVICE IDENTIFIER
83118661	Granted	8676844	5/26/2010	41716	13/696398	US	GRAPH AUTHORIZATION
83118732	Published		5/12/2010		13/696384	US	METHODS, APPARATUS AND ARTICLES OF MANUFACTURE TO UPDATE VIRTUAL MACHINE TEMPLATES
83120661	Published		5/28/2010		13/697972	US	INITIALIZING A MEMORY SUBSYSTEM OF A MANAGEMENT CONTROLLER
83123092	Allowed		4/29/2010		13/695238	US	METHOD, SYSTEM, AND APPARTUS FOR SELECTING AN ACRONYM EXPANSION
83126881	Published		1/15/2013		13/742283	US	Managing Volatile File Copies
83127147	Published		6/22/2010		13/806031	US	METHODS AND SYSTEMS FOR PLANNING APPLICATION DEPLOYMENT
83127182	Published		10/12/2010		13/877069	US	TRANSACTION PROCESSING SYSTEM AND METHOD
83127188	Allowed		10/13/2010		13/822374	US	DASHBOARD INCLUDING RULES TO DATA
83130002	Published		5/30/2010		13/696981	US	Virtual Machine Code Injection

PATENT
REEL: 038498 FRAME: 0519

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83131974	Granted	9069954	5/20/2011	42185	13/699030	US	SECURITY THREAT DETECTION ASSOCIATED WITH SECURITY EVENTS AND AN ACTOR CATEGORY MODEL
83133022	Granted	9071373	6/1/2010	42185	13/697101	US	MULTIPLEXED SERIAL MEDIA INDEPENDENT INTERFACE
83134891	Allowed		6/16/2010		13/704147	US	Computer Racks
83135457	Allowed		8/17/2010		13/817345	US	Encryption Key Management Using Distributed Storage of Encryption-Key Fragments
83135703	Published		5/19/2010		13/697760	US	OPTICAL INTERCONNECT FABRICS AND OPTICAL SWITCHES
83135752	Published		6/16/2010		13/697901	US	SYSTEM FOR INFORMATION MANAGEMENT PROTECTION AND ROUTING
83135892	Published		12/19/2014		14/577611	US	System And Method For Optimizing Queries
83136248	Granted	8848360	6/7/2010	41912	13/702202	US	MODULE AND PORT
83136977	Granted	9052462	5/28/2010	6/9/2015	13/698933	US	AREA ARRAY WAVEGUIDE POWER SPLITTER
83137192	Published		12/14/2012		13/715814	US	Computer System And Network Interface Supporting Class Of Service Queues
83137765	Application		1/31/2013		13/755400	US	ASSET VALUATION USING A COMPOSITE EVALUATION
83137773	Application		1/31/2013		13/755313	US	ASSET RATING USING SIGNAL-TO-NOISE RATIOS
83138314	Published		4/29/2013		13/872934	US	TARGET FAILURE BASED ROOT CAUSE ANALYSIS OF NETWORK PROBE FAILURES
83138320	Published		5/17/2013		13/897002	US	Fault Management In An IT Infrastructure
83138337	Allowed		1/30/2013		13/754191	US	POWER OVER ETHERNET POWER HARVESTER
83138345	Granted	9143517	1/31/2013	9/22/2015	13/754951	US	THREAT EXCHANGE INFORMATION PROTECTION
83138403	Published		1/25/2013		13/749955	US	LEAF NAMES AND RELATIVE LEVEL INDICATIONS FOR FILE SYSTEM OBJECTS
83138411	Published		1/31/2013		13/755007	US	ATTACK NOTIFICATION
83138489	Published		1/21/2013		13/746025	US	SIMULATING REAL USER ISSUES IN SUPPORT ENVIRONMENTS
83138586	Granted	9008518	1/30/2013	42108	13/753949	US	OPTICAL TRANSMITTER AND RECEIVER CIRCUIT ARRANGEMENT
83138615	Granted	8917537	1/30/2013	41996	13/754616	US	INLINE FUSES IN PROGRAMMABLE CROSSBAR ARRAYS
83138637	Published		1/31/2013		13/756268	US	DETERMINING A COUNTEROFFER
83138677	Published		1/29/2013		13/753510	US	REDUNDANT LIGHT SUPPLY FOR SILICON PHOTONIC CHIP
83138681	Allowed		7/8/2013		13/936986	US	APPARATUS AND METHOD FOR MULTI-MODE STORAGE
83138718	Granted	8915635	3/13/2013	12/23/2014	13/801996	US	BACKLIGHT HAVING DUAL COLLIMATING REFLECTORS
83138763	Published		1/28/2013		13/751406	US	TEST INFRASTRUCTURE SIMULATION
83138769	Published		2/28/2013		13/780662	US	MODIFY EXECUTION OF APPLICATION UNDER TEST SO USER IS POWER USER
83138795	Published		1/28/2013		13/751498	US	ALLOCATING TEST CAPACITY FROM CLOUD SYSTEMS
83138852	Published		1/25/2013		13/750187	US	CONTEXT-AWARE INFORMATION ITEM RECOMMENDATIONS FOR DEALS

PATENT
REEL: 038498 FRAME: 0520

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83138881	Published		1/31/2013		13/755836	US	IDENTIFYING SUBSETS OF SIGNIFIERS TO ANALYZE
83138927	Published		3/13/2013		13/801712	US	DETERMINING TARGET CUSTOMERS DURING MARKETING
83138981	Granted	9083736	1/28/2013	42199	13/751695	US	MONITORING AND MITIGATING CLIENT-SIDE EXPLOITATION OF APPLICATION FLAWS
83139124	Granted	8990165	7/13/2010	42087	13/704344	US	METHODS, APPARATUS AND ARTICLES OF MANUFACTURE TO ARCHIVE DATA
83139127	Granted	9135193	3/25/2013	42262	13/849616	US	EXPANDER INTERRUPT PROCESSING
83139135	Granted	8941330	3/21/2013	1/27/2015	13/848516	US	LIGHT SOURCE OPERATION
83139239	Granted	8914416	1/31/2013	12/16/2014	13/755556	US	SEMANTICS GRAPHS FOR ENTERPRISE COMMUNICATION NETWORKS
83139256	Allowed		1/29/2013		13/753022	US	IDENTIFYING TASKS AND COMMITMENTS USING NATURAL LANGUAGE PROCESSING AND MACHINE LEARNING (as amended)
83139261	Allowed		1/30/2013		13/754241	US	SCALABLE STRUCTURED DATA STORE OPERATIONS
83139270	Published		1/31/2013		13/755311	US	Reducing backup bandwidth by remembering downloads
83139284	Published		1/31/2013		13/756156	US	TASK CROWDSOURCING WITHIN AN ENTERPRISE
83139391	Published		1/30/2013		13/754054	US	ANTICIPATORILY RETRIEVING INFORMATION IN RESPONSE TO A QUERY OF A DIRECTORY
83139445	Published		1/30/2013		13/754099	US	RECONSTRUCTING A STATE OF A FILE SYSTEM USING A PRESERVED SNAPSHOT
83139453	Published		1/31/2013		13/756144	US	TAPE DRIVE CACHE MEMORY
83139476	Published		2/19/2013		13/770456	US	Planar Structure Characteristics Obtained With Look Up Tables
83139680	Granted	9101081	1/30/2013	42220	13/754761	US	Data Center Canopy Including Turning Vanes
83139719	Published		1/30/2013		13/754126	US	Authenticating Applications to a Network Service
83139742	Published		1/23/2013		13/748342	US	Implementing Gateway Redundancy in a Network
83139808	Published		6/30/2010		13/701866	US	SYSTEM AND METHOD FOR COLLABORATIVE INFORMATION SERVICES
83140043	Published		1/31/2013		13/755084	US	POWER OVER ETHERNET MANAGEMENT ON A NETWORK SWITCH
83140106	Published		12/17/2012		13/717151	US	PRESENTING DOCUMENTS TO A USER BASED ON TOPICS AND COLLECTIVE OPINIONS EXPRESSED IN THE DOCUMENTS
83140415	Published		4/29/2013		13/872940	US	A Shielding Panel Having an Opening for a Heat Sink
83140507	Published		12/21/2012		13/723480	US	ACCESS POINTS TO PROVIDE EVENT NOTIFICATIONS
83140845	Allowed		1/30/2013		13/754570	US	Delta partitions for backup and restore
83140850	Published		2/27/2013		13/778890	US	DISTRIBUTED IMPLEMENTATION OF SEQUENTIAL CODE THAT INCLUDES A FUTURE

PATENT
REEL: 038498 FRAME: 0521

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83140891	Granted	D706273	1/4/2013	6/3/2014	29/441453	US	BEZEL FOR A COMPUTING DEVICE
83140954	Granted	8984230	1/30/2013	42080	13/754758	US	METHOD OF USING A BUFFER WITHIN AN INDEXING ACCELERATOR DURING PERIODS OF INACTIVITY
83140967	Published		1/31/2013		13/755661	US	Executing Requests from Processing Elements with Stacked Memory Devices
83140976	Granted	8943353	1/31/2013	42031	13/756155	US	ASSIGNING NODES TO JOBS BASED ON RELIABILITY FACTORS
83141140	Application		1/14/2013		29/443194	US	DOCUMENT READER USER INTERFACE FOR PRESENTING DOCUMENTS TO A USER BASED ON TOPICS AND COLLECTIVE OPINIONS EXPRESSED IN THE DOCUMENTS
83141159	Published		1/25/2013		13/750896	US	RAID STORAGE REBUILD PROCESSING
83141511	Allowed		2/28/2013		13/781293	US	SAS Latency Based Routing
83141515	Published		3/29/2013		13/853873	US	SAS EXPANDER
83141534	Published		4/5/2013		13/857944	US	DATA STORAGE
83148959	Granted	8893283	1/31/2013	41961	13/755876	US	Performing an Automated Compliance Audit by Vulnerabilities
83150110	Granted	9104753	3/1/2013	42227	13/781826	US	IDENTIFYING AN INCIDENT-ADDRESSING STEP
83150130	Allowed		2/21/2013		13/773088	US	SAMPLE BASED DETERMINATION OF NETWORK POLICY VIOLATIONS
83154799	Published		4/29/2013		13/872915	US	MANAGEMENT OF WIRELESS CHANNEL USE
83155640	Allowed		3/13/2013		13/800304	US	WEIGHT-BASED COLLOCATION MANAGEMENT
83156491	Published		3/28/2013		13/852179	US	DATA CACHE FOR A STORAGE ARRAY
83156571	Published		3/13/2013		13/799290	US	Non-Volatile Memory Update Tracking
83156582	Published		4/26/2013		13/871187	US	APPLYING WRITE ELISION
83159791	Published		7/26/2010		13/809064	US	Mitigation Of Detected Patterns In A Network Device
83159860	Allowed		9/15/2010		13/808507	US	COMPUTER SYSTEM WITH FABRIC MODULES
83160158	Published		7/30/2010		13/808622	US	METHOD AND SYSTEM OF CONTROLLING POWER CONSUMPTION OF AGGREGATED I/O PORTS
83163776	Published		9/16/2010		13/810357	US	Power Capping System
83164626	Allowed		7/20/2010		13/809690	US	FORMATTING SYSTEM MONITORING INFORMATION
83164637	Granted	8912520	7/21/2010	41989	13/809498	US	NANOSCALE SWITCHING DEVICE
83164709	Published		7/30/2010		13/812092	US	VISUAL SEPARATOR DETECTION IN WEB PAGES USING CODE ANALYSIS
83166229	Published		7/22/2010		13/810896	US	SQL Enumerator
83166323	Granted	9107294	7/26/2010	42227	13/810665	US	A System Including A Module
83166332	Allowed		7/30/2010		13/810348	US	FILE TRANSFERS BASED ON TELEPHONE NUMBERS
83166378	Granted	8912771	9/13/2010	41989	13/814043	US	POWER RAIL REGULATOR TO REGULATE DC RAIL VOLTAGE AND OUTPUT CURRENT
83166392	Published		7/30/2010		13/812123	US	LOCATION-INDEXED AUDIO CONTENT

PATENT
REEL: 038498 FRAME: 0522

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83167099	Granted	8922981	10/4/2010	42003	13/810582	US	RACK MOUNTED UI DEVICE
83167834	Allowed		10/16/2010		13/817932	US	DEVICE HARDWARE AGENT
83167838	Published		10/29/2010		13/817842	US	SIGNAL MANAGER
83168805	Published		8/20/2010		13/817366	US	SYSTEMS AND METHODS FOR FILTERING WEB PAGE CONTENTS
83169583	Published		7/30/2010		13/813243	US	COMPUTER SYSTEM AND METHOD FOR SHARING COMPUTER MEMORY
83174522	Published		10/13/2010		13/813128	US	SYSTEMS AND METHODS FOR MODELING BINARY SYNAPSES
83174555	Granted	9160759	2/6/2013	10/13/2015	13/760944	US	Security System For Protecting Networks From Vulnerability Exploits
83174561	Published		7/30/2010		13/812578	US	CONFIGURATION MANAGEMENT
83177094	Published		7/30/2010		13/813254	US	COMPUTER SYSTEM AND METHOD FOR SHARING COMPUTER MEMORY
83177106	Published		7/30/2010		13/813258	US	COMPUTER SYSTEM AND METHOD FOR SHARING COMPUTER MEMORY
83187256	Published		8/25/2010		13/813965	US	TRANSFERRING FILES
83189168	Granted	9116805	10/6/2010	42241	13/814700	US	METHOD AND SYSTEM FOR PROCESSING EVENTS
83193845	Published		10/27/2010		13/817667	US	PROVIDING CONTROL OVER A PERSONALIZED CATEGORY OF INFORMATION
83195282	Published		10/13/2010		13/816980	US	CREATING A CONFIGURATION FILE TEMPLATE
83196416	Published		9/7/2010		13/818109	US	SYSTEM AND METHOD FOR AUTOMATED DEPLOYMENT OF MULTI-COMPONENT COMPUTER ENVIRONMENT
83200323	Published		6/10/2013		13/914355	US	ESTIMATING A QUANTITY OF EXPLOITABLE SECURITY VULNERABILITIES IN A RELEASE OF AN APPLICATION
83200361	Allowed		5/1/2013		13/874774	US	DATA RELAY BY SERVER
83200410	Allowed		9/23/2010		13/818850	US	METHODS, APPARATUS AND SYSTEMS FOR MONITORING LOCATIONS OF DATA WITHIN A NETWORK SERVICE
83204419	Granted	9092696	3/26/2013	42213	13/850413	US	Image Sign Classifier
83204443	Published		3/15/2013		13/842821	US	DATA ANALYSIS IN A NETWORK
83204600	Published		6/4/2013		13/909901	US	ASSESSING THE IMPACT OF AN INCIDENT IN A SERVICE LEVEL AGREEMENT
83204631	Published		6/27/2013		13/928489	US	ANALYZING PARTICIPANTS OF A SOCIAL NETWORK
83204635	Granted	9143403	6/19/2013	42269	13/921343	US	AUTONOMOUS METRIC TRACKING AND ADJUSTMENT
83204643	Published		4/25/2013		13/870295	US	Classifying Source Code Using An Expertise Model
83204680	Allowed		7/2/2013		13/933657	US	DERIVING AN INTERESTINGNESS MEASURE FOR A CLUSTER
83204688	Published		3/15/2013		13/832644	US	REQUESTS FOR SOURCE CODE TEXT

PATENT
REEL: 038498 FRAME: 0523

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0524

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83204732	Published		5/31/2013		13/907572	US	DEVICE MONITORING
83204738	Published		6/7/2013		13/912344	US	METER DATA MANAGEMENT TESTING
83204818	Published		6/27/2013		13/929249	US	MILLIMETER WAVE FREQUENCY DATA COMMUNICATION SYSTEMS
83205172	Granted	9098634	5/13/2013	42220	13/892819	US	CREATING TEST TEMPLATES BASED ON STEPS IN EXISTING TESTS
83205213	Published		3/27/2013		13/851134	US	ASSOCIATING EVENT TEMPLATES WITH EVENT OBJECTS
83205247	Published		4/30/2013		13/874179	US	APPLICATION THREAD TO CACHE ASSIGNMENT
83205273	Published		3/18/2013		13/845399	US	DETERMINE VOLTAGE SUPPLIED TO A CORE
83205278	Published		3/19/2013		13/846992	US	THREADS IN OPERATING SYSTEMS WITHOUT KERNEL THREAD SUPPORT
83206029	Published		4/30/2013		13/873459	US	CACHING CIRCUIT WITH PREDETERMINED HASH TABLE ARRANGEMENT
83206769	Published		5/31/2013		13/907674	US	REMAP RAID TO MAINTAIN RAID LEVEL
83206773	Published		6/4/2013		13/909759	US	BOOT FROM LOGICAL VOLUME SPANNING PLURALITY OF PCI DEVICES
83206787	Granted	9134910	4/30/2013	42262	13/874344	US	SET HEAD FLAG OF REQUEST
83206935	Published		5/30/2013		13/906291	US	ALLOCATION OF CACHE TO STORAGE VOLUMES
83206941	Published		6/21/2013		13/923370	US	CACHE NODE PROCESSING
83206950	Granted	9040948	9/16/2010	42150	13/821173	US	NANOSCALE SWITCHING DEVICE
83207276	Allowed		4/5/2013		13/857533	US	MOBILE WEB-BASED PLATFORM FOR PROVIDING A CONTEXTUAL ALIGNMENT VIEW OF A CORPUS OF DOCUMENTS
83207705	Published		6/27/2013		13/929453	US	Power Down Signal For Port Of Network Device
83207838	Published		5/30/2013		13/906091	US	EXCLUDING A DATA FRAME FROM A LINK AGGREGATION GROUP
83208808	Published		9/10/2010		13/821110	US	SYSTEM AND METHOD FOR INTERPRETING AND GENERATING INTEGRATION FLOWS
83209023	Granted	8923073	11/1/2010	12/30/2014	13/823826	US	STORAGE ELEMENT READING USING RING OSCILLATOR
83209080	Granted	8856889	10/19/2010	41919	13/821438	US	METHODS AND SYSTEMS FOR GENERATION OF AUTHORIZED VIRTUAL APPLIANCES
83209123	Published		4/30/2013		13/874235	US	DETERMINING CANDIDATE SCRIPTS FROM A CATALOG OF SCRIPTS
83209180	Published		4/24/2013		13/869359	US	SYNCHRONIZATION OF AN AUTOMATION SCRIPT
83209641	Allowed		4/30/2013		13/873680	US	HOTSPOT IDENTIFICATION
83209749	Published		4/30/2013		13/873587	US	SUPPORT VECTOR MACHINE
83209810	Published		4/30/2013		13/874186	US	AUTOREGRESSIVE MODEL FOR TIME-SERIES DATA
83209816	Published		3/15/2013		13/841514	US	Visual Analytics of Multivariate Session Data Using Concentric Rings with Overlapping Periods

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83209827	Published		5/30/2013		13/905571	US	DETERMINING A COMPLETION TIME OF A JOB IN A DISTRIBUTED NETWORK ENVIRONMENT
83209832	Published		5/31/2013		13/906707	US	Granting Permission to Use an Object Remotely with a Context Preserving Mechanism
83209836	Published		4/30/2013		13/874181	US	Portfolio Generation
83209861	Published		3/15/2013		13/832805	US	Performing Cross-Validation Using Non-Randomly Selected Cases
83209867	Granted	8829581	4/19/2013	41891	13/866625	US	RESISTIVE MEMORY DEVICES
83209881	Granted	9053434	3/15/2013	42164	13/842461	US	Determining an Obverse Weight
83209890	Published		4/30/2013		13/874328	US	MANAGEMENT OF CLASSIFICATION FRAMEWORKS TO IDENTIFY APPLICATIONS
83209899	Published		4/30/2013		13/874254	US	SYNTHETIC TIME SERIES DATA GENERATION
83210534	Published		4/30/2013		13/874221	US	Method for generating realistic synthetic resource consumption data
83210560	Published		10/29/2010		13/821208	US	Software Application Recognition
83210574	Granted	8873192	7/30/2013	10/28/2014	13/954209	US	MAGNETIC TAPE HEADS
83213138	Allowed		11/2/2010		13/822249	US	SOLID-STATE DISK (SSD) MANAGEMENT
83213646	Published		9/3/2013		14/016413	US	BACKPLANE CONTROLLER TO ARBITRATE MULTIPLEXING OF COMMUNICATION
83213705	Published		5/17/2013		13/896497	US	MARKET FOR RESOURCES BASED ON REUSABLE USAGE POINTS AND USAGE PERIODS (as amended)
83214673	Published		11/12/2010		13/824517	US	DETERMINE AUTHORIZATION OF A SOFTWARE PRODUCT BASED ON A FIRST AND SECOND AUTHORIZATION ITEM
83214678	Published		9/30/2010		13/823228	US	IDENTIFICATION OF EVENTS OF INTEREST
83214687	Published		10/11/2010		13/825019	US	SYSTEM AND METHOD FOR QUERYING A DATA STREAM
83214690	Published		10/14/2010		13/825024	US	Providing Operational Business Intelligence
83214693	Published		10/14/2010		13/825043	US	DATASET COMPRESSION
83219396	Granted	9065587	10/8/2010	42178	13/825950	US	OPTICAL MULTIPLEXING USING LASER ARRAYS
83219401	Published		10/11/2010		13/877319	US	MICROFLUIDIC CHIP ASSEMBLY
83221552	Published		3/26/2013		13/850991	US	VIRTUAL MACHINES
83222070	Published		10/27/2010		13/876586	US	PATTERN DETECTION
83222118	Published		10/13/2010		13/878417	US	AUTOMATED NEGOTIATION
83222132	Published		10/29/2010		13/879427	US	GENERATING A TAXONOMY FROM UNSTRUCTURED INFORMATION
83222716	Published		11/10/2010		13/883934	US	SEED SET EXPANSION
83224726	Granted	9141462	2/24/2011	9/22/2015	13/977015	US	SYSTEM AND METHOD FOR ERROR REPORTING IN A NETWORK
83224937	Published		10/15/2010		13/878420	US	SYSTEM AND METHOD FOR PROVIDING A SERVICE
83225190	Granted	9014567	10/8/2010	42115	13/877641	US	ELECTRONIC SYSTEM HAVING FANOUT OPTICAL BUSES

PATENT
REEL: 038498 FRAME: 0525

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83225196	Allowed		10/8/2010		13/877638	US	OPTICAL POLARIZATION MULTIPLEXING USING LASER ARRAYS
83225980	Published		11/27/2010		13/883488	US	Causal Dynamic Model For Revenue
83225983	Published		11/27/2010		13/883498	US	Composite Driver Derivation
83227144	Published		4/30/2013		13/873673	US	SEMANTIC ZOOM-IN OR DRILL-DOWN IN A VISUALIZATION HAVING CELLS WITH SCALE ENLARGEMENT AND CELL POSITION ADJUSTMENT
83231550	Granted	8837713	10/27/2010	41898	13/879899	US	SYSTEMS, METHODS, AND APPARATUS FOR ENABLING AUDIO TRANSMISSION WITHIN A COMMUNICATIONS SESSION
83235820	Published		10/29/2010		13/880316	US	SMALL-MODE-VOLUME, VERTICAL-CAVITY, SURFACE-EMITTING LASER
83241900	Granted	9064129	4/7/2011	42178	13/882692	US	Managing Data
83241998	Published		10/28/2010		13/881081	US	SYSTEMS AND METHODS FOR SYNTHESIZING MOLECULES ON SUBSTRATES
83242138	Published		10/29/2010		13/881134	US	OPTICAL INTERCONNECT FABRICS IMPLEMENTED WITH STAR COUPLERS
83243069	Allowed		10/29/2010		13/881452	US	MEMRISTORS HAVING AT LEAST ONE JUNCTION
83254896	Granted	D739404	6/24/2013	9/22/2015	29/458889	US	HARD DRIVE TRAY DEVICE
83255666	Granted	8942026	2/28/2011	42031	13/883510	US	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83256513	Published		5/2/2013		13/875970	US	Autonomous Network Device Configuration Method
83259822	Published		12/15/2010		13/988744	US	SYSTEM, ARTICLE, AND METHOD FOR ANNOTATING RESOURCE VARIATION
83260523	Published		5/17/2013		13/897094	US	Network Switch Configuration
83262502	Allowed		1/28/2011		13/988090	US	AUTOMATED CONTRACT MANAGEMENT
83262522	Published		12/3/2010		13/885003	US	SYSTEMS AND METHODS FOR PERFORMING A NESTED JOIN OPERATION
83262539	Published		12/10/2010		13/885017	US	MANAGING RECORDS DISPLAYED IN A TREE LIST
83262559	Published		1/27/2011		13/885984	US	IMPORTANCE CLASS BASED DATA MANAGEMENT
83262570	Published		1/25/2011		13/885032	US	ANALYTICAL DATA PROCESSING
83265874	Published		1/27/2011		13/885942	US	IDENTIFY POTENTIAL ACCOUNT NUMBERS IN A SINGLE PASS OF A LIST OF DIGITS
83265939	Published		2/11/2011		13/885973	US	DETERMINING CHARACTERISTICS OF PARTICIPANTS IN A SOCIAL NETWORK
83268813	Published		6/25/2013		13/926039	US	AMBIGUOUS QUERIES IN CONFIGURATION MANAGEMENT DATABASES
83268948	Published		9/9/2013		14/021755	US	Method For Determining Network Topology
83269855	Granted	9025365	5/21/2013	5/5/2015	13/899283	US	READING MEMORY ELEMENTS WITHIN A CROSSBAR ARRAY

PATENT
REEL: 038498 FRAME: 0526

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83270021	Published		5/31/2013		13/907509	US	A MARKET FOR RESOURCES BASED ON REUSABLE USAGE POINTS AND USAGE PERIODS
83270328	Published		10/21/2011		13/989129	US	SYSTEMS AND METHODS FOR PROVIDING PROMOTIONAL CONTENT DURING A CALL ATTEMPT
83271678	Published		3/30/2011		13/989168	US	SYSTEMS AND METHODS FOR GENERATING A SHORTENED NOTIFICATION OF AN INCOMING CALL
83271701	Published		1/31/2011		13/980901	US	METHODS FOR HANDLING CONFLICTS IN A MULTICAST ROUTING ELECTION
83272380	Allowed		6/28/2013		13/931042	US	KEY RETRIEVAL
83272431	Allowed		8/6/2013		13/960747	US	IDENTIFIER MANAGEMENT
83273845	Granted	D735192	7/8/2013	7/28/2015	29/460123	US	MICROSERVER
83277650	Published		1/11/2011		13/995492	US	PASSIVE OPTICAL ALIGNMENT
83278385	Granted	8737785	6/26/2013	5/27/2014	13/927562	US	OPTICAL BEAM COUPLERS AND SPLITTERS
83410700	Published		1/9/2011		13/994820	US	COMPUTER NETWORK NODE DISCOVERY SEQUENCING
83415105	Published		12/21/2010		13/995187	US	SYSTEM FOR MANAGING ADDRESS REFLECTORS
83415242	Granted	RE45070	5/9/2013	41863	13/891049	US	Receive Processing With Network Protocol Bypass
83416919	Allowed		2/28/2011		13/984168	US	SPRING LOADED LID (as amended)
83417500	Published		7/26/2013		13/951997	US	RELEASE LATCH
83417898	Published		1/24/2011		13/980849	US	SYSTEM AND METHOD FOR ACCESSING A SERVICE
83421542	Published		1/20/2011		13/977911	US	CHIP CARRIER SUPPORT SYSTEMS
83422035	Published		1/31/2011		13/977909	US	METHODS AND SYSTEMS TO GENERATE REPORTS INCLUDING REPORT REFERENCES FOR NAVIGATION
83422061	Published		1/31/2011		13/977912	US	CABLE HARNESS SWITCHES
83422495	Granted	9148430	8/17/2011	42276	14/001699	US	METHOD OF MANAGING USAGE RIGHTS IN A SHARE GROUP OF SERVERS
83422622	Published		2/2/2011		13/982732	US	ESTIMATING A PERFORMANCE CHARACTERISTIC OF A JOB USING A PERFORMANCE MODEL
83423128	Granted	8970958	1/31/2011	3/3/2015	13/980472	US	BROADBAND OPTICAL BEAM SPLITTERS
83439060	Published		6/9/2011		13/981903	US	REGULATING POWER CONSUMPTION OF A MASS STORAGE SYSTEM
83439075	Granted	9063835	6/2/2011	42178	13/981907	US	MANAGING PROCESSING OF USER REQUESTS AND DATA REPLICATION FOR A MASS STORAGE SYSTEM
83442160	Published		3/3/2011		13/980350	US	RECORDS MANAGEMENT SYSTEM
83498533	Published		2/18/2011		13/982706	US	GENERATING TEST DATA
83498562	Published		3/11/2011		13/984336	US	Sampling Network Traffic
83501095	Published		2/23/2011		13/985808	US	METHOD AND APPARATUS FOR MANAGING DEVICES
83505261	Granted	8755656	8/7/2013	41807	13/961171	US	PROXIMITY FREE SPACE OPTICAL INTERCONNECT
83507399	Published		3/1/2012		14/003020	US	METHODS AND SYSTEMS FOR FULL PATTERN MATCHING IN HARDWARE

PATENT
REEL: 038498 FRAME: 0527

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83507642	Granted	9036472	3/15/2011	42143	13/984547	US	Network Switching Device for Quantifying Available Service-Level Capacity of a Network For Projected Network Traffic
83515797	Allowed		2/1/2011		13/982672	US	NEGATIVE DIFFERENTIAL RESISTANCE DEVICE
83516169	Published		10/25/2013		14/063918	US	Method And System For Hierarchical Forecasting
83518888	Published		5/2/2011		13/985265	US	Digital Signatures
83543188	Allowed		3/3/2011		14/001710	US	TESTING INTEGRATED BUSINESS SYSTEMS
83543319	Granted	9104810	3/8/2011	42227	14/001723	US	CREATING A TEST CASE
83543629	Published		4/7/2011		13/984608	US	SYSTEMS AND METHODS FOR DETERMINING A POWER PHASE AND/OR A PHASE ROTATION
83543637	Published		4/13/2011		14/009771	US	INPUT/OUTPUT PROCESSING
83546348	Published		2/10/2011		13/984738	US	GRATING-BASED POLARIZERS AND OPTICAL ISOLATORS
83553808	Published		2/16/2011		13/985110	US	POPULATION CATEGORY HIERARCHIES
83584479	Granted	D705232	10/29/2013	41779	29/471212	US	Extended Bezel for a Blade Server
83584490	Granted	D705233	10/29/2013	5/20/2014	29/471213	US	Extended Bezel for a Blade Server
83584531	Published		3/15/2011		14/001861	US	USABILITY TESTING
83588887	Published		5/6/2011		14/003510	US	Computing Device Protector
83593356	Published		6/2/2011		14/000966	US	NETWORK VIRTUALIZATION
83598159	Published		3/15/2011		14/003126	US	ESTIMATING COSTS OF BEHAVIORAL TARGETING
83598162	Published		5/13/2011		14/003255	US	AUTOMATED NEGOTIATION
83598170	Published		4/6/2011		14/003264	US	AUTOMATED NEGOTIATION
83602930	Application		1/21/2014		14/160030	US	PROVIDING FILE METADATA QUERIES FOR FILE SYSTEMS USING RESTful APIs
83618376	Published		5/25/2011		14/005279	US	BLADE COMPUTER SYSTEM
83618657	Published		9/18/2013		14/030930	US	MANAGEMENT OF STORAGE READ REQUESTS
83623279	Granted	8949693	3/4/2011	42038	14/002790	US	ANTIPODAL-MAPPING-BASED ENCODERS AND DECODERS
83629022	Published		10/14/2013		14/053241	US	DIAGNOSING CONNECTIVITY IN A NETWORK
83629033	Published		6/27/2011		14/006033	US	COOLING A SECONDARY COMPONENT BY DIVERTING AIRFLOW USING AN AIR CHANNEL ASSOCIATED WITH A THERMAL DISSIPATION DEVICE THAT COOLS A PRIMARY COMPONENT
83629039	Published		10/11/2013		14/052082	US	PROVISIONING A NETWORK FOR NETWORK TRAFFIC
83634652	Published		1/14/2014		14/154563	US	PERFORMANCE OF TASKS WITHIN ORGANIZATIONS
83663162	Published		5/31/2011		14/003275	US	AUTOMATED NEGOTIATION
83663174	Published		4/7/2011		14/004512	US	GRAPHICAL OBJECT CLASSIFICATION
83663191	Published		6/8/2011		14/122357	US	Sentiment Trend Visualization Relating to an Event Occuring in a Particular Geographic Region
83663213	Published		6/8/2011		14/003163	US	Determining and Visualizing Social Media Expressed Sentiment
83663291	Granted	9083653	10/21/2013	42199	14/058939	US	Automated Cloud Set Up
83663296	Published		10/31/2013		14/069113	US	Building a Realized Topology with a Binding Document

PATENT
REEL: 038498 FRAME: 0528

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83680552	Published		4/11/2011		14/004429	US	PERFORMING A TASK IN A SYSTEM HAVING DIFFERENT TYPES OF HARDWARE RESOURCES
83680972	Published		4/6/2011		14/009365	US	IDENTIFYING SIMILARITY
83681482	Allowed		3/21/2011		14/006002	US	DATA BACKUP PRIORITIZATION
83682166	Published		4/29/2011		14/110333	US	SYSTEMS AND METHODS FOR IN-MEMORY PROCESSING OF EVENTS
83691795	Granted	8933431	3/29/2011	42017	14/006719	US	DUAL-PLANE MEMORY ARRAY
83693035	Granted	8780613	10/8/2013	41835	14/048521	US	READING A MEMORY ELEMENT WITHIN A CROSSBAR ARRAY
83694488	Allowed		5/19/2011		14/113957	US	Error Control Coding
83696796	Published		5/20/2011		14/116167	US	DATA SHARING AGREEMENTS
83696864	Published		6/6/2011		14/115269	US	CROSS-PROTOCOL LOCKING WITH A FILE SYSTEM
83698803	Published		4/19/2012		14/232002	US	File Lock Preservation
83698845	Allowed		7/18/2011		14/110445	US	Optical Interconnect
83699243	Published		7/1/2011		14/110511	US	TRAFFIC FORWARDING IN A POINT MULTI-POINT LINK AGGREGATION USING A LINK SELECTOR DATA TABLE
83700385	Allowed		5/11/2011		14/110398	US	Varying a Characteristic of a Job Profile Relating to Map and Reduce Tasks According to a Data Size
83701126	Published		10/14/2011		14/233742	US	USING A VIRTUAL BOOT DEVICE TO ACCESS A SYSTEM RECOVERY IMAGE
83701896	Published		2/8/2012		14/130871	US	TRANSITION BETWEEN STATES IN A PROCESSOR
83712199	Published		10/25/2013		14/063034	US	Method And System For Effecting Payment By Checks Through The Use Of Image Replacement Documents
83712725	Application		11/5/2013		14/071903	US	NETWORK ACCESS MANAGEMENT BASED ON SESSION INFORMATION
83713435	Published		5/25/2011		14/112644	US	IMPLEMENTATION OF NETWORK DEVICE COMPONENTS IN NETWORK DEVICES
83714223	Allowed		5/31/2011		14/116000	US	APPLICATION SECURITY TESTING
83718863	Published		11/7/2013		14/074454	US	Server Consolidation
83721258	Published		6/3/2011		14/122161	US	RATING ITEMS
83721473	Published		5/31/2011		14/118520	US	ESTIMATING A PERFORMANCE PARAMETER OF A JOB HAVING MAP AND REDUCE TASKS AFTER A FAILURE
83731643	Published		9/21/2011		14/130947	US	SAS EXPANDER
83733008	Published		8/8/2011		14/124794	US	FABRIC CHIP HAVING A PORT RESOLUTION MODULE
83733023	Published		8/8/2011		14/124817	US	Fabric Chip Having Trunked Links
83733355	Published		8/26/2011		14/237096	US	MANAGING ACCESS TO A NETWORK
83735433	Published		6/28/2011		14/126732	US	SHIFTABLE MEMORY
83738422	Application		7/29/2011		14/131805	US	SYSTEMS AND METHODS FOR DISTRIBUTED RULE-BASED CORRELATION OF EVENTS
83748040	Published		1/31/2014		14/170404	US	CLOUD IMPLEMENTATION ORCHESTRATION

PATENT
REEL: 038498 FRAME: 0529

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83766027	Published		10/31/2011		14/351258	US	IMPLEMENTING AN ENERGY PROPORTIONAL NETWORK ARCHITECTURE FROM DESIRED NETWORK CRITERIA
83768013	Granted	9128631	6/29/2011	42255	14/125488	US	STORAGE ENCLOSURE BRIDGE DETECTION
83769035	Published		7/27/2011		14/233121	US	Efficient Data-Storage Devices that Include Memory Elements Characterized by Potentially Large Switching Latencies
83769047	Published		6/29/2011		14/126145	US	Application Migration with Dynamic Operating System Containers
83769101	Published		7/11/2011		14/131446	US	VIRTUAL MACHINE PLACEMENT
83775467	Application		7/6/2011		14/126840	US	METHOD AND SYSTEM FOR AN IMPROVED I/O REQUEST QUALITY OF SERVICE ACROSS MULTIPLE HOST I/O PORTS
83776077	Application		7/29/2011		14/234334	US	CREDENTIAL VALIDATION
83776696	Published		2/24/2014		14/188099	US	DISPLAYING VISUAL ANALYTICS OF ENTITY DATA
83777585	Application		1/31/2014		14/170321	US	Extracting Log Files From Storage Devices
83778081	Published		7/12/2011		14/130758	US	TRACING OPERATIONS IN A CLOUD SYSTEM
83778742	Published		7/1/2011		14/129459	US	METHOD OF AND SYSTEM FOR MANAGING COMPUTING RESOURCES
83781210	Application		1/28/2014		14/165947	US	CACHE AND METHOD FOR CACHE BYPASS FUNCTIONALITY
83782770	Published		12/15/2011		14/233310	US	RESET VECTORS FOR BOOT INSTRUCTIONS
83782775	Published		12/15/2011		14/233321	US	SECURITY PARAMETER ZEROIZATION
83782959	Published		10/25/2011		14/232416	US	DEVICE AUTHENTICATION
83784095	Published		8/25/2011		14/131536	US	RECOMMENDING A NEXT STEP TO TAKE IN A CASE
83784127	Published		10/20/2011		14/239885	US	SYSTEMS AND METHODS FOR EVALUATION OF EVENTS BASED ON A REFERENCE BASELINE ACCORDING TO TEMPORAL POSITION IN A SEQUENCE OF EVENTS
83784175	Application		1/6/2012		14/232229	US	REQUESTED AND ALLOWED CRYPTOGRAPHIC OPERATIONS COMPARISON
83786450	Published		7/14/2011		14/232521	US	MEMRISTORS HAVING MIXED OXIDE PHASES
83786534	Published		7/22/2011		14/232808	US	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83786674	Granted	D725593	2/24/2014	42094	29/482921	US	FRONT BEZEL FOR AN UNINTERRUPTIBLE POWER SYSTEMS (UPS) TOWER
83786722	Published		12/13/2011		14/235793	US	STORAGE CONTROLLER WITH HOST COLLABORATION FOR INITIALIZATION OF A LOGICAL VOLUME
83787461	Granted	D719912	2/28/2014	41996	29/483568	US	Front Bezel for an Uninterruptible Power systems (UPS) Rack and Tower
83787473	Granted	9025496	1/21/2014	42129	14/159531	US	Parallelly Coupled Stackable Network Switching Device
83788571	Published		10/25/2011		14/233407	US	DISTRIBUTED MANAGEMENT
83789070	Application		3/17/2014		14/215949	US	SYSTEM AND METHOD FOR EXECUTING QUERIES

PATENT
REEL: 038498 FRAME: 0530

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83789075	Published		8/24/2012		14/237280	US	MULTIDIMENSION COLUMN-BASED PARTITIONING AND STORAGE
83789823	Application		8/24/2012		14/237192	US	MULTIDIMENSION CLUSTERS FOR DATA PARTITIONING
83793364	Published		1/26/2012		14/359261	US	CLUSTERING EVENT DATA BY MULTIPLE TIME DIMENSIONS
83798012	Published		9/28/2011		14/238519	US	MANAGING PACKET FLOW IN A SWITCH FARIC
83798756	Published		8/31/2011		14/235112	US	TIERED DEEP PACKET INSPECTION IN NETWORK DEVICES
83799689	Published		7/31/2011		14/235393	US	INCIDENT HANDLING
83800116	Published		8/31/2011		14/236122	US	PROVIDING APPLICATION CONTEXT FOR A CONVERSATION
83807347	Published		8/3/2011		14/236822	US	NITRIDE-BASED MEMRISTORS
83807639	Allowed		2/18/2014		29/482442	US	Multi-Sectional Door for a FlexRack Server
83814448	Published		9/30/2011		14/240363	US	METHOD AND APPARATUS FOR MAINTAINING WIRELESS NETWORK DEVICES IN WIRELESS NETWORKS
83815043	Published		10/25/2011		14/349691	US	CONNECTOR
83816166	Published		9/21/2011		14/342664	US	AUTOMATED DETECTION OF A SYSTEM ANOMALY
83818513	Granted	8917476	11/16/2011	41996	14/348894	US	Operation of Tape Drives
83819944	Published		9/14/2011		14/239866	US	Determining Risk Associated with a Determined Labor Type for Candidate Personnel
83820998	Application		8/12/2014		14/457517	US	CLASSIFYING URLS
83822529	Application		4/30/2014		14/266238	US	DATA STORE QUERY
83824759	Application		4/30/2014		14/265736	US	UNIQUE IDENTIFIER FOR A TRANSACTION
83825617	Application		4/29/2014		14/264334	US	GENERATING AN INTERACTIVE VISUALIZATION OF METRICS COLLECTED FOR FUNCTIONAL ENTITIES
83825681	Application		4/30/2014		14/266471	US	NETWORK TOOL SYNCHRONIZATION
83825938	Published		10/14/2011		14/346344	US	PREDICTING CUSTOMER SATISFACTION
83832716	Published		12/2/2011		14/241483	US	Topic Extraction And Video Association
83834016	Application		6/30/2014		14/320188	US	MANAGEMENT OF DATA OPERATIONS
83835765	Published		9/6/2011		14/342705	US	MECHANICALLY ALIGNED OPTICAL ENGINE
83853736	Published		11/1/2011		14/350371	US	KEYING SOLUTION
83853756	Published		10/25/2011		14/349117	US	DRIVE CARRIER TOUCH SENSING
83853770	Published		10/15/2011		14/349143	US	SERVICE SUSTAINABILITY SYSTEMS AND METHODS
83854671	Published		9/30/2011		14/345713	US	EXTENDING A CONVERSATION ACROSS APPLICATIONS
83854743	Published		10/27/2011		14/349113	US	SHIFTABLE MEMORY SUPPORTING IN-MEMORY DATA STRUCTURES
83857293	Application		3/28/2014		14/229301	US	PROCESSING A METRIC OF A COMPONENT OF A SOFTWARE-DEFINED NETWORK
83858318	Published		10/21/2011		14/345210	US	GRATING COUPLERS WITH DEEP-GROOVE NON-UNIFORM GRATINGS
83862120	Published		10/28/2011		14/345594	US	METAL-INSULATOR PHASE TRANSITION FLIP-FLOP
83862179	Granted	8937981	11/1/2011	1/20/2015	14/345379	US	DIRECT MODULATED LASER

PATENT
REEL: 038498 FRAME: 0531

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83862225	Published		11/4/2011		14/348954	US	STRUCTURE OF A SWITCHING DEVICE IN AN ARRAY
83862426	Published		10/27/2011		14/353944	US	GENERATING A VISUAL REPRESENTATION
83863058	Published		11/4/2011		14/346554	US	DECODER CIRCUITS HAVING METAL-INSULATOR-METAL THRESHOLD SWITCHES
83863425	Published		12/20/2011		14/347282	US	WIRELESS ACCESS POINT ALTERNATE SETTINGS
83873835	Published		10/25/2011		14/349687	US	DRIVE CARRIER SUBSTRATE
83874136	Published		10/7/2011		14/347958	US	Generating A Non-Deterministic Model of a Process for a Goal
83875502	Published		10/27/2011		14/349678	US	SHIFTABLE MEMORY SUPPORTING ATOMIC OPERATION
83881867	Published		10/25/2011		14/351715	US	LOAD BALANCING FOR CHARGING SYSTEM CLUSTERS
83881910	Published		10/27/2011		14/349352	US	SHIFTABLE MEMORY EMPLOYING RING REGISTERS
83881948	Published		10/28/2011		14/349401	US	ROW SHIFTING SHIFTABLE MEMORY
83883451	Allowed		9/25/2012		14/353873	US	SYSTEMS AND METHODS FOR CALL FORWARDING TO A DEVICE BASED ON A PRIORITY LEVEL AND GEOGRAPHIC PROXIMITY
83883802	Published		10/10/2011		14/350625	US	Methods And Systems For Planning Execution Of An Application In A Cloud Computing System
83927135	Published		12/20/2011		14/352121	US	DISTRIBUTED EVENT PROCESSING
83928325	Published		10/31/2011		14/355288	US	Reducing TCP Timeouts due to Incast Collapse at a Network Switch
83929659	Published		12/17/2011		14/353489	US	Determining Rack Position of Device
83931480	Published		12/23/2011		14/353491	US	GENERATING A CAPACITY SCHEDULE FOR A FACILITY
83932086	Allowed		12/9/2011		14/357841	US	Optical Connections
83933022	Allowed		12/12/2011		14/357783	US	MEMRISTORS AND METHODS OF FABRICATION
83933057	Published		12/23/2011		14/353607	US	MANAGING A FACILITY
83933389	Published		10/31/2011		14/354100	US	ESTIMATION OF UNOBSERVED DEMAND
83933546	Published		10/27/2011		14/354115	US	Aligning Annotation of Fields of Documents
83942972	Application		6/3/2014		14/294865	US	Flexible Midplane And Architecture For A Multi-processor Computer System
83943785	Published		5/7/2014		14/272243	US	RESTORING STABILITY TO AN UNSTABLE BUS
83948841	Published		1/12/2012		14/364702	US	INTEGRATED SUB-WAVELENGTH GRATING SYSTEM
83951313	Published		2/22/2012		14/366390	US	MULTIPLEXER FOR SIGNALS ACCORDING TO DIFFERENT PROTOCOLS
83951485	Granted	9020006	1/18/2012	42122	14/364746	US	HIGH DENSITY LASER OPTICS
83951543	Allowed		1/27/2012		14/365129	US	Glass-Silicon Wafer-Stacked Opto-Electronic Platforms
83952273	Published		5/1/2012		14/394260	US	PACKAGED MEMORY DIES THAT SHARE A CHIP SELECT LINE
83952335	Published		3/15/2012		14/369669	US	Accessing And Replicating Backup Data Objects
83952392	Application		9/26/2014		14/498616	US	PLATFORM ERROR CORRECTION
83952501	Application		9/29/2014		14/499323	US	IMPLEMENTING STORAGE POLICIES REGARDING USE OF MEMORY REGIONS

PATENT
REEL: 038498 FRAME: 0532

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83954837	Application		6/30/2014		14/320185	US	GRAPHICAL REPRESENTATIONS OF A PORTFOLIO OF PROJECTS
83954906	Published		7/8/2014		14/326009	US	CONTEXT-BASED BUSINESS PROCESS MANAGEMENT
83957794	Application		7/30/2014		14/447449	US	Determining an Active Management Uplink
83959643	Published		1/31/2012		14/365194	US	MONOLITHICALLY INTEGRATED, SELF-ALIGNING, OPTICAL-FIBER FERRULE
83959958	Published		1/31/2012		14/371509	US	APPARATUS FOR USE IN OPTOELECTRONICS
83963511	Published		1/20/2012		14/373452	US	STORAGE PROVISIONING NEGOTIATION
83964318	Published		1/25/2012		14/363537	US	STORAGE SYSTEM DEVICE MANAGEMENT
83965904	Published		6/3/2014		14/362566	US	BOOTING A SERVER USING A REMOTE READ-ONLY MEMORY IMAGE
83965935	Published		1/31/2012		14/362959	US	CONNECTOR INDICIA
83965952	Application		7/28/2014		14/444742	US	Storage Unit Priority Based on Configuration Information
83966579	Published		1/25/2012		14/363462	US	METHOD AND SYSTEM FOR DIFFERENTIAL CHARGING
83969756	Application		3/30/2012		14/371665	US	AUTHORIZATION CACHE
83972230	Published		2/6/2012		14/364486	US	De-Duplication
83972808	Published		2/2/2012		14/364440	US	SYSTEMS AND METHODS FOR DATA CHUNK DEDUPLICATION
83973117	Published		3/15/2012		14/373848	US	REGULATING A REPLICATION OPERATION
83974293	Published		1/30/2012		14/365181	US	ESTABLISHING CONNECTIVITY OF MODULAR NODES IN A PRE-BOOT ENVIRONMENT
83974314	Published		1/31/2012		14/365191	US	SINGLE AND DOUBLE CHIP SPARE
83977147	Published		7/3/2014		14/323614	US	Multi-chip Socket
83977153	Published		7/3/2014		14/323619	US	Multi-chip Socket
83977176	Published		12/21/2011		14/366786	US	PROPER INSTALLATION DETERMINATION BASED ON RFID
83980599	Allowed		2/24/2012		14/367442	US	OPTICAL BLIND-MATE CONNECTOR
83984220	Allowed		1/6/2012		14/370165	US	CONNECTOR MODULES HAVING OPTICAL CONNECTORS MOVEABLE BETWEEN A RETRACTED POSITION AND AN EXTENDED POSITION
83985643	Published		2/21/2012		14/369760	US	MAINTAINING SYSTEM FIRMWARE IMAGES REMOTELY USING A DISTRIBUTE FILE SYSTEM PROTOCOL
83986994	Application		1/31/2012		14/370758	US	REDUCING CURRENT HARMONICS AT LIGHT LOADS
83987166	Published		1/23/2012		14/373595	US	IDENTIFYING A POLLING COMMUNICATION PATTERN
83988362	Published		4/24/2012		14/374804	US	IDENTIFYING NETWORK COMMUNICATION PATTERNS
83988396	Published		4/25/2012		14/374808	US	NETWORK MANAGEMENT
83990818	Published		4/20/2012		14/371138	US	Unified User Profiles
83991333	Published		1/26/2012		14/373560	US	IDENTIFYING A PUSH COMMUNICATION PATTERN
83991373	Published		1/30/2012		14/372514	US	REDUNDANT NON-LOOPING PATHS
83991402	Published		4/25/2012		14/372541	US	INTER DOMAIN LINK FOR FIBRE CHANNEL

PATENT
REEL: 038498 FRAME: 0533

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0534

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83991414	Published		4/26/2012		14/372546	US	MULTICAST ROUTING PATH CHECK
83991637	Published		2/27/2012		14/374831	US	METHOD AND SYSTEM FOR VEHICLE PERSONALIZATION
83991760	Published		1/31/2012		14/374249	US	IDENTIFICATION OF A FAILED CODE CHANGE
83992327	Published		3/16/2012		14/373478	US	VARIED MULTILAYER MEMRISTIVE DEVICE
83992375	Published		4/18/2012		14/373437	US	FLEXIBLE CIRCUIT CABLE WITH FLOATING CONTACT
83992436	Allowed		4/25/2012		14/373417	US	ANALYZING LIGHT BY MODE INTERFERENCE
83992456	Published		4/26/2012		14/373400	US	OPTICAL SLAB
83992739	Application		1/31/2013		14/761550	US	DEFINING A DESIGN PLAN
83992779	Published		4/25/2012		14/374834	US	FILE TRANSFER USING XML
83992793	Application		3/13/2012		14/374797	US	Submatch Extraction
83992827	Application		12/3/2012		14/646113	US	GENERIC RESOURCE PROVIDER FOR CLOUD SERVICE
83993189	Published		4/26/2012		14/374828	US	RESOURCE PLANNING
83995389	Application		2/28/2013		14/759704	US	AN INTERFACE FOR CREATING A PLAN ARTIFACT
83995433	Application		4/9/2012		14/375486	US	CREATING AN ARCHIVAL MODEL
83995578	Published		2/7/2012		14/374785	US	TESTING A MOBILE APPLICATION
83995805	Application		3/12/2012		14/376137	US	RACK COOLING SYSTEM WITH A COOLING SECTION
83995836	Published		4/20/2012		14/376136	US	VOLTAGE REGULATOR CONTROL SYSTEM
83996463	Published		4/30/2012		14/372296	US	CONTROL SIGNAL BASED ON A COMMAND TAPPED BY A USER
83998478	Published		2/29/2012		14/381410	US	NETWORK SERVICE INTERFACE ANALYSIS
83998868	Published		1/30/2012		14/374776	US	WORD SHIFT STATIC RANDOM ACCESS MEMORY (WS-SRAM)
83998916	Published		1/30/2012		14/374789	US	DYNAMIC/STATIC RANDOM ACCESS MEMORY (D/SRAM)
83999014	Published		1/20/2012		14/372976	US	MANAGING DATA ENTITIES USING COLLABORATIVE FILTERING
84000239	Application		4/27/2012		14/372874	US	APPLICATION RETENTION METRICS
84002955	Published		3/29/2012		14/374839	US	A Conceptual Services Implementation Platform
84008033	Published		7/30/2014		14/446525	US	COMPOSITE WAFER INCLUDING A MOLDED WAFER AND A SECOND WAFER
84016721	Published		2/29/2012		14/377919	US	INFORMATION TRANSMISSION FROM WIRELESS ACCESS POINT
84017573	Published		8/30/2012		14/377927	US	SECURE NETWORK DATA
84017588	Published		4/27/2012		14/377928	US	HOME NETWORK PACKET DELIVERY
84017625	Published		2/22/2012		14/378971	US	HIDING LOGICAL PROCESSORS FROM AN OPERATING SYSTEM ON A COMPUTER
84022087	Published		2/16/2012		14/378661	US	RADIO RESOURCE MANAGEMENT
84022818	Published		4/24/2012		14/379662	US	OPTICAL DATA INTERFACE WITH ELECTRICAL FORWARDED CLOCK
84026920	Published		4/25/2012		14/379638	US	OPEN-GAIN TRANS-IMPEDANCE AMPLIFIER WITH PROGRAMMABLE INPUT IMPEDANCE

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84027706	Allowed		4/25/2012		14/386183	US	OPERATING VERTICAL-CAVITY SURFACE-EMITTING LASERS
84028835	Published		2/29/2012		14/381291	US	Continuous Recording Multichannel Disk-based Data Logging
84028840	Published		3/2/2012		14/381859	US	Shiftable Memory Supporting Bimodal Storage
84031356	Application		10/31/2014		14/529476	US	COMMON DEPLOYMENT MODEL
84038278	Application		8/29/2014		14/473582	US	DETERMINING THROUGHPUT BASED ON SYSTEM BUSY LEVEL
84038292	Application		8/27/2014		14/470837	US	COMPUTING PLATFORM POWER CONSUMPTION LEVEL ADJUSTMENT
84044280	Application		10/30/2014		29/507763	US	Hot Plug Button with an Identifying Colored Stripe
84044294	Application		10/30/2014		29/507765	US	HARD DRIVE CARRIER
84044306	Application		10/30/2014		29/507762	US	HANDLE FOR A DRAWER
84044318	Application		10/30/2014		29/507764	US	HANDLE FOR A CARRIER
84046860	Published		3/30/2012		14/388177	US	ASSOCIATING AN APPLICATION WITH AN APPLICATION FILE
84047389	Application		3/30/2012		14/386792	US	LICENSE MANAGEMENT OF FIRMWARE-CONTROLLABLE FEATURES IN COMPUTER SYSTEMS
84052785	Granted	9084187	9/30/2014	42199	14/502450	US	PACKET ROUTING METHOD, PROXY SERVER AND APPARATUS
84056073	Granted	D740846	11/18/2014	42290	29/509514	US	COMPUTING DEVICE DISPLAYING GRAPHICAL USER INTERFACE FOR PROVIDING COLLABORATIVE RESOURCES (as amended)
84057342	Published		10/31/2014		14/530331	US	PROVISION OF SERVICES OVER A COMMON DELIVERY PLATFORM SUCH AS A MOBILE TELEPHONY NETWORK
84057413	Published		4/25/2012		14/387650	US	ELECTRICAL/OPTICAL CONNECTOR
84060087	Published		4/27/2012		14/387554	US	SHIELDING A MEMORY DEVICE
84060946	Published		4/30/2012		14/387563	US	ADDRESS TRANSLATION GASKET
84063613	Published		4/30/2012		14/387863	US	CONFIGURABLE COMPUTER MEMORY
84064684	Published		10/22/2014		14/520517	US	Packet Processing Indication
84067646	Published		4/30/2012		14/389910	US	REFLECTIVE MEMORY BRIDGE FOR EXTERNAL COMPUTING NODES
84068293	Published		4/16/2012		14/390587	US	INTEGRATED OPTICAL SUB-ASSEMBLY
84068877	Published		4/26/2012		14/396694	US	INPUT-OUTPUT MODULE
84071857	Published		4/20/2012		14/391686	US	TESTING SYSTEM FOR AN INTEGRATED SOFTWARE SYSTEM
84071969	Published		4/23/2012		14/391689	US	SOFTWARE DEFECT VERIFICATION
84072859	Published		6/8/2012		14/391668	US	TEST AND MANAGEMENT FOR CLOUD APPLICATIONS
84073443	Published		4/30/2012		14/391300	US	FEEDBACK-BASED TRANS-IMPEDANCE AMPLIFIER WITH PROGRAMMABLE INPUT IMPEDANCE
84073463	Published		4/30/2012		14/391336	US	TRANSCEIVER MODULE
84073520	Application		4/30/2012		14/391352	US	OPTICAL BASE LAYER

PATENT
REEL: 038498 FRAME: 0535

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84073529	Published		4/30/2012		14/391359	US	SOCKET WITH ROUTED CONTACTS
84074268	Published		7/6/2012		14/391202	US	EXPOSED GROUP OF RECIPIENTS FOR TEXT MESSAGE
84074293	Published		5/30/2012		14/395931	US	SERVER PROFILE TEMPLATES
84075973	Published		7/27/2012		14/395951	US	SYSTEMS AND METHODS FOR DETECTING A DIMM SEATING ERROR
84076014	Published		5/29/2012		14/402704	US	DEVICES INCLUDING INDEPENDENTLY CONTROLLABLE ABSORPTION REGION AND MULTIPLICATION REGION ELECTRIC FIELDS
84076111	Published		7/25/2012		14/396419	US	Avalanche Photodiodes with Defect-assisted Silicon Absorption Regions
84076180	Application		7/26/2012		14/416312	US	OPTICAL ENGINE
84076305	Published		7/27/2012		14/395996	US	OPTICALLY CONNECTING A CHIP PACKAGE TO AN OPTICAL CONNECTOR
84076334	Published		7/20/2012		14/394544	US	MIGRATING APPLICATIONS BETWEEN NETWORKS
84077542	Application		7/20/2012		14/395445	US	PROBLEM ANALYSIS AND PRIORITY DETERMINATION BASED ON FUZZY EXPERT SYSTEMS
84077571	Published		7/30/2012		14/391824	US	PROVIDING AGREEMENT INFORMATION TO ALLOW ACCESS BY A CLIENT DEVICE OF SELECTED EQUIPMENT FROM AMONG MULTIPLE EQUIPMENT
84077579	Published		7/30/2012		14/395437	US	DEVICE TO PERFORM SERVICE CONTRACT ANALYSIS
84077631	Application		7/31/2012		14/391839	US	IMPLEMENTING A TRANSITION PROTOCOL IN WHICH A FIRST RULE SET FOR ROUTING PACKETS RECEIVED BY A GROUP OF SWITCHES DURING A FIRST TIME PERIOD IS UPDATED TO A SECOND RULE SET
84077653	Published		7/20/2012		14/395684	US	POLICY-BASED SCALING OF NETWORK RESOURCES
84077882	Published		7/10/2012		14/396331	US	LIST SORT STATIC RANDOM ACCESS MEMORY
84078673	Application		5/24/2012		14/396055	US	Fiber Connector Assembly
84079488	Published		5/30/2012		14/398003	US	FIELD SELECTION FOR PATTERN DISCOVERY
84079569	Published		5/15/2012		14/398213	US	PATTERN MINING BASED ON OCCUPANCY
84079629	Published		6/1/2012		14/398249	US	MERGING DATA FROM A SOURCE LOCATION INTO A TARGET LOCATION
84079652	Published		6/4/2012		14/398269	US	MANAGING AN ANALYTIC FUNCTION TO BE PERFORMED ON DATA STORED IN AN INPUT BLOCK
84082448	Published		10/15/2014		14/515312	US	Method And Apparatus For Processing Inbound And Outbound Quanta Of Data
84082709	Application		9/26/2014		14/498998	US	UNMAP STORAGE SPACE
84084111	Published		4/30/2012		14/396733	US	DETERMINING A PRIMARY WIRELESS ACCESS POINT (WAP) OBJECT FROM COVERAGE PREDICTIONS FOR TRIAL WAP CONFIGURATIONS

PATENT
REEL: 038498 FRAME: 0536

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84086487	Published		11/14/2014		14/542098	US	SEMANTICS GRAPHS FOR ENTERPRISE COMMUNICATION NETWORKS
84088685	Published		4/30/2012		14/397705	US	NOTIFICATION BASED ON AN EVENT IDENTIFIED FROM VIBRATION DATA
84089321	Published		5/9/2012		14/396600	US	APPARATUS AND METHOD FOR SELECTING MEMORY OUTSIDE A MEMORY ARRAY
84089439	Published		6/7/2012		14/397425	US	Multi-Tenant Network Provisioning
84089444	Published		6/19/2012		14/397429	US	An Iterative Optimization Method for Site Selection in Global Load Balance
84092613	Published		6/8/2012		14/402653	US	CLOUD APPLICATION DEPLOYMENT
84095078	Application		11/18/2014		29/509506	US	CABINET
84095601	Granted	D732041	11/18/2014	42171	29/509511	US	ENCLOSURE
84096695	Application		10/30/2014		29/507767	US	CARRIER
84096718	Application		10/30/2014		29/507768	US	CARRIER
84100737	Published		6/30/2012		14/400601	US	SYSTEM AND METHOD FOR VIRTUAL REPLICATION OF A MOBILE PHONE
84100836	Published		5/11/2012		14/398866	US	SERVER SELECTION
84103109	Allowed		12/8/2014		14/563327	US	EXECUTION OF END-TO-END PROCESSES ACROSS APPLICATIONS
84103161	Published		6/15/2012		14/400366	US	COMMUNICATING DATA ASSOCIATED WITH DIFFERENT PERSONAS OF A USER
84103284	Published		7/31/2012		14/400373	US	VIRTUAL MACHINE DATA PACKET ENCAPSULATION AND DECAPSULATION
84105891	Application		5/22/2012		14/401832	US	ALTERNATING POWER SOURCES TO MANAGE INPUT POWER IN A CONVERTER
84106324	Application		6/29/2012		14/411055	US	RE-VERIFICATION OF A DEVICE
84106336	Application		6/29/2012		14/411090	US	GENERATION OF ACCESS POINT CONFIGURATION CHANGE BASED ON A GENERATED COVERAGE MONITOR
84110970	Published		7/27/2012		14/415268	US	DYNAMIC SENSE CIRCUITRY
84111004	Published		7/27/2012		14/416292	US	STORING MEMORY WITH NEGATIVE DIFFERENTIAL RESISTANCE MATERIAL
84111545	Published		12/8/2014		14/563331	US	EXECUTION OF A WORKFLOW THAT INVOLVES APPLICATIONS OR SERVICES OF DATA CENTERS
84111908	Application		4/16/2015		14/688888	US	Refresh Flow Entry
84112930	Published		7/30/2012		14/417819	US	OPTICAL WAVEGUIDE
84113159	Application		1/23/2015		14/604256	US	Worker Task Assignment Based on Correlation and Capacity Information
84113163	Application		2/19/2015		14/626317	US	FAN GUARD
84113720	Application		1/28/2015		14/607247	US	DETECTING FLOW ANOMALIES
84113798	Acknowledged					US	MARKETPLACE FOR CLOUD SERVICE PROVIDERS

PATENT
REEL: 038498 FRAME: 0537

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84115667	Application		4/30/2015		14/700972	US	APPARATUS HAVING FIRST AND SECOND SWITCHING MATERIALS
84115781	Published		12/11/2014		14/567513	US	PRIORITIZED OPTICAL ARBITRATION SYSTEMS AND METHODS
84116623	Published		6/4/2012		14/405563	US	USER-DEFINED LOADING OF DATA ONTO A DATABASE
84116998	Published		6/22/2012		14/406564	US	OPTIMAL ASSIGNMENT OF VIRTUAL MACHINES AND VIRTUAL DISKS USING MULTIARY TREE
84117006	Published		12/8/2014		14/563552	US	FULFILLING A REQUEST BASED ON CATALOG AGGREGATION AND ORCHESTRATED EXECUTION OF AN END-TO-END PROCESS
84118364	Application		9/27/2012		14/410660	US	REPLACING VIRTUAL FILE SYSTEM DATA STRUCTURES DELETED BY A FORCED UNMOUNT
84118616	Application		7/3/2012		14/406683	US	MANAGING A HYBRID CLOUD SERVICE
84119016	Published		8/13/2012		14/406792	US	TRANS-IMPEDANCE AMPLIFIERS (TIA) THERMALLY ISOLATED FROM OPTICAL MODULES
84119359	Allowed		12/18/2014		14/575441	US	DIRECT MODULATED LASER
84120648	Published		8/31/2012		14/424601	US	NETWORK SYSTEM FOR IMPLEMENTING A CLOUD PLATFORM
84121738	Published		7/31/2012		14/408838	US	MONITORING FOR MANAGED SERVICES
84121936	Published		7/6/2012		14/408673	US	MANAGEMENT OF AIRFLOW PROVISIONING TO MEET A COOLING INFLUENCE REDUNDANCY LEVEL
84123810	Application		10/22/2012		14/410629	US	PERFORMING REFRESH OF A MEMORY DEVICE IN RESPONSE TO ACCESS OF DATA
84124111	Published		12/22/2014		14/579917	US	TELECENTRIC OPTICAL ASSEMBLY
84124749	Application		1/30/2013		14/438624	US	FAILOVER IN RESPONSE TO FAILURE OF A PORT
84126210	Application		7/9/2012		14/413417	US	SITE MODEL SELECTION FOR A WIRELESS ACCESS POINT
84126774	Application		1/30/2013		14/442450	US	WRITING DATA TO A TAPE
84126791	Application		1/31/2013		14/443548	US	MAGNETIC TAPE PROCESSING
84136983	Application		7/31/2012		14/418881	US	NETWORK TRAFFIC PROCESSING SYSTEM
84137299	Application		10/10/2012		14/431414	US	IDENTIFYING REPORTS TO ADDRESS NETWORK ISSUES
84138275	Published		7/30/2012		14/417224	US	COMPILATION SYSTEM FOR EXECUTABLE OBJECTS
84138409	Application		9/27/2012		14/416266	US	ALLOCATING WORKLOADS BASED ON AIR FLOW PRIORITY
84139170	Application		7/31/2012		14/418894	US	CONJOINT VULNERABILITY IDENTIFIERS
84139551	To Be Filed		2/28/2014			US	UNIBODY SOCKETS INCLUDING LATCH EXTENSIONS
84139565	Application		9/28/2012		14/416076	US	PLENUMS FOR REMOVABLE MODULES
84139967	Application		9/27/2012		14/417950	US	CAPTURING AN APPLICATION STATE IN A CONVERSATION
84139989	Published		7/31/2012		14/418815	US	INSTRUMENTED FILE DEPLOYMENT
84140058	Application		10/31/2012		14/415577	US	SIGNALING EXISTENCE OF A NETWORK NODE THAT IS IN A REDUCED-POWER MODE
84140112	Application		10/30/2012		14/416592	US	ANALYZING DATA WITH COMPUTER VISION

PATENT
REEL: 038498 FRAME: 0538

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84140193	Published		10/26/2012		14/416610	US	PROCESSING STREAMING DATA WITH OPEN EXECUTORS
84140883	Application		9/6/2012		14/414958	US	Scalable File System
84141246	Published		10/31/2012		14/427709	US	THERMAL STABILIZATION SHIPPING SYSTEM AND METHOD
84141272	Application		7/31/2012		14/418863	US	VULNERABILITY VECTOR INFORMATION ANALYSIS
84141864	Published		2/10/2015		14/618602	US	SERVER SWITCH INTEGRATION IN A VIRTUALIZED SYSTEM
84147329	Application		42025		14/602033	US	DISPLAY SERVER COMMUNICATIONS CHANNEL
84148242	Allowed		8/13/2012		14/419019	US	PERFORMANCE TESTS IN A CONTINUOUS DEPLOYMENT PIPELINE
84148250	Application		8/29/2012		14/424030	US	CONTROLLER TO DETERMINE A RISK OF THERMAL DAMAGE BASED ON CURRENT MEASUREMENTS
84148304	Application		8/24/2012		14/423708	US	DEDICATING RESOURCES OF A NETWORK PROCESSOR
84153343	Published		7/31/2012		14/418927	US	UNAUTHORIZED USER CLASSIFICATION
84156299	Published		9/13/2012		14/420255	US	POLICY DECISION POINT MANAGEMENT
84158942	Published		8/28/2012		14/423913	US	HIGH PERFORMANCE PERSISTENT MEMORY
84159549	Application		1/31/2013		14/429489	US	CONTROLLED HEAT DELIVERY
84160894	Published		9/27/2012		14/426416	US	NON-EVANESCENT HYBRID LASER
84161772	Application		2/24/2015		29/518531	US	BEZEL WITH DOCKING RECESS
84161938	Application		9/21/2012		14/428686	US	MONITOR USABLE WITH CONTINUOUS DEPLOYMENT
84162986	Published		8/30/2012		14/421759	US	ENCRYPTED DATA STORE FOR RECORDS
84163292	Published		9/12/2012		14/421734	US	VALIDATING A METADATA TREE USING A METADATA INTEGRITY VALIDATOR
84164269	Published		9/19/2012		14/421784	US	METADATA TREE OF A PATIENT WITH LOCKBOXES
84168273	Published		8/21/2012		14/422346	US	CONGESTION NOTIFICATION IN A NETWORK
84169635	Published		3/10/2015		14/642950	US	HIGH DENSITY LASER OPTICS
84169911	Application		4/30/2015		14/701428	US	CLINICAL QUALITY PERFORMANCE MANAGEMENT
84170294	Application		4/30/2015		14/701302	US	PROJECTION DEVICE ACCESS
84170409	Application		5/11/2015		14/709132	US	STORING INDICATORS OF UNREFERENCED MEMORY ADDRESSES IN VOLATILE MEMORY
84172702	Application		3/31/2015		14/675556	US	CLOUD MODELS
84172741	Application		4/6/2015		14/679757	US	DETERMINING STRING SIMILARITY USING SYNTACTIC EDIT DISTANCE
84173614	Application		5/27/2015		14/723102	US	IDENTIFYING ALGORITHMICALLY GENERATED DOMAINS
84174522	Application		9/26/2012		14/425592	US	MULTICAST MESSAGE UPDATE
84178421	Allowed		12/31/2012		13/731414	US	SYSTEMS AND METHODS FOR PREDICTIVE POWER MANAGEMENT IN A COMPUTING CENTER
84178563	Published		8/31/2012		14/424767	US	SELECTING A RESOURCE TO BE USED IN A DATA BACKUP OR RESTORE OPERATION
84179374	Published		10/31/2012		14/425247	US	REPAIRING A MEMORY DEVICE
84179380	Published		9/28/2012		14/427866	US	GENERATING A SHAPE GRAPH FOR A ROUTING TABLE

PATENT
REEL: 038498 FRAME: 0539

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84185041	Application		9/14/2012		14/428038	US	DETERMINING A LOAD DISTRIBUTION FOR DATA UNITS AT A PACKET INSPECTION DEVICE
84186410	Published		9/18/2012		14/426367	US	Mining Questions Related To An Electronic Text Document
84189979	Application		3/6/2015		14/640730	US	Computing Entities, Platforms And Methods Operable To Perform Operations Selectively Using Different Cryptographic Algorithms
84191341	Application		5/13/2015		29/526789	US	HANDLE
84191568	Application		4/27/2015		29/525134	US	ROUTER
84191748	Published		9/25/2012		14/430877	US	NOTIFICATION OF ADDRESS RANGE INCLUDING NON-CORRECTABLE ERROR
84191765	Application		8/9/2013		14/432191	US	QR CODE UTILIZATION IN SELF-REGISTRATION IN A NETWORK
84192661	Application		10/8/2012		14/434241	US	ROBUST HARDWARE FAULT MANAGEMENT SYSTEM, METHOD AND FRAMEWORK FOR ENTERPRISE DEVICES
84193721	Application		1/14/2013		14/759713	US	NONVOLATILE MEMORY ARRAY LOGIC
84195029	Application		4/28/2015		14/698675	US	STATUS UPDATE FOR A DEVICE IDENTIFIER IN A COMMUNICATION NETWORK
84200925	Application		3/20/2015		62/136188	US	STANDARDIZED CUSTOM SURVEYS
84202562	Published		5/14/2015		14/711768	US	MONITORING AND MITIGATING CLIENT-SIDE EXPLOITATION OF APPLICATION FLAWS
84202579	Application		11/12/2012		14/441424	US	ASSIMILATING BUSINESS RULES
84202591	Application		11/28/2012		14/646961	US	REGULATING APPLICATION TASK DEVELOPMENT
84202608	Application		11/30/2012		14/646812	US	RUNNING AGENTS TO EXECUTE AUTOMATION TASKS IN CLOUD SYSTEMS
84208035	Application		9/27/2012		14/431694	US	BALANCING A LOAD BETWEEN POWER SUPPLIES TO INCREASE EFFICIENCY
84210884	Application		11/29/2012		14/435786	US	FAULT TOLERANCE IN A MULTI-CORE CIRCUIT
84214430	Published		6/1/2015		14/726792	US	Workload Management With Resource Transfer Sequence Planned As A Function Of Ranking Of Resource Allocations
84215527	Application		3/28/2013		14/760401	US	DATA FLUSH OF GROUP TABLE
84217942	Application		10/31/2012		14/437363	US	EXECUTING A QUERY HAVING MULTIPLE SET OPERATORS
84217954	Application		11/6/2012		14/439206	US	ENHANCED GRAPH TRAVERSAL
84217966	Application		11/14/2012		14/441943	US	UPDATING STATISTICS IN DISTRIBUTED DATABASES
84220837	Application		4/13/2015		14/684555	US	Network Switching Device for Quantifying Available Service-Level Capacity of a Network For Projected Network Traffic
84220851	Published		4/24/2015		14/695789	US	MALICIOUS CODE DETECTION
84220857	Published		5/19/2015		14/716250	US	Zone Group Reassignment Using Storage Device Signatures
84221543	Allowed		5/18/2015		14/715249	US	CONFIGURATION SPACE WITH PSEUDO DEVICE IDENTIFIER
84223080	Application		6/30/2015		14/755125	US	MANAGEMENT OF CRYPTOGRAPHIC KEYS

PATENT
REEL: 038498 FRAME: 0540

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84223664	Application		11/5/2012		14/437024	US	Cellular Base Station
84224835	Application		4/20/2015		14/690682	US	Managing Data Paths Between Computer Applications And Data Storage Devices
84224855	Application		3/29/2013		14/765107	US	PERFORMANCE RULES AND STORAGE UNITS
84224866	Published		4/16/2015		14/688878	US	APPARATUS, AND ASSOCIATED METHOD, FOR GENERATING AN INFORMATION TECHNOLOGY INCIDENT REPORT
84230234	Published		5/19/2015		14/716473	US	STORING DATA IN PERSISTENT HYBRID MEMORY
84232801	Application		10/26/2012		14/438386	US	Summarization of a Document
84237633	Application		11/28/2012		14/439518	US	DETERMINING AT LEAST ONE COST FACTOR ASSOCIATED WITH USING THE CLOUD TO PROVIDE AN APPLICATION COMPONENT
84237731	Application		4/29/2015		14/699244	US	DISTRIBUTED NETWORK INSTRUMENTATION SYSTEM
84237785	Application		10/31/2012		14/439763	US	Patient oriented hospital care approach and system
84237920	Published		10/31/2012		14/439887	US	GENERATING AN OUTPUT BASED ON COLLECTING INFORMATION RELATING TO A CASE
84247408	Application		11/30/2012		14/648290	US	MEMORY CONTROLLERS TO FORM SYMBOLS BASED ON BURSTS
84249418	Application		1/30/2013		14/763532	US	CONTROLLING ERROR PROPAGATION DUE TO FAULT IN COMPUTING NODE OF A DISTRIBUTED COMPUTING SYSTEM
84252613	Application		12/3/2012		14/646121	US	ASYNCHRONOUS FRAMEWORK FOR MANAGEMENT OF IAAS
84252632	Application		12/3/2012		14/646847	US	CLOUD OBJECT
84252644	Application		12/3/2012		14/646857	US	CLOUD SERVICE MANAGEMENT SYSTEM
84252656	Application		12/19/2012		14/653213	US	MULTI-CHANNEL CONVERSATION
84260161	To Be Filed		10/9/2013			US	INFORMATION TECHNOLOGY RESOURCE PLANNING
84262826	Application		7/28/2015		14/811673	US	Shared Symmetric Key Encryption
84264652	Application		8/6/2015		14/819963	US	IDENTIFICATION OF AN APPLICATION BASED ON PACKET SIZE
84264755	Application		7/31/2015		14/815452	US	REMEDIATING RANSOMWARE
84265110	Application		8/7/2015		14/821127	US	CLOUD MODELS BASED ON LOGICAL NETWORK INTERFACE DATA
84265585	Application		11/30/2012		14/648416	US	PATH TO HOST IN RESPONSE TO MESSAGE
84265743	Application		11/30/2012		14/647833	US	Distributed Pattern Discovery
84266647	Application		7/9/2015		14/795684	US	REUSABLE SEMICONDUCTOR SUBSTRATES
84269653	Application		7/31/2015		14/815,179	US	UPDATING SERVICE LEVEL TARGETS
84269661	Application		7/21/2015		14/804654	US	ASSOCIATING ERROR EVENTS WITH INPUTS TO APPLICATIONS

PATENT
REEL: 038498 FRAME: 0541

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84269704	Application		1/31/2013		14/764922	US	Mapping Mechanism for Large Shared Address Spaces
84273537	Application		12/11/2013		14/648982	US	RESULT AGGREGATION
84274043	Application		12/4/2012		14/649191	US	Displaying Information Technology Conditions with Heat Maps
84275149	Application		12/19/2012		14/650571	US	HEAT REMOVAL ASSEMBLY
84279580	Application		12/11/2012		14/651185	US	Provisioning Tools for Application Development
84279717	Application		6/8/2015		62/172598	US	DevOps and Test Recommendations with User Coverage and Usage
84283824	Application		1/30/2013		14/763996	US	NON-VOLATILE MEMORY WRITE MECHANISM
84288007	To Be Filed					US	Managing Host Logins To Storage Systems
84289254	Application		7/29/2015		14/813068	US	STORAGE ENCLOSURE BRIDGE DETECTION
84289444	Application		2/1/2013		14/764991	US	STORING BACKUP DATA SEPARATE FROM CATALOG DATA
84290723	Application		7/2/2015		14/790881	US	PROCESSOR TOPOLOGY SWITCHES
84291313	Application		1/15/2013		14/759651	US	Server-Platform Simulation Service
84291356	Application		1/30/2013		14/763582	US	Power Sequencing by Slave Power Sequencers Sharing a Command Bus
84291398	Application		8/4/2015		14/818,054	US	Query Plan Analysis Of Alternative Plans Using Robustness Mapping
84292970	Application		1/31/2013		14/764144	US	UPDATING A COMMIT LIST TO INDICATE DATA TO BE WRITTEN TO A FIRMWARE INTERFACE VARIABLE REPOSITORY
84296125	Application		7/1/2015		14/789437	US	MAXIMIZING SERVER UTILIZATION WITHIN A DATACENTER
84296214	Application		6/29/2015		14/753210	US	Network Zone Identification In A Network Security System
84297184	Application		7/27/2015		14/810389	US	ELEPHANT FLOW DETECTION IN A COMPUTING DEVICE
84301105	Application		7/2/2015		62/188455	US	AUTO-RESOLUTION OF RULES TO RESOURCE TYPES
84301111	Application		7/2/2015		62/188461	US	Intelligent Scheduler for Resource Policy Implementation
84301904	Application		3/28/2013		14/763943	US	Implementing Coherency with Reflective Memory
84301961	Application		3/28/2013		14/760191	US	APPARATUS AND METHOD FOR STORAGE DEVICE READING
84301995	Application		3/14/2013		14/762715	US	RADIO FREQUENCY DATA COLLECTION
84302007	Application		3/31/2013		14/760189	US	SCHEDULE FOR ACCESS TO SHARED WIRELESS MEDIUM BASED ON PROFILE DATA
84304246	Application		2/26/2013		14/759959	US	FEDERATED SOCIAL MEDIA ANALYSIS SYSTEM AND METHOD THEREOF
84304282	Application		7/9/2015		29/532,728	US	MICROSERVER
84304286	Application		7/9/2015		29/532733	US	MICROSERVER
84304337	Application		3/15/2013		14/759977	US	MAP MATCHING
84304414	Application		1/23/2013		14/759659	US	SHARED RESOURCE CONTENTION
84304428	Application		1/25/2013		14/759682	US	Detecting Fraud in Resource Distribution Systems
84304443	Application		1/30/2013		14/763591	US	RECOVERING PAGES OF A DATABASE

PATENT
REEL: 038498 FRAME: 0542

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84304483	Application		1/31/2013		14/764234	US	AREA OCCUPANCY INFORMATION EXTRACTION
84304495	Application		3/15/2013		14/764609	US	MEMORY MODULE CONTROLLER SUPPORTING EXTENDED WRITES
84306281	Application		1/29/2013		14/761342	US	GENERATING TEST CODE TO TEST EXECUTABLE CODE
84306295	Application		1/22/2013		14/759837	US	DETERMINING A REMEDIAL ACTION FOR A MOTORIZED VEHICLE BASED ON SENSED VIBRATION
84306312	Application		1/31/2013		14/761534	US	GENERATING SOFTWARE TEST SCRIPT FROM VIDEO
84306381	Application		1/30/2013		14/759894	US	SYSTEMS AND METHODS FOR DETERMINING COMPATIBILITY BETWEEN SOFTWARE LICENSES
84306472	Application		3/15/2013		14/764563	US	ENERGY BASED NETWORK RESTRUCTURING
84306944	Application		7/23/2015		14/806653	US	Segmenting Bus Topology
84311788	Application		1/31/2013		14/765321	US	METHODS AND APPARATUS FOR DEBUGGING OF REMOTE SYSTEMS
84311845	Application		1/31/2013		14/761359	US	ERROR DEVELOPER ASSOCIATION
84311922	Application		41305		14/761370	US	DEPENDENCY MONITORING
84312504	Application		2/27/2013		14/764988	US	Sending a Request to a Management Service
84312544	Application		2/27/2013		14/764746	US	SELECTING A BACKUP TYPE BASED ON CHANGED DATA
84312569	Application		2/28/2013		14/764717	US	REDUCING POWER FOR STORAGE DEVICES
84312589	Application		2/25/2013		14/763172	US	PRESENTATION OF USER INTERFACE ELEMENTS BASED ON RULES
84312647	Application		1/18/2013		14/762181	US	PREVENTING A MEMORY ATTACK TO A WIRELESS ACCESS POINT
84312707	Application		2/28/2013		14/764280	US	DETERMINING COVERAGE OF DYNAMIC SECURITY SCANS USING RUNTIME AND STATIC CODE ANALYSES
84312815	Application		1/31/2013		14/764596	US	SHARING INFORMATION
84312830	Application		1/31/2013		14/764670	US	TARGETED SECURITY ALERTS
84312856	Application		1/31/2013		14/761567	US	PHYSICAL RESOURCE ALLOCATION
84312899	Application		2/1/2013		14/761574	US	TEST SCRIPT CREATION BASED ON ABSTRACT TEST USER CONTROLS
84312965	Application		1/18/2013		14/761368	US	TASK ASSIGNMENT IN CROWDSOURCING
90001553	Application		7/23/2015		29/533984	US	Multi-Sectional Door for a FlexRack
90015805	Application		7/28/2015		14/810992	US	DYNAMIC PROVISIONING OF VIRTUAL SYSTEMS
90016086	Application		1/30/2013		14/763504	US	UNIFIED CONTROL OF AN ELECTRONIC CONTROL SYSTEM AND A FACILITY CONTROL SYSTEM
90016435	Application		1/23/2013		14/762759	US	Balancing Access Point Workloads
90016449	Application		8/11/2015		14/823591	US	System And Method For Dynamically Allocating Resources
90016463	Application		1/24/2013		14/762941	US	LIMITING ACCESS TO SERVICE PROVIDERS BASED ON THE NETWORK TRAFFIC LOAD OF A WIRELESS ACCESS POINT
90016523	Application		3/21/2013		14/778405	US	USING A NETWORK SWITCH TO CONTROL A VIRTUAL LOCAL NETWORK IDENTITY ASSOCIATION

PATENT
REEL: 038498 FRAME: 0543

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90016538	Application		7/22/2015		14/805505	US	METHOD OF PURCHASING INSURANCE OR VALIDATING AN ANONYMOUS TRANSACTION
90016564	Application		1/29/2013		14/764229	US	METHODS AND SYSTEMS FOR SHARED FILE STORAGE
90016641	Application		1/31/2013		14/762590	US	SYNTHETIC HEALTHCARE DATA GENERATION
90016689	Application		1/31/2013		14/763218	US	Linking Media Access Between Devices
90017096	Application		1/30/2013		14/764093	US	CONTROLLING A TOPOLOGY OF A NETWORK
90017116	Application		1/31/2013		14/763496	US	NETWORK SWITCH STIMULATION
90017145	Application		1/31/2013		14/763793	US	Approximate Query Processing
90017154	Application		1/31/2013		14/763488	US	Event Log System
90022223	Application		11/12/2013		14/764084	US	NETWORK MANAGEMENT ACCESS BASED PREVIOUS REGISTRATION OF USER DEVICE
90022663	Application		7/29/2015		14/812750	US	MANAGING MAC MOVES WITH SECURE PORT GROUPS
90022729	Application		3/27/2013		14/780381	US	Non-Volatile Memory Based Synchronous Logic
90022769	Application		1/31/2013		14/764960	US	RADIX ENHANCEMENT FOR PHOTONIC PACKET SWITCH
90022827	Application		1/31/2013		14/764973	US	DETERMINING TRANSFERABILITY OF A COMPUTING RESOURCE TO A CLOUD COMPUTING ENVIRONMENT
90022856	Application		2/7/2013		14/765011	US	Formatting Semi-Structured Data in a Database
90024189	Application		2/28/2013		14/764937	US	RECOVERY PROGRAM USING DIAGNOSTIC RESULTS
90024630	Application		3/28/2013		14/778341	US	REGULATING MEMORY ACTIVATION RATES
90024639	Application		3/28/2013		14/780392	US	Split Mode Addressing of Persistent Memory
90025981	Application		3/28/2013		14/777132	US	Shared Memory System
90028910	Application		4/1/2013		14/780389	US	External Memory Controller
90028926	Acknowledged		4/2/2013			US	STATE-RETAINING LOGIC CELL
90030653	Application		9/2/2015		14/843824	US	PERSISTENT CHECKSUM DATA VALIDATION
90031016	Application		8/18/2015		14/829076	US	INVERSION OF CONTROL FOR EXECUTABLE EXTENSIONS IN A RUN-TIME ENVIRONMENT
90031025	Application		3/12/2013		14/773943	US	IDENTIFYING TRANSPORT-LEVEL ENCODED PAYLOADS
90031133	To Be Filed		4/30/2013			US	DEPENDENCIES BETWEEN FEATURE FLAGS
90031145	To Be Filed		4/30/2013			US	Coordinating Application Deployment with a Platform Tier
90032823	Application		8/13/2015		14/825987	US	OPTIMIZING EXECUTION AND RESOURCE USAGE IN LARGE SCALE COMPUTING
90035359	Acknowledged					US	Dial like interaction gesture for triggering navigation.
90037373	Application		3/12/2013		14/773549	US	PROGRAMMABLE ADDRESS MAPPING AND MEMORY ACCESS OPERATIONS
90037735	Acknowledged					US	Micro-services as SOA services with management and API that support logic or data source decoupling from API and UI
90037831	To Be Filed					US	Suggest relevant code using user story description
90037980	To Be Filed					US	Improved Memory Resiliency Method

PATENT
REEL: 038498 FRAME: 0544

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90039626	Application		8/27/2015		14/837472	US	DATA PACKET FLOW RULE FIELD RANGE OF AN APPLICATION SPECIFIC INTEGRATED CIRCUIT
90039666	Application		9/25/2015		14/865505	US	WIDGETS IN DIGITAL DASHBOARDS
90039721	To Be Filed					US	Connecting data sources to dashboard widget using virtual data channels.
90041049	Application		8/31/2015		14/841088	US	SERIAL CONNECTION EXTERNAL INTERFACE RISER CARDS AVOIDANCE OF ABUTMENT OF PARALLEL CONNECTION EXTERNAL INTERFACE MEMORY MODULES
90041289	Application		3/13/2013		14/772352	US	COUPLED RING RESONATOR SYSTEM
90041312	Application		3/13/2013		14/772358	US	BACKLIGHT HAVING COLLIMATING REFLECTOR
90041332	Application		4/11/2013		14/773179	US	MODE CONVERSION FOR OPTICAL ISOLATION
90045017	Application		3/25/2013		14/779969	US	Extensible Firmware Abstraction
90046368	Application		3/14/2013		14/771800	US	SUPPORT MEMBER
90046408	Application		9/11/2015		14/852052	US	Distributed Network Connection Policy Management
90047310	Application		9/18/2015		14/858,958	US	Cooling Apparatus
90048531	Acknowledged		4/30/2013			US	Memory Access Rate
90048549	Acknowledged		4/30/2013			US	Coalescing Memory Access Requests
90048706	Application		9/14/2015		14/853415	US	Data Processing System And Method
90049373	Application		3/26/2013		14/780523	US	TOP LOADING CARTRIDGE
90049391	Application		3/28/2013		14/781014	US	MAKING MEMORY OF COMPUTE AND EXPANSION BLADE DEVICES AVAILABLE FOR USE BY AN OPERATING SYSTEM
90050868	Application		9/4/2015		14/846502	US	NETWORK ASSET INFORMATION MANAGEMENT
90050928	Application		9/4/2015		14/845670	US	NEGATIVE DIFFERENTIAL RESISTANCE DEVICE
90051534	Application		3/28/2013		14/781022	US	IDENTIFYING MEMORY OF A BLADE DEVICE FOR USE BY AN OPERATING SYSTEM OF A PARTITION INCLUDING THE BLADE DEVICE
90051568	Application		3/29/2013		14/781299	US	SHARING FIRMWARE AMONG AGENTS IN A COMPUTING NODE
90051575	Application		3/7/2013		14/773084	US	SYNCHRONIZING SIGNAL TRANSMISSIONS BY ANTENNA APPARATUSES
90052828	Application		3/15/2013		14/775329	US	CO-PROCESSOR-BASED ARRAY-ORIENTED DATABASE PROCESSING
90053561	Application		3/28/2013		14/780544	US	STORING DATA FROM CACHE LINES TO MAIN MEMORY BASED ON MEMORY ADDRESSES
90053570	Application		3/29/2013		14/780482	US	ELECTRONIC APPARATUS HAVING A COOLING APPARATUS
90055201	Application		3/13/2013		14/775811	US	MEMRISTORS WITH DOPANT-COMPENSATED SWITCHING
90056294	Application		3/15/2013		14/777501	US	MAINTENANCE OF DATA FORWARDER CONNECTION STATE INFORMATION
90056309	Application		3/15/2013		14/777497	US	NETWORK DEVICE ARCHITECTURE ADJUSTMENTS

PATENT
REEL: 038498 FRAME: 0545

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0546

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90056389	To Be Filed		4/3/2013			US	MICROCONTROLLER AT A CARTRIDGE OF A CHASSIS
90056463	To Be Filed					US	MANAGING TARGET COMPUTER USING ENCAPSULATED FILE
90056870	Application		3/15/2013		14/777475	US	MULTIBAND OPERATION OF A SINGLE WI-FI RADIO
90056890	To Be Filed		4/3/2013			US	Disabling Counterfeit Cartridges
90065904	Application		3/28/2013		14/780686	US	SHIELD FOR AN ELECTRONIC DEVICE
90065952	Application		3/29/2013		14/780352	US	INTERACTIVE SLIDE DECK
90068030	Acknowledged					US	Variable chunking for large file download
90068045	Application		3/28/2013		14/780707	US	GENERATING A FEATURE SET
90068053	Acknowledged					US	Storage Techniques to Support Cloud Computing
90068073	Application		3/29/2013		14/780734	US	QUERY FEATURES AND QUESTIONS
90068236	To Be Filed		4/3/2013			US	DEVICE PAIRING FOR CONTENT SHARING
90068334	To Be Filed		4/2/2013			US	SHARING A WEB BROWSER SESSION BETWEEN DEVICES IN A SOCIAL GROUP
90068528	Application		3/28/2013		14/780976	US	ERROR COORDINATION MESSAGE FOR A BLADE DEVICE HAVING A LOGICAL PROCESSOR IN ANOTHER SYSTEM FIRMWARE DOMAIN
90068549	To Be Filed					US	Service Chaining
82274969	Granted	8626822	8/28/2008	41646	12/199929	US	Method For Implementing Network Resource Access Functions Into Software Applications
84076359	Published		6/25/2012		14/391222	US	TRANSLATED SESSION INFORMATION TO PROVISION A NETWORK PATH
84140014	Published		9/11/2012		14/414468	US	Discovering IP Multicast Group Memberships In Software Defined Networks
84149048	Application		7/31/2012		14/417059	US	POWER EFFICIENT NETWORK WITH NETWORK CONTROLLER
90037098	Application		8/27/2015		14/837533	US	APPLICATION-SPECIFIC INTEGRATED CIRCUIT DATA FLOW ENTITY COUNTING
81966932	Granted	6818835	4/22/2003	38307	10/420572	US	Processor And Power Supply Circuit
82088669	Granted	7185214	8/12/2002	39140	10/216234	US	System And Method For Load Dependent Frequency And Performance Modulation In Bladed Systems
82098413	Granted	7474229	9/13/2006	39819	11/531433	US	Computer System Indicator Panel With Exposed Indicator Edge
82120574	Granted	7093146	7/31/2002	38944	10/210424	US	POWER MANAGEMENT STATE DISTRIBUTION USING AN INTERCONNECT
82128695	Granted	5694302	8/20/1996	35766	08/699990	US	PASSIVE CLAMP AND RIPPLE CONTROL FOR BUCK BOOST CONVERTER
82129190	Granted	5821641	7/30/1996	36081	08/690640	US	SECONDARY SUPPLY POWER REFERENCED INTERLOCK CIRCUIT

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82129505	Granted	5821636	8/8/1997	36081	08/907518	US	LOW PROFILE, REDUNDANT SOURCE POWER DISTRIBUTION UNIT
82133183	Granted	7138733	12/13/2001	39042	10/017785	US	REDUNDANT DATA AND POWER INFRASTRUCTURE FOR MODULAR SERVER COMPONENTS IN A RACK
82178384	Granted	7496740	7/26/2004	39868	10/899394	US	Accessing Information Associated With An Advanced Configuration And Power Interface Environment
82179008	Granted	7627774	2/25/2005	40148	11/066024	US	REDUNDANT MANAGER MODULES TO PERFORM MANAGEMENT TASKS WITH RESPECT TO AN INTERCONNECT STRUTURE AND POWER SUPPLIES
82179389	Granted	7646183	5/31/2005	40190	11/141341	US	Adjusting An Output Voltage Of A Converter Based On Current Consumption
82206977	Granted	8423832	11/7/2006	41380	11/593841	US	System And Method For Preventing Processor Errors
82214102	Granted	8327168	11/19/2008	41247	12/274225	US	System And Method For Throttling Memory Power Consumption
82248563	Published		4/30/2009		12/433421	US	Power Supply System Having A Redundant Supply That Remains Online While Sourcing No Current (As Amended)
82250747	Granted	8067857	40023	40876	12/512017	US	REDUNDANT POWER SUPPLY SYSTEMS AND METHODS
82675549	Granted	8564269	12/13/2008	41569	13/133364	US	Systems And Methods For Scaling A Signal In A Power Factor Correction Circuit
82817501	Granted	8868900	39868	41933	13/148012	US	Method And System To Lower Power Consumption
90001180	Application		42209		14/808,641	US	POWER CONVERTER DEPENDENT ON A VOLTAGE RANGE THE INPUT VOLTAGE RESIDES IN
81998273	Granted	6704200	37299	38055	10/074885	US	Loop Thermosyphon Using Microchannel Etched Semiconductor Die As Evaporator
82096475	Granted	6961242	7/31/2003	38657	10/631696	US	SYSTEM FAN MANAGEMENT BASED ON SYSTEM LOADING OPTIONS FOR A SYSTEM HAVING REPLACEABLE ELECTRONICS MODULES
82099409	Granted	6807057	1/22/2003	38279	10/348875	US	Apparatus And Method For Cooling An Electronic Device
82101968	Granted	6819562	37652	38307	10/355424	US	Cooling Apparatus For Stacked Components
82103654	Granted	7079390	6/5/2003	38916	10/456671	US	System And Method For Heat Dissipation And Air Flow Redirection In A Chassis
82103660	Granted	6913069	8/14/2003	38538	10/641502	US	Cooling Device Having Fins Arranged To Funnel Air
82106900	Granted	6987370	6/23/2003	38734	10/602972	US	Method And System For Cooling Electronic Components
82132814	Granted	6086476	7/31/1998	36718	09/127565	US	METHOD AND APPARATUS FOR COOLING AND ACOUSTIC NOISE REDUCTION IN A COMPUTER
82174640	Granted	6927976	1/15/2004	38573	10/759846	US	Air Baffle For Managing Cooling Air Re-Circulation In An Electronic System
82174769	Granted	8430156	4/29/2004	41394	10/835956	US	Liquid Loop With Multiple Pump Assembly
82174955	Granted	7142424	4/29/2004	39049	10/835852	US	Heat Exchanger Including Flow Straightening Fins

PATENT
REEL: 038498 FRAME: 0547

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0548

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82175138	Granted	7325588	4/29/2004	39483	10/837459	US	HIGH SERVICEABILITY LIQUID COOLING LOOP USING FLEXIBLE BELLOWS
82177451	Granted	6997247	4/29/2004	38762	10/835955	US	MULTIPLE-PASS HEAT EXCHANGER WITH GAPS BETWEEN FINS OF ADJACENT TUBE SEGMENTS
82183007	Granted	7322799	10/31/2003	39476	10/699430	US	Scalable, Modular, High Availability Fan System
82185254	Granted	7354246	10/26/2005	39546	11/260095	US	Electronics Cooling Fan With Collapsible Fan Blade
82188005	Granted	6948555	6/22/2004	38622	10/874408	US	HEAT DISSIPATING SYSTEM AND METHOD
82202297	Granted	7443671	10/31/2005	39749	11/263662	US	Axial Duct Cooling Fan
82208726	Granted	7450380	10/25/2006	39763	11/552707	US	Computer System Having Multi-direction Blower
82224149	Granted	7551440	1/24/2007	39987	11/657145	US	SYSTEM AND METHOD FOR COOLING AN ELECTRONIC COMPONENT
82240379	Granted	8559177	4/14/2008	41562	12/937333	US	Fan For Computer Element In The Service Position
82260425	Granted	8300404	4/15/2010	41212	12/760825	US	FAN HOLDER INCLUDING CABLE CHANNELS
82938245	Granted	9055698	2/26/2010	42164	13/387068	US	Fluid Flow Control for Computing Device
83218691	Published		10/12/2010		13/876399	US	RESOURCE MANAGEMENT FOR DATA CENTERS
83854699	Published		10/26/2011		14/350066	US	Device for Cooling an Electronic Component in a Data Center
82092545	Granted	7136804	10/30/2002	39035	10/283770	US	Systems And Methods For Providing Users With Information In Audible Form
84072924	Published		7/24/2012		14/394923	US	INITIATING A HELP FEATURE
84156874	Published		9/25/2012		14/421115	US	DISPLAYING INBOX ENTITIES AS A GRID OF FACETED TILES
82025804	Granted	6172837	3/23/1998	36900	09/046809	US	Postponable Servo Code Selection
82068629	Granted	6701450	8/6/1999	38048	09/529113	US	SYSTEM BACKUP AND RECOVERY
81978479	Granted	6883071	38117	38461	10/841555	US	Method For Evaluation Of Scalable Symmetric Multiple Processor Cache Coherency Protocols And Algorithms
82000709	Granted	6834327	2/8/2002	38342	10/071069	US	Multilevel Cache System Having Unified Cache Tag Memory
82030859	Granted	6493812	12/17/1999	37600	09/465722	US	Apparatus And Method For Virtual Address Aliasing And Multiple Page Size Support In A Computer System Having A Prevalidated Cache
82031483	Granted	6427189	2/21/2000	37467	09/510973	US	Multiple Issue Algorithm With Oversubscription Avoidance Features To Get High Bandwidth Through Cache Pipeline
82046720	Granted	6233669	10/30/1998	37026	09/183172	US	MEMORY ADDRESS GENERATOR CAPABLE OF ROW-MAJOR AND COLUMN-MAJOR SWEEPS
82106402	Granted	7607038	38765	40106	11/357384	US	Systems And Methods For CPU Repair
82117514	Granted	6832340	1/25/2001	38335	09/769959	US	REAL-TIME HARDWARE MEMORY SCRUBBING
82117640	Granted	6738836	36769	38125	09/652391	US	SCALABLE EFFICIENT I/O PORT PROTOCOL
82117643	Granted	8364851	10/2/2003	41303	10/677583	US	Scalable Efficient I/O Port Protocol
82117826	Granted	6567900	8/31/2000	37761	09/652452	US	EFFICIENT ADDRESS INTERLEAVING WITH SIMULTANEOUS MULTIPLE LOCALITY OPTIONS
82120385	Granted	6892271	10/21/2003	5/10/2005	10/690139	US	MEMORY MODULE RESYNC

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82127696	Granted	5987539	6/5/1996	36480	08/658704	US	METHOD AND APPARATUS FOR FLUSHING A BRIDGE DEVICE READ BUFFER
82127945	Granted	5740188	5/29/1996	35899	08/654853	US	ERROR CHECKING AND CORRECTING FOR BURST DRAM DEVICES
82129256	Granted	5978953	12/19/1996	36466	08/769655	US	ERROR DETECTION AND CORRECTION
82130693	Granted	6052134	12/22/1997	36634	08/995705	US	MEMORY CONTROLLER AND METHOD FOR DYNAMIC PAGE MANAGEMENT
82133246	Granted	6304945	5/13/1999	10/16/2001	09/311082	US	METHOD AND APPARATUS FOR MAINTAINING CACHE COHERENCY IN A COMPUTER SYSTEM HAVING MULTIPLE PROCESSOR BUSES
82136684	Granted	6163821	12/18/1998	12/19/2000	09/215354	US	METHOD AND APPARATUS FOR BALANCING LOAD VS. STORE ACESS TO A PRIMARY DATA CACHE
82136744	Granted	6651144	6/18/1998	11/18/2003	09/099384	US	METHOD AND APPARATUS FOR DEVELOPING MULTIPROCESSOR CACHE CONTROL PROTOCOLS USING AN EXTERNAL ACKNOWLEDGEMENT SIGNAL TO SET A CACHE TO A DIRTY STATE
82165715	Granted	6108752	10/24/1997	8/22/2000	08/957566	US	METHOD AND APPARATUS FOR DELAYING VICTIM WRITES IN A SWITCH-BASED MULTI-PROCESSOR SYSTEM TO MAINTAIN DATA COHERENCY
82171205	Granted	7103744	3/27/2003	9/5/2006	10/401235	US	Binding A Memory Window To A Queue Pair
82181882	Granted	7373467	1/10/2005	5/13/2008	11/032753	US	Storage Device Flow Control
82182821	Granted	7340561	1/8/2004	3/4/2008	10/753276	US	Computer Memory Initialization
82201049	Granted	7496823	3/16/2005	2/24/2009	11/081335	US	Hardware Based Memory Scrubbing
82201052	Granted	8307259	1/5/2009	11/6/2012	12/319266	US	Hardware Based Memory Scrubbing
82209167	Granted	8244983	10/30/2006	8/14/2012	11/554383	US	Memory Control Systems With Directory Caches And Methods For Operation Thereof
82226147	Granted	7856576	4/25/2007	12/21/2010	11/789683	US	Method And System For Managing Memory Transactions For Memory Repair
82236320	Granted	8176255	10/19/2007	5/8/2012	11/875168	US	Allocating Space In Dedicated Cache Ways
82249811	Granted	8539164	10/2/2008	9/17/2013	12/244700	US	Cache Coherency Within Multiprocessor Computer System
82259108	Granted	8316189	12/9/2009	41233	12/634539	US	RESCINDING OWNERSHIP OF A CACHE LINE IN A COMPUTER SYSTEM
82852277	Allowed		9/25/2009		13/259127	US	MAPPING NON-PREFETCHABLE STORAGE LOCATIONS INTO MEMORY MAPPED INPUT/OUTPUT SPACE
83206139	Published		6/28/2013		13/931286	US	Dual Inline Memory Module Socket
83211346	Granted	9146848	4/30/2013	9/29/2015	13/873567	US	Link Training for a Serdes Link
82202609	Application		1/31/2005		11/048358	US	System And Method For Selecting Members Of A Portfolio
82202612	Granted	8738417	4/18/2005	5/27/2014	11/108396	US	Method And Apparatus For Product Management
82220345	Application		10/31/2006		11/590006	US	System And Method For Creating A Value-based Visualization

PATENT
REEL: 038498 FRAME: 0549

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82255988	Granted	8595051	12/24/2003	11/26/2013	10/745989	US	METRICS CAPABILITY SELF ASSESSMENT
82256675	Granted	7613704	1/19/2005	11/3/2009	11/039389	US	ENTERPRISE DIGITAL ASSET MANAGEMENT SYSTEM AND METHOD
82257173	Granted	8332331	3/19/2007	12/11/2012	11/688094	US	Determining a Price Premium for a Project
82257551	Granted	8577712	5/2/2008	11/5/2013	12/114550	US	ASSESSING RISK
82257554	Published		7/28/2008		12/180703	US	ENTERPRISE ASSET MANAGEMENT
82257797	Granted	8255309	7/20/2009	8/28/2012	12/505708	US	VALUATING INTELLECTUAL ASSETS
82257800	Published		7/29/2009		12/511547	US	INDICATING RELATIONSHIPS AMONG TEXT DOCUMENTS INCLUDING A PATENT BASED ON CHARACTERISTICS OF THE TEXT DOCUMENTS
82261046	Published		4/29/2010		12/770675	US	Offer Conversion
82263353	Published		5/27/2010		12/789314	US	Flexible Extended Product Warranties Having Partially Refundable Premiums
82264730	Published		9/29/2010		12/893795	US	NET UTILITY DETERMINATION BASED ON PRODUCT REPLACEMENT AND SERVICE PLAN COVERAGE DECISIONS
82578678	Published		3/11/2011		13/045764	US	RESOURCE SKILL COMPLIANCE OPTIMIZATION
82748347	Published		10/27/2011		13/282714	US	COMPARING CONTRACTS WITH DIFFERENT LENGTHS USING UNCERTAINTY INFORMATION
82964777	Published		7/12/2012		13/547804	US	DETERMINING PRODUCT PRICE
83235193	Granted	9049236	10/22/2010	6/2/2015	13/880078	US	DISTRIBUTED NETWORK INSTRUMENTATION SYSTEM
83516154	Published		3/11/2011		13/983049	US	RESOURCE PLANNING USING FULL TIME EQUIVALENTS
84310702	Application		1/31/2013		14/759945	US	PREDICTIVE CACHE APPARATUS AND METHOD OF CACHE PREDICTION
82077560	Granted	6061665	6/6/1997	5/9/2000	08/870311	US	SYSTEM , METHOD AND ARTICLE OF MANUFACTURE FOR DYNAMIC NEGOTIATION OF A NETWORK PAYMENT FRAMEWORK
82214534	Granted	8689056	10/31/2005	4/1/2014	11/263147	US	Method And System For Providing Customer Service Information
82251680	Granted	6839679	3/18/1996	1/4/2005	08/618005	US	Automated Travel Pricing System
82251683	Granted	7146327	7/1/1996	12/5/2006	08/673986	US	Electronic Publication Distribution Method And System
82253621	Granted	6696660	7/20/2001	38041	09/910394	US	Method and System for Weld Process Monitoring
82253804	Granted	8775194	10/7/2005	41828	11/246599	US	SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR CONTEXT-BASED BUSINESS PROCESS MANAGEMENT
82255430	Granted	5801366	3/28/1996	9/1/1998	08/623439	US	Automated System And Method For Point-of-sale (POS) Check Processing
82256054	Published		12/8/2003		10/730228	US	BILL PAYMENT AUTHORIZATION SYSTEM AND METHOD
82256177	Granted	7618259	5/13/2004	40134	10/845273	US	WORKSHEET WIZARD - SYSTEM AND METHOD FOR CREATING EDUCATIONAL WORKSHEETS
82256552	Granted	6977612	6/29/2004	12/20/2005	10/879711	US	System and Method for Wireless Asset Tracking
82257239	Published		7/16/2007		11/778521	US	Quality Assurance System And Method

PATENT
REEL: 038498 FRAME: 0550

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82257611	Granted	8543331	7/3/2008	9/24/2013	12/167963	US	APPARATUS, AND ASSOCIATED METHOD, FOR PLANNING AND DISPLAYING A ROUTE PATH
82257677	Published		7/23/2008		12/178428	US	APPARATUS, AND ASSOCIATED METHOD, FOR APPROVING PASSAGE OF A VEHICLE THROUGH A VEHICULAR CHECKPOINT
82070693	Published		6/7/2002		10/163877	US	Process For Personalizing A Transaction Through An Internet Or Intranet Network
82176575	Granted	7881837	4/23/2004	2/1/2011	10/599529	US	Diagnostic Apparatus And Method
82252058	Granted	6195765	1/5/1998	2/27/2001	09/002591	US	System and Method for Testing an Application Program
82252121	Granted	6134545	1/30/1998	10/17/2000	09/016558	US	Method and System for Processing a Query
82252496	Granted	5721929	10/6/1995	2/24/1998	08/539515	US	Method For Extending A Fourth Generation Programming Language
82252868	Granted	5805798	10/29/1996	9/8/1998	08/741149	US	Fail-safe Event Driven Transaction Processing System And Method
82256180	Application		4/1/2004		10/815548	US	SYSTEM AND METHOD FOR WEB SERVICES DELIVERY
82256237	Granted	7664759	5/18/2004	2/16/2010	10/847759	US	METHOD AND SYSTEM FOR STORING SELF-DESCRIPTIVE TABULAR DATA WITH ALPHANUMERIC AND BINARY VALUES
82257617	Published		7/29/2008		12/181743	US	VIRTUALIZATION INFRASTRUCTURE MANAGEMENT ENVIRONMENT
82257674	Granted	8321226	8/8/2008	11/27/2012	12/188828	US	GENERATING SPEECH-ENABLED USER INTERFACES
82848367	Published		5/8/2009		13/319387	US	ACCESS CONTROL OF DISTRIBUTED COMPUTING RESOURCES SYSTEM AND METHOD
83127161	Published		6/22/2010		13/704955	US	A METHOD AND SYSTEM FOR DETERMINING A DEPLOYMENT OF APPLICATIONS
82161842	Granted	6154828	2/24/2000	11/28/2000	08/072632	US	METHOD AND APPARATUS FOR EMPLOYING A CYCLE BIT TO INDICATE COMPLETION OF PARALLEL EXECUTING INSTRUCTIONS
82164779	Granted	5563096	11/20/1995	35346	08/560853	US	SEMICONDUCTOR DEVICE FABRICATION WITH PLANAR GATE INTERCONNECT SURFACE
82165211	Granted	5986868	12/4/1998	11/16/1999	09/206019	US	INPUT AND OUTPUT NOISE REDUCTION CIRCUIT
82165277	Granted	5884050	6/21/1996	3/16/1999	08/668200	US	MECHANISM FOR HIGH BANDWIDTH DMA TRANSFERS IN A PCI ENVIRONMMENT
82165280	Granted	5968153	10/13/1998	10/19/1999	09/170812	US	MECHANISM FOR HIGH BANDWIDTH DMA TRANSFERS IN A PCI ENVIRONMENT
82165337	Granted	6012120	3/18/1999	1/4/2000	09/271558	US	METHOD AND APPARATUS FOR PROVIDING DMA TRANSFERS BETWEEN DEVICES COUPLED TO DIFFERENT HOST BUS BRIDGES
82165340	Granted	6021456	11/12/1996	2/1/2000	08/747473	US	METHOD FOR COMMUNICATING INTERRUPT DATA STURCTURE IN MULTI-PROCESSOR COMPUTER SYSTEM

PATENT
REEL: 038498 FRAME: 0551

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82165589	Granted	6105108	10/24/1997	8/15/2000	08/957509	US	METHOD AND APPARATUS FOR RELEASING VICTIM DATA BUFFERS OF COMPUTER SYSTEMS USING VICTIM RELEASE COUNTERS
82166339	Granted	6831544	10/9/2003	12/14/2004	10/682560	US	APPARATUS AND METHOD FOR PCB WINDING PLANAR MAGNETIC DEVICES
82174766	Granted	7102883	12/19/2003	9/5/2006	10/742043	US	Memory Package
82179509	Granted	7450400	12/8/2004	11/11/2008	11/007095	US	Electronic System And Method
82179512	Granted	7444540	6/21/2005	10/28/2008	11/158187	US	Memory Mirroring Apparatus And Method
82183760	Granted	7545651	4/18/2005	6/9/2009	11/108245	US	Memory Module With A Predetermined Arrangement Of Pins
82184690	Granted	7617596	9/6/2007	11/17/2009	11/850952	US	METHOD OF FORMING A HOUSING FOR AN ELECTRONIC DEVICE
82187561	Granted	7519973	9/29/2004	4/14/2009	10/951956	US	PROVIDING UNIQUE EVENT NOTIFICATION TO ENABLE FIRMWARE TO REQUEST THAT AN OPERATING SYSTEM PERFORM A UNIQUE ACTION
82190312	Allowed		1/28/2005		11/046633	US	Information Technology (IT) Equipment Positioning System
82191062	Granted	7330119	4/29/2005	2/12/2008	11/117803	US	Remote Measurement Employing RFID
82198487	Granted	7516359	10/25/2004	39910	10/972835	US	System And Method For Using Information Relating To A Detected Loss Of Lockstep For Determining A Responsive Action
82202732	Granted	7533303	4/15/2005	39945	11/107034	US	Method And System For Performing System-level Correction Of Memory Errors
82203176	Granted	7826229	10/27/2006	11/2/2010	11/588817	US	Component Retention With Distributed Compression
82203425	Granted	7568090	6/23/2005	7/28/2009	11/159757	US	Speedy Boot For Computer Systems
82209605	Granted	7349200	9/21/2005	3/25/2008	11/232280	US	Latching Mechanism
82210229	Granted	7473846	3/29/2006	1/6/2009	11/392113	US	Reversible Cable Support Arm
82213346	Granted	D569347	3/30/2006	5/20/2008	29/257169	US	Electronic Module Retainer
82214039	Granted	8819348	7/12/2006	8/26/2014	11/485409	US	Address Masking Between Users
82214597	Granted	7589974	4/21/2006	9/15/2009	11/408859	US	Modular Server And Method
82215218	Granted	7658619	10/31/2006	40218	11/590094	US	Processor And Power Converter Assembly With Rigidly Connected Power Connector
82220276	Granted	D560665	7/28/2006	1/29/2008	29/263796	US	Retractable And Adjustable Diagnostic Panel
82220900	Granted	7738242	1/8/2004	40344	10/754804	US	System And Method For Displaying Chassis Component Information
82222280	Granted	7519245	10/31/2006	39917	11/590393	US	Modular Array Computer With Optical Intercell Communications Pathways
82233827	Granted	8892942	7/27/2007	41961	11/878860	US	Rank Sparing System And Method
82235573	Published		9/18/2008		12/233148	US	IO Card Receiving Unit
82241258	Application		10/28/2008		12/259395	US	SYSTEM AND METHOD FOR VISUALLY INDICATING PARTITIONS OF A PARTITIONABLE COMPUTER SYSTEM

PATENT
REEL: 038498 FRAME: 0552

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82243628	Granted	6560096	10/31/2000	37747	09/699683	US	Multiple Server Configuration Within A Single Server Housing
82250744	Granted	8276000	10/28/2009	41177	12/607848	US	System And Method For Supplying Power To A Load Using Deep-sleep-mode Power Supplies
82251056	Granted	8301316	1/25/2010	41212	12/693124	US	SYSTEM AND METHOD FOR ORIENTING A BAFFLE PROXIMATE AN ARRAY OF FANS THAT COOL ELECTRONIC COMPONENTS
82262795	Granted	8154866	4/19/2010	41009	12/762738	US	Single Rotor Ducted Fan
82672014	Granted	8542488	1/29/2009	9/24/2013	13/146884	US	COOLING APPARATUS FOR AN IC (as amended)
82846947	Granted	D673160	10/13/2011	12/25/2012	29/404001	US	Cover Plate for A Computing Device
82868507	Granted	D682280	12/7/2011	5/14/2013	29/408110	US	Security Bezel for a Computing Device
82938248	Published		2/18/2010		13/387041	US	A SYSTEM AND METHOD FOR DYNAMICALLY ALLOCATING HIGH-QUALITY AND LOW-QUALITY FACILITY ASSETS AT THE DATACENTER LEVEL
83096258	Granted	9140373	12/21/2012	9/22/2015	13/724085	US	THERMALLY ACTUATED VALVE
83220875	Allowed		4/3/2013		13/855986	US	MANAGING MULTIPLE CARTRIDGES THAT ARE ELECTRICALLY COUPLED TOGETHER
83852687	Application		4/1/2014		29/486630	US	BEZEL WITH DOCKING RECESS
84106366	Application		6/27/2012		14/410568	US	BATTERY TO PROVIDE VOLTAGE TO POWER MODULES
84292929	Application		1/31/2013		14/764341	US	LIQUID COOLING
84313055	To Be Filed		1/23/2013		14/761339	US	LATCH TO GENERATE POSITIVE LOCKING LATCH RETENTION FORCE
90024655	Application		8/10/2015		14/822281	US	A System Including A Module
90045050	Application		3/28/2013		14/781024	US	CONVERTERS TO PROVIDE LIGHT LOAD OUTPUT
90049332	Application		3/26/2013		14/780521	US	TOP LOADING CARTRIDGE
90049358	Application		3/26/2013		14/780520	US	TOP LOADING CARTRIDGE
81951386	Granted	6381690	8/1/1995	4/30/2002	08/509867	US	Processor For Performing Subword Permutations And Combinations
81967865	Granted	6208565	2/18/2000	3/27/2001	09/507333	US	Multi-ported register structure utilizing a pulse write mechanism
81972050	Granted	6647517	4/27/2000	11/11/2003	09/561599	US	APPARATUS AND METHOD FOR PROVIDING ERROR ORDERING INFORMATION AND ERROR LOGGING INFORMATION
81972053	Granted	7103672	5/1/2000	9/5/2006	09/562308	US	Method And Apparatus For Improving System Performance Through Remote Credit Management
81988655	Granted	7035928	4/25/2001	4/25/2006	09/842969	US	Allocating Computer Resources For Efficient Use By A Program

PATENT
REEL: 038498 FRAME: 0553

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0554

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82000952	Granted	7028167	3/4/2002	4/11/2006	10/091084	US	Core Parallel Execution With Different Optimization Characteristics To Decrease Dynamic Execution Path
82013501	Granted	5754458	5/30/1996	5/19/1998	08/655581	US	Trailing Bit Anticipator
82013504	Granted	5798938	7/2/1996	8/25/1998	08/677432	US	System And Method For Verification Of A Precharge Critical Path For A System Of Cascaded Dynamic Logic Gates
82013507	Granted	5740087	5/31/1996	4/14/1998	08/656125	US	Apparatus And Method For Regulating Power Consumption In A Digital System
82015130	Granted	5796997	5/15/1996	8/18/1998	08/647539	US	FAST NULLIFY SYSTEM AND METHOD FOR TRANSFORMING A NULLIFY FUNCTION INTO A SELECT FUNCTION
82016441	Granted	6131156	11/3/1998	10/10/2000	09/185299	US	Optimized Storage System And Method For A Processor That Executes Instructions Out Of Order
82020182	Granted	5644609	7/31/1996	7/1/1997	08/690466	US	Apparatus And Method For Reading And Writing Remote Registers On An Integrated Circuit Chip Using A Minimum Of Interconnects
82024739	Granted	5944843	8/21/1997	8/31/1999	08/918696	US	Method And Apparatus For Using The Unused Bits Of A Data Packet To Transmit Additional Information
82024994	Granted	6312973	3/21/2001	11/6/2001	09/813761	US	IC Die Power Connection Using Canted Coil Spring
82032293	Granted	6141674	6/10/1998	10/31/2000	09/095533	US	Reducing The Hardware Cost Of A Bank Of Multipliers By Combining Shared Terms
82038101	Granted	6161215	8/31/1998	12/12/2000	09/144299	US	Package Routing Of Integrated Circuit Signals
82052147	Granted	7281147	8/20/2003	10/9/2007	10/644184	US	Systems And Methods For Variable Control Of Power Dissipation In A Pipelined Processor
82057457	Granted	6233152	8/9/2000	5/15/2001	09/634222	US	Circuit Board Mounting Assembly And Method
82078934	Granted	6765446	9/18/2002	7/20/2004	10/251100	US	FREQUENCY LOCK LOOP HAVING A RELOADABLE COUNTER WITHOUT ROLLOVER
82084427	Granted	7398419	12/1/2005	7/8/2008	11/290504	US	Method And Apparatus For Seeding Differences In Lock-stepped Processors
82095911	Granted	8452945	9/17/2002	5/28/2013	10/245106	US	Indirect Indexing Instructions
82099847	Granted	7574341	11/12/2003	8/11/2009	10/712855	US	Speculative Expectation Based Event Verification
82100597	Granted	7394301	6/17/2005	7/1/2008	11/155064	US	System And Method For Dynamically Varying A Clock Signal
82114709	Granted	6453406	12/13/1993	9/17/2002	08/166279	US	FIBER OPTIC BUS INTERCONNECT
82119701	Granted	7047462	1/4/2002	5/16/2006	10/037541	US	Method And Apparatus For Providing JTAG Functionality In A Remote Server Management Controller
82119764	Granted	7167987	8/29/2001	1/23/2007	09/942352	US	USE OF BIOMETRICS TO PROVIDE PHYSICAL AND LOGIC ACCESS TO COMPUTER DEVICES
82120766	Granted	8051303	6/10/2002	11/1/2011	10/165938	US	SECURE READ AND WRITE ACCESS TO CONFIGURATION REGISTERS IN COMPUTER DEVICES
82124948	Granted	6182187	4/7/1993	1/30/2001	08/044241	US	SYSTEM ROM INCLUDING A FLASH EPROM AND A ROM FOR STORING PRIMARY BOOT CODE REPLACING A BLOCK FLASH EPROM

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82128632	Granted	5933614	12/31/1996	8/3/1999	08/775392	US	ISOLATION OF PCI AND EISA MASTERS BY MASKING CONTROL AND INTERRUPT LINES
82128815	Granted	6201789	12/30/1996	3/13/2001	08/774524	US	NETWORK SWITCH WITH DYNAMIC BACKPRESSURE PER PORT
82128818	Granted	6098110	12/30/1996	8/1/2000	08/777501	US	NETWORK SWITCH WITH A MULTIPLE BUS STRUCTURE AND A BRIDGE INTERFACE FOR TRANSFERRING NETWORK DATA BETWEEN DIFFERENT BUSES
82133312	Granted	6792553	12/29/2000	9/14/2004	09/751506	US	A METHOD FOR SEQUENTIALLY POWERING ON EACH OF A PLURALITY OF PROCESSORS AFTER THE POWER SUPPLY AND VRMS ASSOCIATED WITH EACH PROCESSOR HAVE BECOME STABLE
82135244	Granted	6160809	12/17/1997	12/12/2000	08/992453	US	DISTRIBUTED PACKET DATA WITH CENTRALIZED SNOOPING AND HEADER PROCESSING ROUTER
82135934	Granted	6167508	6/2/1998	36886	09/088818	US	REGISTER SCOREBOARD LOGIC WITH REGISTER READ AVAILIBILITY SIGNAL TO REDUCE INSTRUCTION ISSUE ARBITRATION LATENCY
82136306	Granted	6133760	12/8/1999	10/17/2000	09/457603	US	METHOD AND APPARATUS FOR A FAST VARIABLE PRECEDENCE PRIORITY ENCODER WITH OPTIMIZED ROUND ROBIN PRECEDENCE UPDATE SCHEME
82165217	Granted	6130878	12/27/1995	36809	08/579393	US	METHOD AND APPARATUS FOR RATE-BASED SCHEDULING USING A RELATIVE ERROR APPROACH
82165403	Granted	6091897	3/5/1999	36725	08/593588	US	FAST TRANSLATION AND EXECUTION OF A COMPUTER PROGRAM ON A NON-NATIVE ARCHITECTURE BY USE OF BACKGROUND TRANSLATOR
82165652	Granted	6088771	10/24/1997	36718	08/957501	US	MECHANISM FOR REDUCING LATENCY OF MEMORY BARRIER OPERATIONS ON A MULTIPROCESSOR SYSTEM
82173020	Granted	7447919	4/6/2004	11/4/2008	10/818974	US	Voltage Modulation For Increased Reliability In An Integrated Circuit
82177760	Granted	8224987	3/11/2005	7/17/2012	11/078851	US	System And Method For A Hierarchical Interconnect Network
82180943	Granted	7600023	11/5/2004	10/6/2009	10/982658	US	Systems And Methods Of Balancing Crossbar Bandwidth
82180949	Granted	7349982	1/12/2004	3/25/2008	10/756433	US	Enablement Of Route Table Entries
82206983	Granted	7844838	10/30/2006	11/30/2010	11/589573	US	INTER-DIE POWER MANAGER AND POWER MANAGEMENT METHOD
82208855	Granted	7903556	11/3/2005	3/8/2011	11/266549	US	METHOD OF CONTROLLING DATA TRANSFERS BETWEEN NODES IN A COMPUTER SYSTEM
82217720	Granted	8296849	10/31/2006	10/23/2012	11/590420	US	Method And Apparatus For Removing Homogeneity From Execution Environment Of Computing System
82240631	Granted	8520686	5/8/2008	8/27/2013	12/989336	US	A Method For Interfacing A Fibre Channel Network With An Ethernet Based Network

PATENT
REEL: 038498 FRAME: 0555

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82240940	Granted	7521972	9/25/2007	4/21/2009	11/903950	US	Fifty Percent Duty Cycle Clock Divider Circuit And Method
82264109	Published		11/15/2010		12/946540	US	SYSTEMS, DEVICES, AND METHODS FOR MULTIPLE HOST MANAGEMENT
82672080	Granted	8661235	10/8/2008	2/25/2014	13/123194	US	Firmware Storage Medium With Customized Image
83931742	Published		6/25/2014		14/314696	US	Packet routing within server device enclosure
84076459	Published		7/30/2012		14/395889	US	Detecting Defects in a Processor Socket
90028940	Application		4/3/2013		14/777124	US	Cartridge Interdependence Switch
81967115	Granted	7181582	9/11/2003	2/20/2007	10/660192	US	Unified Data Sets Distributed Over Multiple I/o-device Arrays
81976049	Granted	6904441	3/27/2001	6/7/2005	09/819265	US	Method And Apparatus For Providing File System Access To A Disk Array
81990905	Granted	6603657	6/29/2001	8/5/2003	09/896478	US	Systems For Mounting Data Storage Devices
82003640	Granted	7480815	6/10/2005	1/20/2009	11/150796	US	Controller Communications Over An Always-on Controller Interconnect
82037663	Granted	6223267	2/26/1998	4/24/2001	09/031504	US	DYNAMICALLY ALLOCABLE RAM DISK
82040726	Granted	6065087	5/21/1998	5/16/2000	09/082738	US	ARCHITECTURE FOR A HIGH-PERFORMANCE NETWORK/BUS MULTIPLEXER INTERCONNECTING A NETWORK AND A BUS THAT TRANSPORT DATA USING MULTIPLE PROTOCOLS
82052585	Granted	7213165	9/22/2003	5/1/2007	10/667949	US	Host I/O Performance And Availability Of A Storage Array During Rebuild By Prioritizing I/O Requests
82064078	Granted	6851037	7/1/2002	2/1/2005	10/185725	US	METHOD OF UTILISATION OF A DATA STORAGE ARRAY, AND ARRAY CONTROLLER THEREFOR
82080809	Granted	7089395	10/3/2002	8/8/2006	10/264957	US	Computer Systems, Virtual Storage Systems And Virtual Storage System Operational Methods
82085549	Granted	6898664	8/28/2002	5/24/2005	10/233107	US	Optimizing Performance For A Storage Device Within A Computer System
82090796	Granted	6810439	2/18/2003	10/26/2004	10/370327	US	System And Method To Monitor Connections To A Device
82095791	Granted	6820146	10/1/2002	11/16/2004	10/260291	US	Filter Driver For Blocking Access By Host To Devices
82098533	Granted	7308599	6/9/2003	12/11/2007	10/457892	US	METHOD AND APPARATUS FOR DATA RECONSTRUCTION AFTER FAILURE OF A STORAGE DEVICE IN A STORAGE ARRAY
82106093	Granted	7231544	2/27/2003	6/12/2007	10/376957	US	Restoring Data From Point-in-time Representations Of The Data
82107278	Granted	D455153	12/22/2000	4/2/2002	29/134619	US	SANworks MANAGEMENT APPLIANCE BEZEL
82119950	Granted	6889345	10/19/2001	5/3/2005	10/004374	US	System And Method For Locating A Failed Storage Device In A Data Storage System
82120139	Granted	6948036	6/21/2002	38615	10/177274	US	System And Method For Providing Multi-initiator Capability To An ATA Drive

PATENT
REEL: 038498 FRAME: 0556

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82120142	Granted	6961813	2/25/2003	11/1/2005	10/373969	US	System And Method For Providing Multi-initiator Capability To An ATA Drive
82120697	Granted	7111084	12/28/2001	9/19/2006	10/035660	US	Data Storage Network With Host Transparent Failover Controlled By Host Bus Adapter
82120700	Granted	6983303	1/31/2002	1/3/2006	10/061956	US	STORAGE AGGREGATOR FOR ENHANCING VIRTUALIZATION IN DATA STORAGE NETWORKS
82126877	Granted	6058489	8/20/1998	5/2/2000	09/137801	US	ON-LINE DISK ARRAY RECONFIGURATION
82132748	Granted	6675244	2/18/2000	1/6/2004	09/507000	US	SCSI DATA RATE SPEED DETERMINATION
82133372	Granted	6311232	7/29/1999	10/30/2001	09/363439	US	METHOD AND APPARATUS FOR CONFIGURING STORAGE DEVICES
82134806	Granted	5868261	11/15/1996	2/9/1999	08/749466	US	ANTI-SLAMMING LATCH APPARATUS FOR MODULAR COMPONENT INSTALLATIONS
82161533	Granted	6269453	6/29/1993	7/31/2001	08/084370	US	METHOD FOR REORGANIZING THE DATA ON A RAID-4 OR RAID-5 ARRAY IN THE ABSENCE OF ONE DISK
82176701	Granted	7305520	1/30/2004	12/4/2007	10/769380	US	Storage System With Capability To Allocate Virtual Storage Segments Among A Plurality Of Controllers
82186442	Granted	7590522	6/14/2004	9/15/2009	10/867524	US	Virtual Mass Storage Device For Server Management Information
82191563	Granted	7647465	1/31/2005	1/12/2010	11/045253	US	Storage-system-portion Sufficiency Determination
82191746	Granted	8984140	12/14/2004	42080	11/012510	US	Managing Connections Through An Aggregation Of Network Resources Providing Offloaded Connections Between Applications Over A Network
82195553	Granted	7518854	9/30/2004	4/14/2009	11/836263	US	REMOVABLE STORAGE MODULES
82196807	Published		2/1/2005		11/048526	US	Monitoring Path Connectivity Between Teamed Network Resources Of A Computer System And A Core Network
82204361	Granted	8688800	10/5/2005	4/1/2014	11/243848	US	Remote Configuration Of Persistent Memory System ATT Tables
82205795	Granted	7644168	7/13/2005	1/5/2010	11/180145	US	SAS Expander
82206230	Granted	7340551	11/15/2005	3/4/2008	11/274607	US	Bridge Permitting Access By Multiple Hosts To A Single Ported Storage Drive
82212971	Granted	7302539	4/20/2005	11/27/2007	11/111090	US	Migrating Data In A Storage System
82215599	Granted	7958343	9/8/2006	40701	11/517778	US	BIOS BOOTABLE RAID SUPPORT
82225649	Granted	7934027	1/19/2007	40659	11/655456	US	CRITICAL RESOURCE MANAGEMENT
82231454	Granted	8260132	3/26/2007	41156	11/728485	US	SYSTEM AND METHOD FOR CABLE MONITORING
82231457	Granted	7757936	7/31/2007	7/20/2010	11/830922	US	System And Method For Cable Monitoring
82236701	Granted	9110597	8/25/2008	8/18/2015	12/197827	US	Data Processing Method And System
82240697	Granted	8201018	9/18/2007	6/12/2012	11/857335	US	Control Of Sparing In Storage Systems
82244504	Granted	8041543	12/11/2008	10/18/2011	12/332358	US	Input/output Workload Analysis Method And System For A Storage Area Network

PATENT
REEL: 038498 FRAME: 0557

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82248125	Published		6/9/2009		12/481139	US	SYSTEM AND METHOD FOR OPERATING A COMMUNICATION LINK
82249184	Granted	8244934	11/24/2009	8/14/2012	12/625117	US	DATA STORAGE NETWORK MANAGEMENT
82250000	Published		7/11/2009		12/501412	US	Data Replication
82250120	Granted	8732339	3/24/2009	41779	12/409493	US	NPIV AT STORAGE DEVICES
82257926	Granted	7529816	6/3/2005	5/5/2009	10/908993	US	System For Providing Multi-path Input/output In A Clustered Data Storage Network
82257929	Granted	7865588	6/3/2005	1/4/2011	12/414042	US	System For Providing Multi-path Input/output In A Clustered Data Storage Network
82259489	Granted	8693865	1/11/2010	41737	12/685502	US	Network Security Using Optical Attenuation Data
82259861	Published		5/26/2010		12/787642	US	MIGRATING WRITE INFORMATION IN A WRITE CACHE OF A STORAGE SYSTEM
82262168	Published		6/30/2010		12/827028	US	Storage Virtualization
82262174	Published		6/21/2010		12/819312	US	Prioritizing Input/Outputs At A Host Bus Adapter
82578744	Granted	7802153	12/7/2006	9/21/2010	11/608241	US	Trainable Link
82578781	Granted	7191304	9/4/2003	39154	10/655963	US	Efficient and Reliable Virtual Volume Mapping
82578801	Granted	6833634	1/4/2001	12/21/2004	09/755285	US	Disk Enclosure With Multiple Power Domains
82578847	Granted	7415553	8/12/2005	39679	11/202671	US	Automatic Cluster Join Protocol
82578867	Granted	7457175	10/23/2006	39777	11/552107	US	Dual Data Rate Memory Strobe Checker
82578907	Granted	8103754	5/2/2002	40932	10/138990	US	Reserving a Shared Volume in a Multiple Node Data Storage System
82585717	Granted	8396999	5/2/2011	41345	13/099046	US	INPUT/OUTPUT HOT SPOT TRACKING
82831650	Published		1/17/2012		13/351331	US	UNINTERRUPTIBLE POWER SUPPLY CONTROL
82844219	Granted	8484357	9/14/2011	7/9/2013	13/232382	US	Communication In Multiprocessor Using Proxy Sockets
82848221	Granted	9021499	1/10/2012	4/28/2015	13/346933	US	MOVING A LOGICAL DEVICE BETWEEN PROCESSOR MODULES IN RESPONSE TO IDENTIFYING A VARYING LOAD PATTERN
82899685	Allowed		4/30/2012		13/460115	US	STORAGE FABRIC ADDRESS BASED DATA BLOCK RETRIEVAL
82961677	Granted	9143416	6/19/2012	9/22/2015	13/527237	US	EXPANDER DEVICE
83010725	Published		7/26/2012		13/558388	US	DE-DUPLICATION USING A PARTIAL DIGEST TABLE
83037472	Granted	8856404	7/31/2012	10/7/2014	13/563197	US	Primitive Group Data Encoding in a Data Storage Fabric
83154738	Granted	9064562	4/3/2013	6/23/2015	13/856013	US	MEMORY MODULE HAVING MULTIPLE MEMORY BANKS SELECTIVELY CONNECTABLE TO A LOCAL MEMORY CONTROLLER AND AN EXTERNAL MEMORY CONTROLLER
83205306	Published		4/17/2013		13/864673	US	AUTOMATIC CLUSTER-BASED FAILOVER HANDLING
83206763	Granted	8830619	5/31/2013	9/9/2014	13/907693	US	OVERWRITE THRESHOLD NUMBER OF TRACKS
83206783	Published		4/30/2013		13/874322	US	DECRYPT AND ENCRYPT DATA OF STORAGE DEVICE
83213650	Published		5/30/2013		13/906287	US	MODULES TO CONTAIN INTERFACE CARDS
83835910	Published		9/29/2011		14/343477	US	STORAGE RESOURCE ACKNOWLEDGMENTS

PATENT
REEL: 038498 FRAME: 0558

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83952197	Published		4/30/2012		14/368769	US	PREVENTING A HYBRID MEMORY MODULE FROM BEING MAPPED
84288083	Application		7/28/2015		14/810,982	US	SET HEAD FLAG OF REQUEST
82037600	Granted	6910169	9/17/2002	6/21/2005	10/245260	US	ECC Code Mechanism To Detect Wire Stuck-At Faults
82084055	Granted	6876224	11/5/2002	4/5/2005	10/288174	US	Method And Apparatus For High Speed Bus Having Adjustable, Symmetrical, Edge-Rate Controlled, Waveforms
82104968	Granted	7877647	5/23/2003	1/25/2011	10/444451	US	CORRECTING A TARGET ADDRESS IN PARALLEL WITH DETERMINING WHETHER THE TARGET ADDRESS WAS RECEIVED IN ERROR
82117331	Granted	6775758	12/21/2000	8/10/2004	09/745365	US	BUFFER PAGE ROLL IMPLEMENTATION FOR PCI-X BLOCK READ TRANSACTIONS
82127444	Granted	5790870	12/15/1995	8/4/1998	08/573030	US	BUS ERROR HANDLER FOR PERR# AND SERR# ON DUAL PCI BUS SYSTEM
82128563	Granted	5712754	4/15/1996	1/27/1998	08/631963	US	HOT PLUG PROTECTION SYSTEM
82128878	Granted	5764925	6/27/1996	6/9/1998	08/671349	US	MULTIPLE LONG BUS ARCHITECTURE HAVING A NON-TERMINAL TERMINATION ARRANGEMENT
82128941	Granted	6249830	3/21/2000	6/19/2001	09/532109	US	Method and apparatus for distributing interrupts in a scalable symmetric multiprocessor system without changing the bus width or bus protocol
82129376	Granted	6128669	9/30/1997	10/3/2000	08/940367	US	System having a bridge with distributed burst engine to decouple input/output task from a processor
82129439	Granted	6098134	12/31/1996	8/1/2000	08/775130	US	LOCK PROTOCOL FOR PCI BUS USING AN ADDITIONAL "SUPERLOCK" SIGNAL ON THE SYSTEM BUS
82129442	Granted	5881253	12/31/1996	3/9/1999	08/775129	US	A COMPUTER SYSTEM USING POSTED MEMORY WRITE BUFFERS IN A BRIDGE TO IMPLEMENT SYSTEM MANAGEMENT MODE
82130624	Granted	6055582	1/16/1998	36641	09/008702	US	A SCSI DUPLEX-READY BACKPLANE OF A COMPUTER SYSTEM
82130942	Granted	6038633	8/15/1997	36599	08/912096	US	SYSTEM AND METHOD FOR PROVIDING A DUAL INTERRUPT MECHANISM TO DESIGNATE THE OCCURRENCE AND TERMINATION OF AN EVENT
82131254	Granted	6175889	10/21/1998	36907	09/177441	US	APPARATUS, METHOD AND SYSTEM FOR A COMPUTER CPU AND MEMORY TO HIGH SPEED PERIPHERAL INTERCONNECT BRIDGE HAVING A PLURALITY OF PHYSICAL BUSES WITH A SINGLE LOGICAL BUS NUMBER
82132559	Granted	6992541	8/29/2002	38748	10/232552	US	SINGLE TO DIFFERENTIAL INTERFACING
82132997	Granted	7587542	7/28/2005	40064	11/193590	US	DEVICE ADAPTED TO SEND INFORMATION IN ACCORDANCE WITH A COMMUNICATION PROTOCOL
82133000	Granted	7464207	7/29/2005	39791	11/192561	US	Device Operating According To A Communication Protocol

PATENT
REEL: 038498 FRAME: 0559

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82133186	Granted	8386727	12/31/2001	41331	10/039010	US	SUPPORTING INTERLEAVED READ/WRITE OPERATIONS FROM/TO MULTIPLE TARGET DEVICES
82169834	Granted	7120717	2/13/2004	39000	10/779017	US	Method And Apparatus For Controlling Interrupt Storms
82180508	Granted	7454514	1/12/2004	11/18/2008	10/756441	US	PROCESSING DATA WITH UNCERTAIN ARRIVAL TIME
82181381	Granted	7721159	2/11/2005	5/18/2010	11/056505	US	Passing Debug Information
82211354	Granted	8391432	8/8/2005	3/5/2013	11/199431	US	Data Serializer
82221902	Granted	9053072	1/25/2007	6/9/2015	11/626887	US	END NODE TRANSACTIONS AT THRESHOLD-PARTIAL FULLNESS OF STORAGE SPACE
82233017	Granted	8464260	10/31/2007	6/11/2013	11/930854	US	Hardware Device Interface Supporting Transaction Authentication
82241567	Granted	8386654	3/25/2008	2/26/2013	12/934035	US	System And Method For Transforming PCIE SR-IOV Functions To Appear As Legacy Functions
83984354	Published		4/12/2012		14/369596	US	RECONFIGURATION OF AN OPTICAL CONNECTION INFRASTRUCTURE
84056067	Published		4/25/2012		14/387264	US	OPERATING VERTICAL-CAVITY SURFACE-EMITTING LASERS
84116333	Published		12/3/2014		14/559462	US	CLOCK SIGNALS FOR DYNAMIC RECONFIGURATION OF COMMUNICATION LINK BUNDLES
84264608	Application		6/11/2015		14/736647	US	PRE-BOOT VIDEO SIGNAL
84269669	Application		1/30/2013		14/650548	US	OPTICAL CONNECTOR HAVING A CLEANING ELEMENT
82693700	Published		8/3/2011		13/197402	US	DETECTING SUSPICIOUS NETWORK ACTIVITY USING FLOW SAMPLING
82964740	Allowed		4/12/2012		13/445374	US	DYNAMIC PROVISIONING OF VIRTUAL SYSTEMS
83629035	Published		10/14/2013		14/053150	US	DATA FLOW PATH DETERMINATION
82066886	Granted	6052390	3/11/1997	4/18/2000	08/930105	US	DATA CODE BLOCK TRANSMISSION USING PRESELECTED CONTROL SIGNALS AND DELIMITERS
82092608	Granted	7325183	7/21/2004	1/29/2008	10/896217	US	Error Correction Code Generation Method And Apparatus
82136120	Granted	6151629	3/2/1998	11/21/2000	09/033183	US	TRIGGERED REMOTE DIAL-UP FOR INTERNET ACCESS
82267601	Granted	6487196	5/29/1998	11/26/2002	09/093838	US	System and Method For Simulating Telephone Use In A Network Telephone System
82267727	Granted	5920177	2/24/1998	7/6/1999	09/034142	US	Autonomously Powered Communications Card modem Having Additional Communications Port For Use As An External Modem
82267793	Granted	5963622	7/29/1997	10/5/1999	08/902403	US	Mode Signalling Method And Apparatus
82267853	Granted	6240464	2/4/1998	5/29/2001	09/018780	US	METHOD AND SYSTEM FOR MANAGING ADDRESSES FOR NETWORK HOST INTERFACES IN A DATA-OVER-CABLE SYSTEM
82268042	Granted	6016346	10/21/1997	1/18/2000	08/955053	US	LOW-PROFILE SPEAKERPHONE WITH DOWNWARD ORIENTED MICROPHONE CONFIGURATION
82268411	Granted	5912967	9/11/1997	6/15/1999	08/926752	US	Speaker-Phone Assembly And Method
82268414	Granted	6068235	2/26/1998	5/30/2000	09/032333	US	Microphone Connector Assembly And Method

PATENT
REEL: 038498 FRAME: 0560

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82268540	Granted	6189102	5/27/1998	2/13/2001	09/085585	US	METHOD FOR AUTHENTICATION OF NETWORK DEVICES IN A DATA-OVER CABLE SYSTEM
82269287	Granted	6249757	2/16/1999	6/19/2001	09/250685	US	SYSTEM FOR DETECTING VOICE ACTIVITY IN A COMMUNICATIONS SIGNAL
82269416	Granted	6252901	4/15/1999	6/26/2001	09/292295	US	Digital Modem Fast Retrain Escape Mechanism
82270412	Granted	6853637	5/29/1999	2/8/2005	09/322887	US	Converged Home Gateway
82270415	Granted	7529229	5/17/2004	5/5/2009	10/847596	US	Converged Home Gateway
82270847	Granted	6446127	11/30/1999	9/3/2002	09/451388	US	System and Method for Providing User Mobility Services on a Telephony Network
82271222	Granted	6898210	5/31/2000	5/24/2005	09/584650	US	System and Method For Providing A Local Area Network Utilizing Remote Transceivers
82271534	Granted	6768796	2/5/2001	38195	09/777115	US	System and Method for Echo Cancellation
82271726	Granted	6760781	2/16/2000	38174	09/505069	US	Intelligent Packet Transmission Engine
82272785	Granted	D461813	6/30/2000	8/20/2002	29/125905	US	Concave Push-Button
82272911	Granted	D454125	9/8/2000	3/5/2002	29/129244	US	Antenna Design
82273283	Granted	6771745	5/22/2001	8/3/2004	09/862351	US	Method and Apparatus for Telephone Dialling Using a Network Device
82273412	Granted	6779056	7/3/2001	8/17/2004	09/897044	US	DIRECT DATA PLACEMENT AND MESSAGE REASSEMBLY OF TCP-SEGMENTS UTILIZING A CUMULATIVE ESCAPE DATA SIZE INDICATOR
82273598	Granted	7984110	11/2/2001	7/19/2011	10/004116	US	Method And System For Load Balancing
82273907	Granted	7564835	11/6/2002	7/21/2009	10/289948	US	SYSTEM AND METHOD FOR MAXIMIZING THE USE OF BANDWIDTH OPTIMIZATION TECHNIQUES IN VOICE-OVER-PACKET CONNECTIONS
82274159	Granted	7894480	8/27/2002	2/22/2011	10/228492	US	Computer System And Network Interface With Hardware Based Rule Checking For Embedded Firewall
82274342	Granted	8539552	9/25/2003	9/17/2013	10/671375	US	SYSTEM AND METHOD FOR NETWORK BASED POLICY ENFORCEMENT OF INTELLIGENT-CLIENT FEATURES
82274531	Granted	7526081	10/5/2004	4/28/2009	10/959621	US	Telephone Recording And Storing Arbitrary Keystrokes Sequence With Replay With A Single Stroke
82274534	Granted	8218533	3/13/2009	7/10/2012	12/403478	US	Telephone Recording And Storing Arbitrary Keystrokes Sequence With Replay With A Single Stroke
82275341	Granted	5805228	8/9/1996	9/8/1998	08/689444	US	VIDEO ENCODER/DECODER SYSTEM
82276469	Granted	7707297	10/31/2003	4/27/2010	10/697951	US	method and associated apparatus for creating a network connection to a network based on bandwidth
82858623	Published		1/24/2012		13/357217	US	CRYPTOGRAPHIC KEY
83191114	Published		2/7/2013		13/762187	US	Communications Methods And Appliances
82024304	Granted	6247058	3/30/1998	6/12/2001	09/050645	US	METHOD AND APPARATUS FOR PROCESSING NETWORK PACKETS USING TIME STAMPS

PATENT
REEL: 038498 FRAME: 0561

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82025306	Granted	6038600	7/16/1997	3/14/2000	08/895119	US	Method And System For Automatic Detection Of Bridged And Repeated Network Device Connections
82028174	Granted	6256307	3/27/1998	7/3/2001	09/049762	US	Local Area Network Receive Filter
82033355	Granted	6567403	4/30/1998	5/20/2003	09/070451	US	Virtual-Chassis Switch Network Topology
82035290	Granted	6654382	10/26/1998	11/25/2003	09/179103	US	Network Device With Logical-Address Learn Mode
82035545	Granted	6222854	3/19/1998	4/24/2001	09/044640	US	Link Monitor State Machine
82035728	Granted	6556541	1/11/1999	4/29/2003	09/228918	US	MAC Address Learning And Propagation In Load Balancing Switch Protocols
82035731	Granted	6947384	2/12/2003	9/20/2005	10/366042	US	MAC Address Learning And Propagation In Load Balancing Switch Protocols
82055021	Granted	8072884	12/8/2003	12/6/2011	10/730390	US	Method And System For Output Flow Control In Network Multiplexers
82087982	Granted	7145911	3/5/2002	12/5/2006	10/092159	US	METHOD AND SYSTEM FOR PARALLEL HASH TRANSFORMATION FOR AN ADDRESS INPUT
82169150	Granted	8891509	7/6/2004	11/18/2014	10/886095	US	Proxy Networking Device For A Router
82180757	Granted	7487255	8/14/2003	2/3/2009	10/641217	US	Routing Cache Management With Route Fragmentation
82180760	Granted	8045566	8/1/2003	10/25/2011	10/633444	US	Automated Router Load Balancing
82180763	Granted	7447223	1/28/2004	11/4/2008	10/767236	US	Switching Mesh With Broadcast Path Redundancy
82184693	Granted	7609705	5/20/2004	10/27/2009	10/850334	US	Determination Of A Plurality Of Paths Before Selection Of One Path Of The Plurality Of Paths For Transmission Of One Or More Packets
82184696	Granted	7656790	6/28/2004	2/2/2010	10/878143	US	Handling Link Failures With Re-tagging
82186505	Granted	8156207	10/8/2004	41009	10/962315	US	A Method And Apparatus For Remotely Configuring Network Devices
82186562	Granted	7552238	9/30/2004	6/23/2009	10/955268	US	Method And Apparatus For Maintaining Network Device Configurations
82187624	Granted	7359383	3/29/2004	4/15/2008	10/812267	US	Load Balancing With Mesh Tagging
82187627	Granted	7969863	3/29/2004	6/28/2011	10/812260	US	Directed Cost Protocol
82187630	Granted	7706411	3/29/2004	4/27/2010	10/812368	US	Handling Oversubscribed Mesh Ports With Re-tagging
82189253	Granted	7577855	5/19/2004	8/18/2009	10/850167	US	System For Controlling Current Flow To Electronic Attachment Device
82191869	Granted	7424626	4/28/2004	39700	10/833603	US	Laptop Computer Recharging Using Ethernet Connection
82198925	Granted	8769135	11/4/2004	7/1/2014	10/981150	US	Data Set Integrity Assurance With Reduced Traffic
82202861	Granted	7504809	5/26/2005	3/17/2009	11/138948	US	POWER SUPPLY AND A DEVICE FOR PROVIDING A CONTROL VOLTAGE THAT IS SUBSTANTIALLY EQUIVALENT TO A REFERENCE VOLTAGE USED BY THE POWER SUPPLY
82206041	Granted	7533109	4/26/2005	39945	11/114253	US	Item Queue Management
82211036	Granted	7571326	5/25/2005	8/4/2009	11/138511	US	Relative Latency Dynamics For Identity Authentication
82217591	Granted	9037748	5/31/2006	5/19/2015	11/443154	US	Method And Apparatus For Determining The Switch Port To Which And End-node Is Connected

PATENT
REEL: 038498 FRAME: 0562

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82217594	Granted	8891524	6/30/2006	41961	11/477853	US	Method And Apparatus Of Automatically Providing Registration Information
82217969	Granted	7742439	10/13/2006	6/22/2010	11/580458	US	Automated Correction Of Duplex Mismatches
82227644	Published		2/28/2007		11/680089	US	Transmitting A Packet From A Distributed Trunk Switch
82230140	Granted	7940700	1/31/2007	5/10/2011	11/669847	US	METHOD OF DISTRIBUTING MULTIPLE SPANNING TREE PROTOCOL CONFIGURATION
82230329	Granted	7873038	4/30/2007	1/18/2011	11/796971	US	Packet Processing
82230332	Granted	8045550	3/1/2007	10/25/2011	11/712706	US	PACKET TUNNELING
82231265	Granted	7849503	6/1/2007	12/7/2010	11/809512	US	PACKET PROCESSING USING DISTRIBUTION ALGORITHMS
82231268	Granted	8416773	7/11/2007	4/9/2013	11/827293	US	Packet Monitoring
82241504	Published		9/15/2008		12/210380	US	Computing Platform With System Key
82241627	Granted	8108645	6/26/2008	1/31/2012	12/147271	US	Optimized Memory Allocation Via Feature Extraction
82244879	Granted	7869374	5/5/2008	1/11/2011	12/151177	US	System And Method For Detecting A Network Loop
82247312	Allowed		2/9/2010		12/703170	US	DISTRIBUTED DENIAL-OF-SERVICE SIGNATURE TRANSMISSION
82248935	Granted	9008112	2/19/2009	4/14/2015	12/389100	US	Network Switch
82249121	Granted	9147172	1/26/2009	9/29/2015	12/359547	US	Source Configuration Based On Connection Profile
82249934	Published		10/26/2009		12/605707	US	Controlling A Device's Boot Path With Disk Locking
82258610	Granted	8046578	4/14/2005	10/25/2011	11/105652	US	System And Method For Providing HTML Authentication Using An Access Controller
82259546	Published		10/30/2009		12/609624	US	Authentication Methods And Devices
82266350	Granted	5999530	12/6/1996	12/7/1999	08/761574	US	METHOD AND APPARATUS FOR TRANSPARENT INTERMEDIATE SYSTEM BASED FILTERING ON A LAN OF MULTICAST PACKETS
82266356	Granted	6169741	8/5/1999	1/2/2001	09/369495	US	METHOD AND APPARATUS FOR TRANSPARENT INTERMEDIATE SYSTEM BASED FILTERING ON A LAN MULTICAST PACKETS
82266416	Granted	5834950	3/17/1994	11/10/1998	08/214376	US	Phase detector which eliminates frequency ripple
82266476	Granted	6329906	9/29/2000	12/11/2001	09/675730	US	Power Transfer Apparatus For Concurrently Transmitting Data And Power Over Data Wires
82266479	Granted	6496105	10/10/2001	12/17/2002	09/974237	US	Power Transfer Apparatus For Concurrently Transmitting Data And Power Over Data Wires
82266482	Granted	6710704	10/28/2002	3/23/2004	10/281831	US	Power Transfer Apparatus For Concurrently Transmitting Data And Power Over Data Wires
82266668	Granted	5828665	2/28/1997	10/27/1998	08/807552	US	Apparatus And Method For Selecting Improved Routing Paths In An Emulated LAN Over An ATM Network
82266731	Granted	6163541	1/15/1998	12/19/2000	09/007801	US	Method For Selecting Virtual Channels Based On Address Priority In An Asynchronous Transfer Mode Device
82266854	Granted	5898669	3/22/1996	4/27/1999	08/621055	US	ATM Traffic Management Device

PATENT
REEL: 038498 FRAME: 0563

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82267412	Granted	6212165	3/24/1998	4/3/2001	09/047066	US	Apparatus For And Method Of Allocating A Shared Resource Among Multiple Ports
82267415	Granted	5999948	9/3/1997	12/7/1999	08/922284	US	Dynamic Configuration Forms In Network Management Software
82267604	Granted	6115376	10/29/1997	9/5/2000	08/959833	US	Medium Access Control Address Authentication
82267913	Granted	6026420	1/20/1998	2/15/2000	09/009393	US	High-speed evaluation of polynomials
82268225	Granted	6041058	9/11/1997	3/21/2000	08/928882	US	Hardware Filtering Method And Apparatus
82268417	Granted	6181404	2/27/1998	1/30/2001	09/031942	US	APPARATUS AND METHOD FOR MOUNTING A LIQUID CRYSTAL DISPLAY (LCD) ASSEMBLY ONTO A PRINTED CIRCUIT BOARD
82268660	Granted	6047172	3/10/1998	4/4/2000	09/037848	US	A TRANSCEIVER ASSEMBLY WITH AN ELECTROMAGNETIC SHIELD
82268666	Granted	6003689	3/18/1998	12/21/1999	09/044051	US	PCB Ejector Cage Assembly
82268978	Granted	6064305	7/10/1998	5/16/2000	09/113782	US	Network Security
82269284	Granted	6442603	11/21/2000	8/27/2002	09/718170	US	Methods for Ordered Delivery of Electronic Content
82269479	Granted	6167781	11/30/1998	1/2/2001	09/201682	US	System and Apparatus for Retaining Position of Cam Follower
82269911	Granted	6882630	8/20/2003	4/19/2005	10/644173	US	SPANNING TREE WITH RAPID PROPAGATION OF TOPOLOGY CHANGES
82270160	Granted	6281432	5/25/1999	8/28/2001	09/318167	US	Sheet Metal Component With Depression
82270535	Granted	6535490	4/22/1999	3/18/2003	09/296996	US	HIGH AVAILABILITY SPANNING TREE WITH RAPID RECONFIGURATION WITH ALTERNATE PORT SELECTION
82270538	Granted	6697339	1/27/2003	2/24/2004	10/351709	US	HIGH AVAILABILITY SPANNING TREE WITH RAPID RECONFIGURATION WITH ALTERNATE PORT SELECTION
82270790	Granted	7028335	8/27/1999	4/11/2006	09/384158	US	METHOD AND SYSTEM FOR CONTROLLING ATTACKS ON DISTRIBUTED NETWORK ADDRESS TRANSLATION ENABLED NETWORKS
82270910	Granted	6603741	8/12/1999	8/5/2003	09/373231	US	Monitoring Of Connection Between Network Devices In A Packet-based Communication System
82270970	Granted	5644270	3/15/1996	7/1/1997	08/618413	US	ENCHANCED STABILITY VOLTAGE CONTROLLED RC OSCILLATOR
82270973	Granted	5809072	3/15/1996	36053	08/616750	US	Mixed Signal Adaptive Equalizer
82271036	Granted	6601101	3/15/2000	7/29/2003	09/525965	US	Transparent Access To Network Attached Devices
82272038	Granted	6996621	12/6/2000	2/7/2006	09/731333	US	METHOD FOR SUPPORTING SECONDARY ADDRESS DELIVERY ON REMOTE ACCESS SERVERS
82272101	Granted	7450560	5/31/2000	11/11/2008	09/584516	US	Method For Address Mapping In A Network Access System and A Network Access Device For Use Therewith
82272287	Granted	7120819	11/15/2001	10/10/2006	09/998846	US	METHOD AND SYSTEM FOR FAULT DIAGNOSIS IN A DATA NETWORK

PATENT
REEL: 038498 FRAME: 0564

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82272413	Granted	6353891	8/9/2000	3/5/2002	09/579185	US	Control Channel Security For Realm Specific Internet Protocol
82272593	Granted	7463732	8/9/2000	12/9/2008	09/634185	US	FLEXIBLE DATA OUTLET
82272782	Granted	7039049	12/22/2000	5/2/2006	09/748588	US	METHOD AND APPARATUS FOR PPPOE BRIDGING IN A ROUTING CMTS
82273094	Granted	7073055	2/22/2001	7/4/2006	09/791176	US	SYSTEM AND METHOD FOR PROVIDING DISTRIBUTED AND DYNAMIC NETWORK SERVICES FOR REMOTE ACCESS SERVER USERS
82273406	Granted	7028086	8/22/2001	4/11/2006	09/934984	US	Apparatus, method, and computer program for detection of server-like devices on a computer network based on ingress to egress network traffic ratios
82273847	Granted	6816018	7/19/2002	11/9/2004	10/198902	US	System and Method for Partitioning a System Timing Reference Among Multiple Circuit Boards
82273973	Granted	7324488	2/10/2003	1/29/2008	10/364049	US	METHOD AND SYSTEM FOR PROVIDING AN INTELLIGENT DATA CONCENTRATOR COMMUNICATIVELY COUPLED TO A NETWORK BY A WIRELESS MODE
82274030	Granted	7522614	2/28/2003	39924	10/376930	US	Multi-Service Access Platform for Telecommunications and Data Networks
82274096	Granted	7089424	5/10/2002	38937	10/144273	US	Peripheral Device For Protecting Data Stored On Host Device And Method And System Using The Same
82274156	Application		4/14/2009		12/423690	US	Computer System And Network Interface With Hardware Based Packet Filtering And Classification
82274279	Granted	7996588	5/30/2003	40764	10/449816	US	Method And Apparatus For Real-time Transport Of Multi-media Information In A Network
82274282	Granted	7391784	12/30/2002	6/24/2008	10/334702	US	Method and System for Communicating State Information Between Devices of a Communications Network
82274408	Granted	7660323	6/28/2004	40218	10/876654	US	Cascade Control System for Network Units
82274411	Granted	7463654	12/22/2003	39791	10/744974	US	Stackable Routers Employing A Routing Protocol
82274468	Granted	7483999	7/9/2004	1/27/2009	10/886575	US	DISTRIBUTED BRIDGING WITH SYNCHRONIZATION FORWARDING DATABASES
82274471	Granted	7555751	8/11/2004	39994	10/916070	US	Method and System for Performing a Live System Upgrade
82274591	Granted	7957390	5/18/2005	40701	11/133039	US	Detection Of Signatures In Disordered Message Segments
82274597	Granted	8081630	5/3/2005	40897	11/121192	US	Packet Diversion In Switching Fabrics And Multiple Forwarding Instructions For Packets
82275278	Granted	5717690	11/17/1995	35836	08/560314	US	Coordination and Control of Data Streams that Terminate at Different Termination Units
82275284	Granted	5878040	8/26/1997	36221	08/918817	US	Coordination And Control Of data Streams That Terminate At Different Termination Units
82690033	Published		7/29/2011		13/194037	US	RESPONSE MESSAGES BASED ON PENDING REQUESTS

PATENT
REEL: 038498 FRAME: 0565

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82828015	Allowed		10/27/2011		13/282678	US	TEMPERATURE ESTIMATION BASED ON A FAN CONTROL SIGNAL
82829655	Allowed		1/24/2012		13/356742	US	SECURITY ACTIONS BASED ON CLIENT IDENTITY DATABASES
82854049	Published		10/28/2009		13/260170	US	METHOD AND APPARATUS FOR VIRUS THROTTLING WITH RATE LIMITING
82861414	Granted	8291246	10/20/2011	41198	13/277817	US	HIGH SPEED NETWORK INTERFACE WITH AUTOMATIC POWER MANAGEMENT WITH AUTO-NEGOTIATION
82992334	Published		5/1/2012		13/461426	US	Network Switch with Mutually Coupled Look-Up Engine and Network Processor
83037535	Published		7/30/2012		13/562224	US	SEARCHING FOR MULTICAST CONSUMERS IN A NETWORK OF INTERCONNECTED NODES
83135113	Granted	8654637	11/16/2012	41688	13/679513	US	Method For Configuration Of A Load Balancing Algorithm In A Network Device
83135883	Published		7/29/2010		13/809724	US	A Device And Method For Egress Packet Forwarding Using Mesh Tagging
83138814	Published		6/13/2013		13/917350	US	COUNTER UPDATE REMOTE PROCESSING
83198084	Published		3/14/2013		13/803060	US	NETWORK CONTROLLER NORMALIZATION OF NETWORK TRAFFIC
83199169	Allowed		3/15/2013		13/835320	US	FLOW CONTROL TRANSMISSION
83207785	Allowed		5/16/2013		13/895553	US	CERTIFICATE GRANT LIST AT NETWORK DEVICE
83588866	Published		4/19/2011		14/003883	US	Computing A Performance Characteristic Of A Network Device
83991390	Published		4/9/2012		14/372528	US	ASSOCIATING AN IDENTIFIER FOR A VIRTUAL MACHINE WITH A PUBLISHED NETWORK CONFIGURATION SERVICE TYPE
83991430	Published		4/30/2012		14/372573	US	CONVERGED FABRIC FOR FCoE
84084099	Published		4/26/2012		14/395618	US	MULTICAST ROUTER TOPOLOGY DISCOVERY
84089386	Published		5/15/2012		14/397422	US	OPTICAL COMMUNICATION TECHNIQUES
84123246	Published		1/13/2015		14/595289	US	Transmitting A Packet From A Distributed Trunk Switch
84297051	Application		7/10/2015		14/796415	US	Discovering Non Managed Devices In a Network Such as a LAN Using HTTP
90056912	Application		3/15/2013		14/777465	US	SECURE PATH DETERMINATION BETWEEN DEVICES
81989222	Granted	7149529	5/7/2001	39063	09/850503	US	Method And System For Controlling Selective Wireless Communication Access
82251248	Granted	7616966	10/27/2005	40127	11/259864	US	Determining Optimal Access Point Locations For Access Points That Perform Automatic Channel Selection And Automatic Power Adjustment

PATENT
REEL: 038498 FRAME: 0566

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82267730	Granted	6058291	12/3/1997	36648	08/984566	US	METHODS AND APPARATUS FOR CARRIER SUPPRESION IN A RADIO MODULATOR
82272908	Granted	6509876	9/8/2000	37642	09/657500	US	Antenna For Wireless Communication System
82272971	Granted	6965942	1/12/2001	38671	09/759389	US	METHOD AND SYSTEM FOR IMPROVING THROUGHPUT OVER WIRELESS LOCAL AREA NETWORKS WITH A DYNAMIC CONTENTION WINDOW
82272974	Granted	6990116	1/12/2001	1/24/2006	09/759770	US	METHOD AND SYSTEM FOR IMPROVING THROUGHPUT OVER WIRELESS LOCAL AREA NETWORKS WITH MODE SWITCHING
82274033	Granted	7733904	7/1/2002	6/8/2010	10/186810	US	System And Method For Roaming Between Wireless Networks
82274099	Granted	7702726	4/10/2002	4/20/2010	10/120152	US	System And Methods For Providing Presence Services In IP Network
82274348	Granted	7660990	4/27/2004	40218	10/832698	US	METHOD FOR ESTABLISHING A SECURE AD HOC WIRELESS LAN
82749017	Granted	8655278	6/20/2011	2/18/2014	13/164357	US	Band Steering
82964757	Published		4/23/2012		13/453688	US	WIRELESS CLIENT AUTHENTICATION AND ASSIGNMENT
83049211	Published		11/30/2012		13/690975	US	CONFIGURATION INFORMATION SELECTION BASED ON EXTRACTED INFORMATION
83095202	Published		1/17/2013		13/744026	US	ACCESS POINT
82233326	Granted	8099573	10/22/2008	1/17/2012	12/256329	US	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82249499	Granted	9141621	4/30/2009	9/22/2015	12/432807	US	COPYING A DIFFERENTIAL DATA STORE INTO TEMPORARY STORAGE MEDIA IN RESPONSE TO A REQUEST
82261358	Granted	8782368	5/11/2010	7/15/2014	12/777478	US	Storing Chunks In Containers
82261361	Published		8/4/2010		12/850142	US	Performing Deduplication Of Input Data At Plural Levels
82837126	Granted	9009429	3/30/2009	4/14/2015	13/260304	US	Deduplication Of Data Stored In A Copy Volume
83701120	Published		10/18/2011		14/234146	US	INDEX FOR DEDUPLICATION
81968366	Granted	6898045	11/26/2003	5/24/2005	10/723757	US	MEDIA WITH PRE-RECORDED ALIGNMENT TRANSITIONS
81978665	Granted	6469525	1/4/2001	10/22/2002	09/754984	US	METHOD FOR SENSING HUMIDITY IN A TAPE LIBRARY
81978794	Granted	7048345	10/3/2003	5/23/2006	10/678866	US	Reconfigurable Data Cartridge Import/export Drawer
82006889	Granted	6909570	11/25/2002	6/21/2005	10/303415	US	Hard Disk Drive Storage System
82025927	Granted	5818668	7/24/1997	10/6/1998	08/900211	US	Compact Tape Drive Head Positioning System
82030046	Granted	6999274	9/27/2002	2/14/2006	10/256572	US	SERVO HEAD FOR MAGNETIC TAPE
82030049	Granted	7206167	10/30/2003	4/17/2007	10/696824	US	SERVO WRITE METHOD FOR MAGNETIC TAPE
82032608	Granted	6194697	4/13/1999	2/27/2001	09/290807	US	Calibration System For An Imaging Apparatus And Method
82033172	Granted	6161155	7/20/1998	12/12/2000	09/119170	US	Apparatus And Method For Storing Retrievable Boundary Information Into A Buffer Memory Of A Receiving Device
82034669	Granted	6078483	5/14/1998	6/20/2000	09/079109	US	Flexible Circuit Support Structure And Head Carrier

PATENT
REEL: 038498 FRAME: 0567

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0568

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82036232	Granted	5927633	7/22/1998	7/27/1999	09/121273	US	Resiliently Biased Parking Seat For Receiving The Leader Pin Of A Single Reel Tape Cartridge
82049777	Granted	6116063	4/20/1999	9/12/2000	09/294965	US	Adjustable Bezel Assembly
82064384	Granted	6920003	8/2/2002	7/19/2005	10/209856	US	Data Storage Reading Device And Method
82064390	Granted	7126771	7/5/2002	10/24/2006	10/189174	US	DATA READ CHANNEL AND METHOD OF CONTROLLING THE SAME
82064762	Granted	6954834	7/8/2002	10/11/2005	10/189772	US	DATA BACKUP INCLUDING TAPE AND NON-VOLATILE MEMORY UNITS AND METHOD OF OPERATING SAME
82065575	Granted	7472245	12/30/2005	12/30/2008	11/323545	US	System And Method For Securing Drive Access To Data Storage Media Based On Medium Identifiers
82067699	Granted	6674599	3/10/1999	1/6/2004	09/265356	US	Tape Data Storage Cartridge With Memory
82067756	Granted	6539514	5/12/1999	3/25/2003	09/310407	US	READ WHILE WRITE METHOD IN DATA STORAGE DEVICE
82068071	Granted	6785786	8/28/1998	8/31/2004	09/486439	US	Data Backup And Recovery Systems
82069817	Granted	6978414	7/17/2001	12/20/2005	09/905915	US	Method And Apparatus For Protecting Against Errors Occurring In Data Storage Device Buffers
82094477	Granted	7196866	12/17/2003	3/27/2007	10/737938	US	Interconnect Structure Having Multiple Layers Of Traces For Electrical Connection To A Tape Head Assembly
82094663	Granted	6906654	6/30/2003	6/14/2005	10/609128	US	Data Recovery
82097477	Granted	7349997	1/15/2003	3/25/2008	10/346002	US	Dynamic Command Filter
82176827	Granted	7230792	11/19/2003	6/12/2007	10/717794	US	MEDIA SELECTION SYSTEMS AND METHODS HAVING A COUPLER FOR SLIDABLY ENGAGING A STORAGE MEDIUM IN A STORAGE SYSTEM
82184441	Granted	7624196	11/5/2004	11/24/2009	10/982086	US	SYSTEMS AND APPARATUS FOR MANAGING A STORAGE DEVICE ADDRESS
82189937	Granted	7301724	9/8/2004	11/27/2007	10/936340	US	TRANSDUCING HEAD
82194803	Granted	D523859	4/4/2005	38895	29/226938	US	Media Cartridge
82211225	Granted	8839125	10/26/2005	9/16/2014	11/259217	US	Alternate Power Up Inventory Methods For Storage Apparatus
82211411	Granted	7588492	8/1/2005	9/15/2009	11/195071	US	Air Plenum
82211414	Granted	8015373	5/13/2005	9/6/2011	11/129588	US	Information Sharing Between A Backup Storage Device And A Management Appliance
82217528	Granted	7818587	7/25/2006	10/19/2010	11/493910	US	DATA TRANSFER SYSTEM ENCRYPTING DATA WITH INFORMATION UNIQUE TO A REMOVABLE DATA STORAGE ITEM
82222838	Granted	7656614	9/27/2006	2/2/2010	11/528215	US	Tape Drive
82225646	Granted	8035911	2/15/2007	10/11/2011	11/707722	US	CARTRIDGE DRIVE DIAGNOSTIC TOOLS
82228142	Granted	8045289	1/31/2008	10/25/2011	12/023153	US	Data Transfer Apparatus For Use With Tape Cartridges And Tape Cartridges For Use With Such Data Transfer Apparatus
82235696	Published		10/1/2008		12/243914	US	Key Management In Storage Libraries
82240880	Granted	7835103	9/30/2008	40498	12/242180	US	Tape Drive With Variable Wrap Reversal Location

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82241633	Granted	7733594	9/30/2008	40337	12/242382	US	Storage Device With Pulsed Motor Torque
82244441	Granted	7911727	10/1/2008	3/22/2011	12/243041	US	Controlling Motion Of Storage Media
82263107	Granted	8248279	10/26/2010	8/21/2012	12/911892	US	HISTORY BUFFER APPARATUS AND METHOD FOR ADAPTIVE LOSSLESS DATA COMPRESSION
82276529	Granted	7623309	4/28/2004	11/24/2009	10/833271	US	Apparatus And Method For Use In Transferring Information Relative To A Storage Medium
82961946	Granted	8437234	4/25/2012	5/7/2013	13/456049	US	DYNAMIC PHASE DETECTOR SWITCHING
83095889	Granted	8730615	10/25/2012	5/20/2014	13/660738	US	BIDIRECTIONAL READ/WRITE HEADS HAVING BACKWARD READING COMPATIBILITY
83748571	Granted	8543643	3/7/2011	41541	13/042209	US	System And Method For Inquiry Caching
84072961	Published		6/8/2012		14/394251	US	REPLACING A CHUNK OF DATA WITH A REFERENCE TO A LOCATION
84224883	Application		3/22/2013		14/763953	US	REDUCED CONTACT READ/WRITE HEAD
82238009	Granted	7437386	9/20/2002	10/14/2008	10/251895	US	System And Method For A Multi-node Environment With Shared Storage
82250432	Granted	8650571	3/30/2009	2/11/2014	12/413969	US	Scheduling Data Analysis Operations In A Computer System
82261547	Granted	8977659	8/21/2007	3/10/2015	11/842919	US	Distributing Files Across Multiple Permissibly Heterogeneous Storage Devices
82261550	Granted	7836017	7/2/2007	11/16/2010	11/772800	US	File Replication In A Distributed Segmented File System
82604254	Granted	8725730	5/23/2011	41772	13/113507	US	Responding to a Query in a Data Processing System
82963592	Published		4/30/2012		13/460802	US	MAINTAINING FAULT DOMAINS IN A DISTRIBUTED DATABASE
82177202	Allowed		10/31/2005		11/264618	US	Method And Apparatus For Re-provisioning A Server Of A Data Center
82898434	Published		4/23/2012		13/453285	US	VIRTUAL MACHINE CONSTRUCTION
82077500	Granted	6178409	6/17/1996	36914	08/672346	US	System, Method And Article Of Manufacture For Multiple-Entry Point Virtual Point Of Sale Architecture
82194809	Granted	8051299	3/20/2006	40848	11/378304	US	A Computer Security Method And Computer System
82199300	Granted	8577044	10/28/2005	11/5/2013	11/262131	US	METHOD AND APPARATUS FOR AUTOMATIC AND SECURE DISTRIBUTION OF AN ASYMMETRIC KEY SECURITY CREDENTIAL IN A UTILITY COMPUTING ENVIRONMENT
82254551	Granted	7472421	9/30/2002	12/30/2008	10/259918	US	Computer Model Of Security Risks
82585296	Published		10/12/2009		13/054837	US	SYSTEMS AND PROCESSES FOR SECURING SENSITIVE INFORMATION
83731897	Allowed		5/27/2011		14/122619	US	TRANSACTION GATEWAY
81966305	Granted	7353181	8/15/2001	4/1/2008	09/930640	US	Allocating Freight Haulage Jobs
82133063	Granted	6601190	10/28/1999	7/29/2003	09/429681	US	AUTOMATIC CAPTURE AND REPORTING OF COMPUTER CONFIGURATION DATA
82852981	Published		4/13/2009		13/259081	US	Back Drill Verification Feature

PATENT
REEL: 038498 FRAME: 0569

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82891315	Published		7/29/2009		13/322973	US	INTERFACING CLIMATE CONTROLLERS AND COOLING DEVICES
81982979	Granted	7120832	9/27/2001	39000	09/966953	US	Storage Device Performance Monitor
81983537	Granted	7136882	7/31/2001	11/14/2006	09/919090	US	Storage Device Manager
82091609	Granted	7610295	10/1/2002	40113	10/260411	US	Method And Apparatus For Generating Persistent Path Identifiers
82170956	Granted	7177992	10/31/2003	39126	10/697948	US	System For Coupling Data Stored In Buffer Memories To Backup Storage Devices
82215911	Granted	8543782	4/25/2006	41541	11/411467	US	Content-based, Compression-enhancing Routing In Distributed, Differential Electronic-data Storage Systems
82259300	Granted	8812453	1/28/2010	8/19/2014	12/695750	US	Database Archiving Using Clusters
82275842	Granted	8885653	11/23/2010	11/11/2014	12/952267	US	PROTOCOL TRANSLATION
82671994	Granted	9116967	8/15/2011	8/25/2015	13/210140	US	METHODS AND APPARATUS TO INTERFACE AN APPLICATION TO A DATABASE
82906695	Published		3/30/2012		13/436692	US	Database backup without particularly specifying server
82924236	Granted	8898367	3/17/2010	11/25/2014	13/383960	US	UNIFIED INFORMATION BUS
83700290	Published		7/26/2011		14/110406	US	Job Plan Verification
83853706	Application		11/21/2011		14/359473	US	MANAGEMENT OF CONTEXT-SENSITIVE HELP LINKS
84273871	Application		1/29/2013		14/764256	US	RESTORATION OF A FILE SYSTEM OBJECT FROM RAW IMAGE BACKUP DATA
81985163	Granted	6804680	2/9/2001	10/12/2004	09/780227	US	Extensible Database
82070009	Granted	7194461	3/1/2002	39161	10/469586	US	DOCUMENT AND INFORMATION RETRIEVAL METHOD AND APPARATUS
82110839	Granted	6298338	3/26/1999	10/2/2001	09/277052	US	SYSTEM AND METHOD FOR COMPUTING AN OFFSET SEQUENCE FUNCTION IN A DATABASE SYSTEM
82239380	Published		9/5/2008		12/205445	US	Intelligent Data Storage System
82239386	Granted	7945558	1/9/2008	5/17/2011	12/008357	US	Query Optimizer With Join Cardinality Estimation Which Mitigates The Effects Of Skew
82244753	Granted	8190598	10/30/2008	5/29/2012	12/261058	US	SKEW-BASED COSTING FOR DATABASE QUERIES
82250933	Published		10/1/2009		12/571691	US	Multi-dimensional Access To Data
82258802	Granted	8200660	10/22/2009	6/12/2012	12/603939	US	SYSTEM AND METHOD FOR EXECUTING QUERIES
82262729	Granted	8438153	10/11/2010	5/7/2013	12/901934	US	PERFORMING DATABASE JOINS
82275719	Published		11/19/2010		12/950397	US	SYSTEMS AND METHODS FOR MANAGING A DATABASE
82275722	Granted	8799271	1/25/2011	8/5/2014	13/012868	US	RANGE PREDICATE CANONIZATION FOR TRANSLATING A QUERY
82911773	Published		1/23/2012		13/356056	US	Data Skew Insensitive Parallel Join Scheme
81967928	Granted	6801919	7/27/2001	10/5/2004	09/916539	US	Object Oriented Database Interface Encapsulation That Allows For Chronologically Overlapping Transactions In A Multi-Threaded Environment
82173389	Granted	7924732	4/19/2005	40645	11/109285	US	Quality Of Service In IT Infrastructures

PATENT
REEL: 038498 FRAME: 0570

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82176512	Granted	7284155	3/29/2004	39371	10/810663	US	REMOTE SOFTWARE SUPPORT AGENT SYSTEM WITH ELECTRONIC DOCUMENTS FOR TROUBLESHOOTING
82236260	Granted	8560359	10/31/2008	41562	12/262240	US	System And Methods For Modeling Consequences Of Events
82244189	Granted	7840665	11/30/2006	40505	11/607280	US	Systems And Methods For Providing Automated Network Management
82260107	Published		3/18/2010		12/726596	US	GRAPH TRANSFORMATION
82260173	Granted	8219591	5/3/2010	7/10/2012	12/772479	US	GRAPH QUERY ADAPTATION
82263731	Published		3/7/2011		13/042166	US	INFORMATION TECHNOLOGY INFRASTRUCTURE RISK MODELING
82598867	Granted	8429117	2/14/2011	4/23/2013	13/026315	US	Model Driven Data Loader Framework For An Enterprise Class Data Warehouse
82809638	Published		7/27/2011		13/192382	US	OBTAINING AND DISPLAYING NETWORK TOPOLOGY INFORMATION
83217752	Published		10/27/2010		13/879443	US	SYSTEMS AND METHODS FOR SCHEDULING CHANGES
84041414	Published		3/26/2012		14/386633	US	TOPOLOGICAL QUERY IN MULTI-TENANCY ENVIRONMENT
84169692	Application		4/16/2015		14/688566	US	Business Service Discovery
81968927	Granted	6651191	9/12/2000	11/18/2003	09/659367	US	Testing Of Policy Prior To Deployment In A Policy-Based Network Management System
81978731	Granted	7367017	1/31/2001	4/29/2008	09/773118	US	Method And Apparatus For Analyzing Machine Control Sequences
81982973	Granted	6898634	3/6/2001	5/24/2005	09/799658	US	Apparatus And Method For Configuring Storage Capacity On A Network For Common Use
81983474	Granted	6735595	11/29/2000	5/11/2004	09/725373	US	DATA STRUCTURE AND STORAGE AND RETRIEVAL METHOD SUPPORTING ORDINALITY BASED SEARCHING AND DATA RETRIEVAL
81993776	Granted	D470859	7/31/2001	2/25/2003	29/145971	US	Portion Of A Computer Display With A Computer ICON Graphic (As Amended)
82083740	Granted	7398307	4/30/2003	7/8/2008	10/425727	US	Method And System For Managing A Network
82094606	Granted	7281041	10/31/2002	10/9/2007	10/284247	US	Method And Apparatus For Providing A Baselining And Auto-thresholding Framework
82101599	Granted	8134923	9/15/2004	3/13/2012	10/941536	US	Discovery Of Virtual Private Networks
82165778	Granted	6182157	9/19/1996	1/30/2001	08/710563	US	Flexible SNMP Trap Mechanism
82174451	Granted	7493622	8/12/2003	39861	10/640619	US	USE OF THREAD-LOCAL STORAGE TO PROPAGATE APPLICATION CONTEXT IN JAVA 2 ENTERPRISE EDITON (J2EE) APPLICATIONS
82177385	Granted	7617315	8/30/2005	11/10/2009	11/213726	US	Multi-layered Measurement Model For Data Collection And Method For Data Collection Using Same
82177388	Granted	7899906	9/29/2009	3/1/2011	12/569638	US	Multi-layered Measurement Model For Data Collection And Method For Data Collection Using Same

PATENT
REEL: 038498 FRAME: 0571

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82188128	Granted	7792055	3/19/2007	40428	11/688015	US	METHOD AND SYSTEM FOR DETERMINING THE TOPOLOGY OF A NETWORK
82214474	Granted	7974211	1/10/2007	7/5/2011	11/651600	US	Methods And Apparatus For Network Configuration Baselining And Restoration
82219838	Granted	7957364	1/24/2006	6/7/2011	11/338528	US	Determining Network Paths
82223150	Granted	8676972	3/6/2003	41716	10/506815	US	Method And System For A Network Management Console
82238507	Granted	8359582	9/27/2008	1/22/2013	12/239745	US	Compiling And Inserting Code Snippets At Runtime
82257740	Published		8/14/2008		12/191816	US	DATA VISUALIZATION USING COMPUTER-ANIMATED FIGURE MOVEMENT
82257989	Granted	8676965	7/30/2009	3/18/2014	12/512394	US	Tracking High-level Network Transactions
82259672	Granted	8144624	10/22/2009	3/27/2012	12/588655	US	Method And System For Discovering A Pure Hub-and-spoke Topology
82262111	Published		6/8/2010		12/796168	US	PROCESSING AN ASYNCHRONOUS MESSAGE EVENT
82262981	Granted	8724466	6/30/2010	5/13/2014	12/827593	US	PACKET FILTERING
82263110	Granted	8312128	7/30/2010	11/13/2012	12/847812	US	IDENTIFICATION OF MANAGEMENT INFORMATION BASE OBJECT IDENTIFIERS SUPPORTED BY A MANAGED DEVICE
82264355	Published		10/28/2010		12/914659	US	METHODS AND SYSTEMS TO MAINTAIN DATA COHERENCY
82264421	Granted	9015728	10/12/2010	42115	12/902990	US	METHODS, APPARATUS, AND SYSTEMS TO ACCESS RUNTIME VALUES OF OBJECT INSTANCES
82581280	Granted	9077627	3/28/2011	42192	13/073715	US	REDUCING IMPACT OF RESOURCE DOWNTIME
82662336	Granted	9123003	6/15/2011	9/1/2015	13/161381	US	TOPOLOGIES CORRESPONDING TO MODELS FOR HIERARCHY OF NODES
82755131	Granted	8924667	10/3/2011	12/30/2014	13/251661	US	BACKUP STORAGE MANAGEMENT
82871690	Granted	8811210	2/13/2012	8/19/2014	13/372175	US	EFFECTIVE APPLICATION DENSITIES FOR FABRICS
83037555	Granted	8930964	7/31/2012	42010	13/562942	US	AUTOMATIC EVENT CORRELATION IN COMPUTING ENVIRONMENTS
83141960	Granted	9009729	6/30/2010	4/14/2015	13/703187	US	Tracking A Server Request
83143732	Published		2/7/2013		13/762203	US	Identifying A Label-Switched Path (LSP) Associated With A Multi Protocol Label Switching (MPLS) Service And Diagnosing A LSP Related Fault
83681558	Published		3/30/2011		14/005486	US	TIME FRAME BASED DATA ANALYSIS
84273831	Application		12/4/2012		14/649183	US	Determining Suspected Root Causes of Anomalous Network Behavior
82245686	Granted	8347287	10/3/2008	41275	12/245404	US	SYSTEM AND METHOD FOR LOCALIZING A SERVER APPLICATION USING A CLIENT-SIDE TRANSLATOR
82246688	Granted	8572568	10/14/2008	41576	12/251306	US	Test Tool For Concurrent Web Services And User Interface Testing
82249187	Granted	8615739	4/23/2009	41632	12/428733	US	Resource Monitoring
82251494	Published		8/25/2009		12/546735	US	Dynamic Resource-based Web Service Evaluation
82260611	Granted	8549478	12/2/2009	10/1/2013	12/629107	US	Graphical User Interface Input Element Identification

PATENT
REEL: 038498 FRAME: 0572

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82264352	Published		10/22/2010		12/910025	US	RELATION-BASED IDENTIFICATION OF AUTOMATION OBJECTS
82581595	Granted	8677324	1/31/2011	41716	13/017522	US	EVALUATING PERFORMANCE OF AN APPLICATION USING EVENT-DRIVEN TRANSACTIONS
82653969	Granted	9015337	7/13/2011	42115	13/182089	US	SYSTEMS, METHODS, AND APPARATUS FOR STREAM CLIENT EMULATORS
82963429	Published		4/13/2012		13/446512	US	PERFORMANCE SIMULATION OF SERVICES
82963675	Published		6/13/2012		13/495792	US	UPDATING VIRTUALIZED SERVICES
82963818	Published		4/19/2012		13/450788	US	TESTING SYSTEM FOR AN INTEGRATED SOFTWARE SYSTEM
82965464	Granted	9002847	2/29/2012	42070	13/408203	US	IDENTIFYING AN AUTO-COMPLETE COMMUNICATION PATTERN
83108515	Granted	9104812	4/10/2010	42227	13/637848	US	INJECTION OF DATA INTO A SOFTWARE APPLICATION
83116782	Published		11/28/2012		13/687942	US	Managing Compliance Across Information Technology Components
83681495	Published		5/6/2011		14/009580	US	IMAGE-BASED AUTOMATION SYSTEMS AND METHODS
83992718	Application		1/30/2013		14/759726	US	ACQUIRING IDENTIFICATION OF AN APPLICATION LIFECYCLE MANAGEMENT ENTITY ASSOCIATED WITH SIMILAR CODE
83995675	Published		4/30/2012		14/375005	US	PRIORITIZATION OF CONTINUOUS DEPLOYMENT PIPELINE TESTS
84030806	Application		9/5/2014		14/478420	US	FRAMEWORKS TO DEMONSTRATE LIVE PRODUCTS
84046830	Published		3/30/2012		14/387627	US	SOFTWARE DEVELOPMENT ACTIVITY
84125971	Published		7/27/2012		14/416110	US	RECORDING EXTERNAL PROCESSES
84170379	Application		4/16/2015		14/688646	US	QUALITY PREDICTION
81982916	Granted	6880005	3/31/2000	38454	09/539927	US	Managing Policy Rules In A Network
81991220	Granted	7272849	4/20/2001	9/18/2007	09/838807	US	System And Method For Sharing Data
82180139	Granted	7924709	5/12/2004	4/12/2011	10/843593	US	Access Control Of Resources Using Tokens
82244375	Granted	8266700	5/16/2005	9/11/2012	10/908520	US	SECURE WEB APPLICATION DEVELOPMENT ENVIRONMENT
82244378	Granted	8800042	8/21/2006	8/5/2014	11/465916	US	Secure Web Application Development And Execution Environment
82581154	Granted	7207065	12/10/2004	4/17/2007	11/010146	US	APPARATUS AND METHOD FOR DEVELOPING SECURE SOFTWARE
82581177	Granted	8347392	8/25/2006	1/1/2013	11/510135	US	Apparatus and method for analyzing and supplementing a program to provide security
83138568	Published		7/9/2010		13/704026	US	RESPONSES TO SERVER CHALLENGES INCLUDED IN A HYPERTEXT TRANSFER PROTOCOL HEADER
84000275	Published		2/29/2012		14/381437	US	NETWORK SERVICE INTERFACE ANALYSIS

PATENT
REEL: 038498 FRAME: 0573

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81967427	Granted	7209248	12/8/2000	39196	09/733027	US	Managing The Lifetime Of Distributed Resource Data Using Temporal Scopes
82083737	Granted	7577964	2/28/2003	40043	10/376570	US	SYSTEM AND METHODS FOR DEFINING A BINDING FOR WEB-SERVICES
82083743	Granted	7444675	2/28/2003	10/28/2008	10/376693	US	Systems And Methods For Defining Security Information For Web-services
82201739	Granted	7802084	11/24/2004	40442	10/578091	US	System And Method For Management And Installation Of Operating System Images For Computers
82243625	Granted	7131123	4/30/2001	39021	09/843757	US	Automated Provisioning Of Computing Networks Using A Network Database Model
82244252	Granted	7539769	4/30/2001	39959	09/843815	US	Automated Deployment And Management Of Network Devices
82244255	Granted	8141144	5/10/2001	40988	09/852244	US	Security Policy Management For Network Devices
82247249	Granted	8838777	10/23/2008	41898	12/256486	US	Web Service Management
82250183	Published		7/30/2009		12/512254	US	Providing A Policy Topology Model That Interconnects Policies At Different Layers
82250618	Published		3/23/2010		12/729251	US	Policy-provisioning
82258736	Granted	8352875	11/17/2009	41282	12/620520	US	System And Method For Integrating A Plurality Of Software Applications
82262423	Published		6/14/2010		12/815207	US	CREATING A CAPACITY PLANNING SCENARIO
82890405	Published		5/29/2009		13/319770	US	System And Method For Allocating Resources Of A Server To A Virtual Machine
82914730	Published		4/17/2012		13/448741	US	CONFIGURING AN ENFORCEMENT DEVICE ACCORDING TO A CONTRACT
83139753	Published		6/21/2010		13/702632	US	SYSTEM FOR TESTING AND CERTIFYING A VIRTUAL APPLIANCE ON A CUSTOMER COMPUTER SYSTEM
83140171	Published		6/30/2010		13/702023	US	SYSTEM AND METHOD FOR SELF-SERVICE CONFIGURATION OF AUTHORIZATION
83863003	Published		10/10/2011		14/350639	US	METHODS AND SYSTEMS FOR IDENTIFYING ACTION FOR RESPONDING TO ANOMALY IN CLOUD COMPUTING SYSTEM
83995612	Published		4/26/2012		14/375018	US	PLATFORM RUNTIME ABSTRACTION
83995629	Published		4/27/2012		14/375039	US	MAPPING APPLICATION DEPENDENCIES AT RUNTIME
84072005	Published		6/8/2012		14/394597	US	CLOUD APPLICATION DEPLOYMENT PORTABILITY
84072881	Published		7/31/2012		14/394656	US	Orchestrating Hybrid Cloud Services
84117063	Published		6/29/2012		14/406595	US	Optimizing Placement of Virtual Machines
84137269	Published		10/8/2012		14/414185	US	HYBRID CLOUD ENVIRONMENT
84155397	Application		8/30/2012		14/419667	US	GLOBAL FEATURE LIBRARY USEABLE WITH CONTINUOUS DELIVERY

PATENT
REEL: 038498 FRAME: 0574

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90063344	Application		9/25/2015		14/866444	US	System And Method For Deploying Software Into A Computing Environment
82070939	Granted	7274672	10/29/2002	9/25/2007	10/284058	US	Data Processing System And Method
82071377	Granted	7548985	8/26/2003	6/16/2009	10/649976	US	SYSTEM FOR MANAGING USER PROFILE DATA
82075190	Granted	7464185	4/30/2002	12/9/2008	10/135961	US	METHOD AND APPARATUS FOR TRANSFERING DATA FROM A SENDING SYSTEM TO A RECEIVING SYSTEM, AND PROGRAM STORAGE DEVICES
82092542	Granted	7254541	10/30/2002	8/7/2007	10/283498	US	Systems And Methods For Providing Users With Information In Audible Form
82099601	Published		7/20/2006		11/489433	US	Context-based Event Processing
82116953	Granted	6157831	10/12/1999	12/5/2000	08/781261	US	METHOD AND APPARATUS FOR IMPLEMENTING CONFIGURABLE CALL FORWARDING BINS IN A MOBILE TELEPHONE SYSTEM
82120637	Granted	8099488	4/26/2002	40925	10/133299	US	REAL-TIME MONITORING OF SERVICE AGREEMENTS
82171835	Granted	7599288	9/30/2004	10/6/2009	10/955628	US	Processing Of Usage Data For First And Second Types Of Usage-based Functions
82182632	Granted	8554876	1/23/2004	41555	10/763506	US	User Profile Service
82184381	Granted	7406422	7/20/2004	7/29/2008	10/894508	US	Techniques For Improving Collaboration Effectiveness
82186193	Granted	7885284	5/13/2005	2/8/2011	11/587570	US	Message-based Communications
82199927	Granted	7853666	1/13/2005	12/14/2010	11/036080	US	Data Retrieval From Computing Systems
82211165	Published		6/29/2006		11/476548	US	A Method Or Apparatus For Routing Signaling Messages In A Network
82211792	Granted	8260254	4/20/2006	9/4/2012	11/407650	US	NETWORK BILLING
82211849	Published		10/28/2005		11/262118	US	Service Chaining
82215662	Granted	8204194	6/26/2007	6/19/2012	11/768429	US	Communication System And Method
82222904	Published		7/17/2006		11/487790	US	Call Routing
82229765	Granted	8504018	1/29/2008	41492	12/449244	US	Service Routing For Communication Systems
82230767	Granted	8064961	7/24/2008	11/22/2011	12/178914	US	Communication System And Method Therefor
82234265	Granted	8325925	7/10/2007	41247	11/775628	US	Delivery Of Messages To A Receiver Mobile Device
82235825	Granted	8219449	11/13/2008	41100	12/270342	US	Communication Methods And Systems
82243439	Granted	8640199	12/12/2008	1/28/2014	12/333337	US	Network Service Provision Method, Network Device, Network Server And Network
82247066	Granted	8495169	11/4/2008	7/23/2013	12/264273	US	Method And System For Managing A Hierarchical Information Base With An Application Layer Protocol
82247375	Granted	8208616	1/29/2009	6/26/2012	12/362036	US	Conference-call System And Conference-specific Access Codes
82563072	Granted	8706880	2/24/2011	4/22/2014	13/034531	US	MANAGE A SHARED COMPUTING RESOURCE BASED ON RESOURCE USE REPORTS
82805181	Published		1/26/2010		13/146939	US	Communications System And Method

PATENT
REEL: 038498 FRAME: 0575

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82863306	Granted	8538448	3/12/2012	9/17/2013	13/418012	US	ROUND ROBIN ASSIGNMENT BASED COMMUNICATION SYSTEM
82961909	Published		1/31/2013		13/755221	US	EDITING INFORMATION WITH SLIDER EDIT TOOLS
83694963	Application		10/24/2011		14/116129	US	PROVIDE SERVICES USING UNIFIED COMMUNICATION CONTENT
82000082	Granted	6820098	3/15/2002	11/16/2004	10/099760	US	System And Method For Efficient And Trackable Asynchronous File Replication
82000085	Granted	7185006	9/23/2002	39140	10/251876	US	Method And Apparatus For Reducing The Scope Of Queries That Seek Information From Networked Computers
82002266	Granted	7577944	3/18/2002	8/18/2009	10/100525	US	Unbundling, Translation And Rebundling Of Instruction Bundles In An Instruction Stream
82032797	Granted	6285686	3/19/1998	9/4/2001	09/044659	US	Using Page Registers For Efficient Communication
82065821	Granted	7590746	6/9/2003	9/15/2009	10/457003	US	SYSTEMS AND METHODS OF MAINTAINING AVAILABILITY OF REQUESTED NETWORK RESOURCES
82166090	Granted	6769057	1/22/2001	7/27/2004	09/766685	US	System And Method For Determining Operand Access To Data
82181507	Granted	8370825	10/22/2003	2/5/2013	10/691028	US	PROGRAM UPDATE PRIOTIZATION ACCORDING TO PRORAM USAGE TRACKING
82189811	Granted	7693145	7/23/2005	4/6/2010	11/187754	US	Method And Apparatus For Direct Reception Of Inbound Data
82229393	Granted	8656098	7/30/2007	2/18/2014	11/830175	US	System And Method For Activating A Raid Disc
82260176	Application		1/15/2010		12/688547	US	CONFIGURATION TESTS FOR COMPUTER SYSTEM
82651104	Granted	8844006	9/30/2008	9/23/2014	13/121662	US	Authentication Of Services On A Partition
81966803	Granted	7000151	7/18/2002	2/14/2006	10/198776	US	System And Method For Providing Run-time Type Checking
81971801	Granted	8326965	5/3/2001	12/4/2012	09/848713	US	Method And Apparatus To Extract The Health Of A Service From A Host Machine
81992843	Granted	7007301	6/12/2001	2/28/2006	09/878320	US	Computer Architecture For An Intrusion Detection System
82007387	Granted	7343590	6/25/2002	3/11/2008	10/178992	US	System And Method For Increasing OS Idle Loop Performance In A Simulator
82029239	Granted	6247172	7/2/1998	6/12/2001	09/109467	US	METHOD FOR A TRANSLATION SYSTEM THAT AGGRESSIVELY OPTIMIZES AND PRESERVES FULL SYNCHRONOUS EXCEPTION STATE
82029797	Granted	6199203	7/21/1998	3/6/2001	09/120261	US	Memory Management Techniques For On-Line Replaceable Software
82030301	Granted	6202205	7/21/1998	3/13/2001	09/120038	US	SYSTEM AND METHOD FOR PROFILE-BASED, ON-THE-FLY OPTIMIZATION OF LIBRARY CODE
82033298	Granted	6260190	8/11/1998	7/10/2001	09/132558	US	UNIFIED COMPILER FRAMEWORK FOR CONTROL AND DATA SPECULATION WITH RECOVERY CODE

PATENT
REEL: 038498 FRAME: 0576

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82033358	Granted	6182284	9/30/1998	1/30/2001	09/163677	US	METHOD AND SYSTEM FOR ELIMINATING PHI INSTRUCTION RESOURCE INTERFERENCES AND REDUNDANT COPY INSTRUCTIONS FROM STATIC-SINGLE -ASSIGNMENT-FORM COMPUTER CODE
82055273	Granted	7346699	5/24/2000	3/18/2008	09/578019	US	Reliable Multicast
82084805	Granted	8271400	1/15/2002	9/18/2012	10/045151	US	Hardware Pay-per-use
82089050	Granted	7577951	5/30/2002	8/18/2009	10/159528	US	IMPROVED PERFORMANCE OF COMPUTER PROGRAMS WHILE THEY ARE RUNNING
82093352	Granted	7360219	12/13/2002	4/15/2008	10/318822	US	Systems And Methods For Facilitating Fair And Efficient Scheduling Of Processes Among Multiple Resources In A Computer System
82101842	Granted	7995497	2/27/2003	8/9/2011	10/375459	US	Spontaneous Topology Discovery In A Multi-node Computer System
82103468	Granted	8533828	1/21/2003	9/10/2013	10/349385	US	A System For Protecting Security Of A Provisionable Network
82106279	Granted	7849320	11/25/2003	12/7/2010	10/723119	US	Method And System For Establishing A Consistent Password Policy
82110398	Granted	6247059	9/8/1998	6/12/2001	09/149751	US	TRANSACTION STATE BROADCAST METHOD USING A TWO-STAGE MULTICAST IN A MULTIPLE PROCESSOR CLUSTER HAVING A SENDER TIME OF LIFE MARKER USED BY RECEIVER TO REQUEST RESYNCHRONIZATION
82110458	Granted	6266698	7/31/1998	7/24/2001	09/127658	US	LOGGING OF TRANSACTION BRANCH INFORMATION FOR IMPLEMENTING PRESUMED NOTHING AND OTHER PROTOCOLS
82110587	Granted	6099098	8/14/1998	8/8/2000	09/134080	US	SELF-LOCKING MOUNTING APPARATUS
82110710	Granted	6249756	12/7/1998	6/19/2001	09/206481	US	HYBRID FLOW CONTROL
82110713	Granted	6175882	12/7/1998	1/16/2001	09/206593	US	NETWORK SYSTEM FOR A FIRST MODULE PORT AUTO CONFIGURING SAME MODE AS A SECOND MODULE PORT
82115141	Granted	5867501	6/7/1995	2/2/1999	08/477807	US	A ENCODING FOR COMMUNICATING DATA AND COMMANDS
82116827	Granted	5875291	4/11/1997	2/23/1999	08/840138	US	METHOD AND APPARATUS FOR CHECKING TRANSACTIONS IN A COMPUTER SYSTEM
82117454	Granted	6782399	6/15/2001	8/24/2004	09/883066	US	ULTRA-HIGH SPEED DATABASE REPLICATION WITH MULTIPLE AUDIT LOGS
82118699	Granted	7293102	3/26/2002	11/6/2007	10/106279	US	METHOD AND APPARATUS FOR STORING DATA AND REPLAYING STORED DATA IN A TEMPORALLY ACCURATE MANNER
82121762	Granted	7168001	2/6/2004	1/23/2007	10/774267	US	Transaction Processing Apparatus And Method

PATENT
REEL: 038498 FRAME: 0577

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82130192	Granted	5913058	9/30/1997	6/15/1999	08/941623	US	"SYSTEM AND METHOD FOR USING A REAL MODE BIOS INTERFACE TO READ PHYSICAL DISK SECTORS AFTER THE OPERATING SYSTEM HAS LOADED AND BEFORE THE OPERATING SYSTEM DEVICE DRIVERS HAVE LOADED"
82131629	Granted	6178473	10/15/1998	1/23/2001	09/173438	US	SYSTEM FOR SELECTIVELY INCREMENTING A COUNT NUMBER OF AN ASSOCIATED NODE ONLY WHEN THE NODE IS PUT IN USE IN CONJUNCTION WITH A SUCCESSFUL COMPARE AND SWAP OPERATION
82132496	Granted	6158000	9/18/1998	12/5/2000	09/158165	US	SHARED MEMORY INTIALIZATION METHOD FOR SYSTEM HAVING MULTIPLE PROCESSOR CAPABILITY
82135247	Granted	6098179	1/22/1998	8/1/2000	09/010899	US	METHOD AND APPARATUS FOR PERFORMING ERROR DETECTION
82162901	Granted	5960383	2/25/1997	9/28/1999	08/805780	US	EXTRACTION OF KEY SECTIONS FROM TEXTS USING AUTOMATIC INDEXING TECHNIQUES
82173578	Granted	8179784	7/16/2004	5/15/2012	10/893612	US	Method And Apparatus For Recovering A Communications Connection
82174952	Granted	7606194	2/20/2004	10/20/2009	10/783637	US	Method And Apparatus For Registering A Mobile Node With A Home Agent
82179326	Granted	7356678	1/12/2004	4/8/2008	10/756431	US	Security Measures In A Partitionable Computing System
82179383	Granted	7904910	7/19/2004	3/8/2011	10/893825	US	Cluster System And Method For Operating Cluster Nodes
82179764	Granted	7383429	12/18/2003	6/3/2008	10/739540	US	Configuring Settings Of A Computer System To Be Compatible With An Operating System
82181510	Granted	7536684	12/29/2003	5/19/2009	10/747535	US	Software Documentation Generation Using Differential Upgrade Documentation
82181630	Granted	7383290	3/9/2004	6/3/2008	10/797258	US	TRANSACTION PROCESSING SYSTEMS AND METHODS UTILIZING NON-DISK PERSISTENT MEMORY
82183379	Granted	7426622	3/10/2004	9/16/2008	10/798710	US	Rapid Locality Selection For Efficient Memory Allocation
82184942	Granted	7325156	10/7/2004	1/29/2008	10/961500	US	Methods And Apparatus For Backing Up Data In A Data Center
82186253	Granted	7876689	6/29/2005	1/25/2011	11/171297	US	Method And Apparatus For Load Balancing Network Interface Adapters Based On Network Information
82187003	Granted	7903571	7/9/2004	3/8/2011	10/887731	US	System And Method For Improving Multi-node Processing
82187564	Granted	7743383	11/1/2004	6/22/2010	10/979407	US	Adaptive Cooperative Scheduling
82188188	Granted	8463879	7/16/2004	6/11/2013	10/893617	US	Method And Apparatus For Automatic Verification Of A Machine-readable Map Of Networked Devices
82192370	Granted	7434098	1/25/2005	10/7/2008	11/042981	US	Method And System Of Determining Whether A User Program Has Made A System Level Call
82195493	Granted	7594128	7/29/2005	9/22/2009	11/193834	US	Systems And Methods To Determine Processor Utilization

PATENT
REEL: 038498 FRAME: 0578

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82195928	Granted	7350007	4/5/2005	3/25/2008	11/098803	US	TIME-INTERVAL- BASED SYSTEM AND METHOD TO DETERMINE IF A DEVICE ERROR RATE EQUALS OR EXCEEDS A THRESHOLD ERROR RATE
82197740	Granted	7743380	1/21/2005	6/22/2010	11/040768	US	Monitoring Clustered Software Applications
82202108	Granted	7426684	4/29/2005	9/16/2008	11/118929	US	Lost-cycle Measurement Using Cycle Counter
82203044	Granted	7730350	2/3/2006	6/1/2010	11/346737	US	Method And System Of Determining The Execution Point Of Programs Executed In Lock Step
82203047	Granted	7549082	2/3/2006	6/16/2009	11/350315	US	Method And System Of Bringing Processors To The Same Computational Point
82204670	Granted	7724985	10/27/2005	5/25/2010	11/261199	US	DEVICE STORING VECTOR IMAGE WITH EMBEDDED IMAGE STYLE IDENTIFIER, AND METHODS AND UTILITIES FOR FORMATTING A DEVICE IMAGE WITH IMAGE STYLE ATTRIBUTES
82206293	Granted	7689663	7/28/2005	3/30/2010	11/191639	US	Embedded Web-based Management Method
82206791	Granted	7330942	12/29/2004	2/12/2008	11/027553	US	Method For Efficient Virtualization Of Physical Memory In A Virtual-machine Monitor
82209107	Granted	7895596	9/13/2005	2/22/2011	11/224849	US	Processor Assignment In Multi-processor Systems
82209788	Granted	7739548	6/27/2006	6/15/2010	11/475443	US	Determining Actual Power Consumption For System Power Performance States
82209791	Granted	7607030	6/27/2006	10/20/2009	11/475765	US	METHOD AND APPARATUS FOR ADJUSTING POWER CONSUMPTION DURING SERVER INITIAL SYSTEM POWER PERFORMANCE STATE
82210226	Granted	8799432	10/31/2006	8/5/2014	11/590395	US	Managed Computer Network Caching Requested And Related Data From Remote Computers
82214159	Granted	7672923	10/31/2006	3/2/2010	11/591082	US	GRID NETWORK MANAGEMENT VIA AUTOMATIC TREND ANALYSIS OF A SERVICE LEVEL AGREEMENT.
82215473	Granted	8286244	1/14/2008	10/9/2012	12/013890	US	Method And System For Protecting A Computer Network Against Packet Floods
82215656	Granted	7734960	7/20/2007	6/8/2010	11/878129	US	Method Of Managing Nodes In Computer Cluster
82216469	Granted	7698545	4/24/2006	4/13/2010	11/409754	US	Computer Configuration Chronology Generator
82216472	Granted	8108836	10/13/2006	1/31/2012	11/580649	US	System And Method For Defining Software Management
82216655	Granted	7872965	8/22/2005	1/18/2011	11/208690	US	Network Resource Teaming Providing Resource Redundancy And Transmit/receive Load-balancing Through A Plurality Of Redundant Port Trunks
82217159	Granted	8069371	4/25/2008	11/29/2011	12/110180	US	Method And System For Remotely Debugging A Hung Or Crashed Computing System
82219718	Granted	7743244	10/31/2006	6/22/2010	11/590025	US	Computer System Model Generation With Tracking Of Actual Computer System Configuration
82219967	Granted	8141066	12/14/2007	3/20/2012	12/000645	US	Cross-platform Architecture For Replicating Profiling Scheme In A Computer System

PATENT
REEL: 038498 FRAME: 0579

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82220027	Granted	8510450	4/22/2006	8/13/2013	11/408375	US	Reconciliation Of Web Server Session States With Client Browser States
82220525	Granted	8132171	12/22/2006	3/6/2012	11/615935	US	Method Of Controlling Thread Access To A Synchronization Object
82224527	Granted	8739143	1/31/2007	41786	11/700566	US	PROFILING METRICS FOR COMPUTER PROGRAMS
82225901	Granted	8775122	2/28/2007	7/8/2014	11/680620	US	UTILIZATION REPORTING WITH MULTIPLE TIME FRAMES
82227581	Granted	8799547	7/7/2008	8/5/2014	12/668409	US	Data Packet Processing Method For A Multi Core Processor
82228148	Granted	8032570	7/17/2008	10/4/2011	12/175292	US	An Efficient Stacked File System And Method
82228955	Granted	8041692	4/8/2008	10/18/2011	12/099643	US	System And Method For Processing Concurrent File System Write Requests
82229519	Granted	8464024	4/27/2007	6/11/2013	11/796665	US	VIRTUAL ADDRESS HASHING
82229708	Granted	8156502	6/8/2007	4/10/2012	11/760635	US	Computer Resource Allocation As A Function Of Demand Type
82230644	Granted	7689577	4/16/2007	3/30/2010	11/787612	US	REARRANGING DATA SECTIONS WITHIN A PAGE FILE
82233077	Published		6/17/2008		12/140278	US	Data Processing System And Method
82233830	Granted	7827266	7/31/2007	11/2/2010	11/831736	US	System And Method Of Controlling Multiple Computer Platforms
82233953	Granted	8359467	7/7/2007	1/22/2013	11/774570	US	Access Control System And Method
82235327	Granted	8250581	10/28/2007	8/21/2012	11/926087	US	Allocating Computer Resources To Candidate Recipient Computer Workloads According To Expected Marginal Utilities
82235765	Granted	8219595	9/22/2008	7/10/2012	12/234764	US	System And Method For Efficient Remote Data Access For Server Management
82237886	Granted	8719830	8/21/2008	41765	12/195934	US	SYSTEM AND METHOD FOR ALLOWING EXECUTING APPLICATION IN COMPARTMENT THAT ALLOW ACCESS TO RESOURCES
82247372	Granted	8826138	1/28/2009	41884	12/361449	US	VIRTUAL CONNECT DOMAIN GROUPS
82248062	Granted	8615641	6/24/2009	41632	12/490332	US	System And Method For Differential Backup
82258421	Application		3/17/2009		12/406059	US	ALLOCATING MASS STORAGE TO A LOGICAL SERVER
82261919	Granted	8356198	3/30/2010	41289	12/749784	US	Performing Power Management Based On Information Regarding Zones Of Devices In A System
82852217	Granted	8713297	12/1/2009	4/29/2014	13/258384	US	DECREMENTING POWER-CAP SETTINGS WHEN POWER CAP IS EXCEEDED
82852274	Granted	8838765	12/14/2009	9/16/2014	13/258496	US	MODIFYING COMPUTER MANAGEMENT REQUEST
83123503	Granted	9037538	5/13/2010	5/19/2015	13/642062	US	FILE SYSTEM MIGRATION
83276232	Published		7/25/2013		13/951100	US	Preserving Object Code Translations Of A Library For Future Reuse By An Emulator
84074258	Published		10/21/2014		14/519670	US	License Prerequisite Solution for Central-Management Products

PATENT
REEL: 038498 FRAME: 0580

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84141723	Published		2/25/2015		14/631286	US	ABSTRACTING A MULTITHREADED PROCESSOR CORE TO A SINGLE THREADED PROCESSOR CORE
84210917	Application		1/27/2013		14/440214	US	SOCKET STATE TRANSFER
84289251	Application		8/5/2015		14/819039	US	Computer Workload Redistribution Schedule
81967118	Granted	6750403	4/18/2002	6/15/2004	10/125246	US	Reconfigurable Multilayer Printed Circuit Board
81973298	Granted	6285547	5/1/2000	9/4/2001	09/562878	US	Bracket For Retaining Computer Components Within A Housing
81997832	Granted	6456501	7/30/2001	9/24/2002	09/918765	US	Quick Release Mechanism For Sliding Rail
82004201	Granted	D472880	7/23/2001	4/8/2003	29/145446	US	Electrical Contact
82019687	Granted	6199147	3/20/2000	3/6/2001	09/528583	US	Distributed-memory multiprocessor computer system with directory-based cache coherency with ambiguous mappings of cached data to main-memory locations
82025057	Granted	5966733	6/24/1997	10/12/1999	08/881346	US	OPTIMIZING DATA MOVEMENT WITH HARDWARE OPERATIONS
82029800	Granted	6169662	10/24/1997	1/2/2001	08/957221	US	Ejection System And Method For On Line Removal Of Edge Connector Cards
82045283	Granted	7409531	10/29/1999	8/5/2008	09/430192	US	INTEGRATED MICRO-CONTROLLER AND PROGRAMMABLE DEVICE
82085048	Granted	6822878	10/9/2002	11/23/2004	10/267768	US	Circuit Board Support Arrangement, Method, And Method For Using The Same
82086548	Granted	6807062	11/7/2002	10/19/2004	10/289975	US	Employment Of An Over-bent Ledge Of A Rack Component To Support An Over-bent Ledge Of A Drop-in Chassis
82088174	Granted	6879931	10/3/2002	4/12/2005	10/264194	US	System And Method For Protection Of Equipment During Motion Anomalies
82088237	Granted	7370209	1/30/2003	5/6/2008	10/354759	US	Systems And Methods For Increasing The Difficulty Of Data Sniffing
82090856	Granted	7299141	12/5/2002	11/20/2007	10/310633	US	System And Method For Controlling Vibration
82091672	Granted	6867362	3/7/2003	3/15/2005	10/383412	US	Cable Extension For Reducing EMI Emissions
82093043	Granted	6986032	8/7/2002	1/10/2006	10/212718	US	System And Method For Using An Operating System Defined Field In ACPI Support Multiple Operating Systems
82095728	Granted	D480078	10/21/2002	9/30/2003	29/169495	US	Rack Mount Computer Workstation
82096163	Granted	7437524	3/11/2005	10/14/2008	11/077665	US	Method And Apparatus For Dumping Memory
82101158	Granted	6999321	11/25/2003	2/14/2006	10/722338	US	Assembly For Toolless Installation And Locking Of A Printed Circuit Carrier To A System
82101161	Granted	6896539	6/30/2003	5/24/2005	10/610144	US	Pivot Component Coupled With First Circuit Board For Control Of Relative Alignment Of First Circuit Board Connection Component With Second Circuit Board Connection Component
82107587	Granted	D482691	7/26/2002	11/25/2003	29/164607	US	SERVER BLADE
82107590	Granted	D483033	7/26/2002	12/2/2003	29/164606	US	ENCLOSURE FOR SERVER BLADES

PATENT
REEL: 038498 FRAME: 0581

Schedule A of Patent Assignment

PATENT
REEL: 038498 FRAME: 0582

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82117829	Granted	D455752	2/14/2001	4/16/2002	29/137162	US	Front Panel For A Drive Carrier
82127816	Granted	6069796	10/6/1998	5/30/2000	09/167631	US	SECURING A CARD IN AN ELECTRONIC DEVICE
82128875	Granted	5896273	12/31/1996	4/20/1999	08/777819	US	MODULAR COMPUTER CHASSIS INTERCHANGEABLE BETWEEN STAND ALONE AND RACK MOUNTED STATES
82134995	Granted	6249520	10/24/1997	6/19/2001	08/957664	US	HIGH-PERFORMANCE NON-BLOCKING SWITCH WITH MULTIPLE CHANNEL ORDERING CONSTRAINTS
82135370	Granted	6205521	11/3/1997	3/20/2001	08/963661	US	INCLUSION MAP FOR ACCELERATED CACHE FLUSH
82136936	Granted	6298425	1/12/1999	10/2/2001	09/228662	US	COMPUTER DISK MANAGEMENT SYSTEM USING DOUBLET A-B LOGGING
83705282	Published		12/3/2013		14/095672	US	SQL Query on a NoSQL Database
84249337	Published		5/26/2015		14/721273	US	PROPAGATING A SNAPSHOT ATTRIBUTE IN A DISTRIBUTED FILE SYSTEM
81974174	Granted	6820072	8/22/2000	11/16/2004	09/644117	US	Validation Of Probabilistic Troubleshooters And Diagnostic Systems
81980102	Granted	6845390	11/10/2000	1/18/2005	09/710728	US	Server-Side State Replication Among Collaborating World Wide Web Servers
81987659	Granted	6879973	1/11/2001	4/12/2005	09/758891	US	Automated Diagnosis Of Printer Systems Using Bayesian Networks
81988406	Granted	7107313	4/13/2001	9/12/2006	09/833573	US	ADDING AND REMOVING PROCESSES IN A SINGLE VIEW
81990341	Granted	7044362	10/10/2001	5/16/2006	09/975623	US	Electronic Ticketing System And Method
81997898	Granted	7020875	2/15/2002	3/28/2006	10/077603	US	MECHANISM FOR SELECTING REPRESENTATIVES FROM PROGRAM PATCH CHAINS BASED ON USER ROLES
82007201	Granted	7583607	3/6/2003	9/1/2009	10/379662	US	Method And Apparatus For Designating And Implementing Support Level Agreements
82035353	Granted	6185589	7/31/1998	2/6/2001	09/127185	US	AUTOMATIC BANNER RESIZING FOR VARIABLE-WIDTH WEB PAGES USING VARIABLE WIDTH CELLS OF HTML TABEL
82057394	Granted	6587827	10/22/1999	7/1/2003	09/425378	US	Order Fulfillment Processing System
82072313	Granted	7356738	6/6/2005	4/8/2008	11/146775	US	Electronic Apparatus Having Improved Diagnostic Interface
82095977	Granted	7016889	1/30/2003	3/21/2006	10/355498	US	System And Method For Identifying Useful Content In A Knowledge Repository
82106525	Granted	7603668	1/9/2004	10/13/2009	10/755112	US	Determining The Applicability Of Patches For Installation On A Computer System
82106528	Granted	7451440	1/9/2004	11/11/2008	10/755113	US	PATCH APPLICATION THAT ENABLES THE IDENTIFICATION OF PATCHES FOR INSTALLATION ON A COMPUTER SYSTEM IN A REACTIVE MANNER
82210355	Granted	7536268	6/21/2005	5/19/2009	11/157572	US	Collecting Information To Identify Defective Locations Of A Display Monitor
82212536	Granted	8914868	3/3/2006	12/16/2014	11/367653	US	Vendor-neutral Policy Based Mechanism For Enabling Firewall Service In An MPLS-VPN Service Network

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82214036	Application		10/31/2005		11/263712	US	Discovery Of And Sharing Of Content Within A Sharing Neighborhood Of A Network
82231640	Granted	7970585	6/29/2007	6/28/2011	11/771504	US	METHOD AND SYSTEM FOR REMOTE MONITORING AND CONTROL OF WIRELESS CELL-SITES
82240256	Published		8/27/2008		12/198896	US	System And Method For Concurrency Control Of Logically Grouped Shared Objects In A Multi-user Environment
83099441	Published		1/31/2013		13/755819	US	EXTENSIBLE MODEL FOR IT RESOURCE CHARGEBACK
84019774	Published		4/27/2012		14/387985	US	DATA CENTER SERVICE ORIENTED NETWORKING
82092731	Granted	8694394	11/19/2001	41737	10/495634	US	Methods, Data Record, Software Interface, Data Warehouse Module And Software Application For Exchanging Transaction-tax-related Data
82184633	Granted	8015086	9/13/2005	9/6/2011	11/226532	US	System And Method For Calculating Employee Expenses
82194869	Granted	8131603	10/12/2004	40974	10/964527	US	Determining, Storing, And Analyzing Product Country Classifications
83992847	Published		4/23/2012		14/373613	US	INFLUENCE SCORES FOR SOCIAL MEDIA PROFILES
81952571	Granted	6182176	2/24/1994	36921	08/201185	US	QUEUE-BASED PREDICTIVE FLOW CONTROL MECHANISM
81958499	Granted	6074428	10/19/1994	6/13/2000	08/325765	US	Minimizing Logic By Resolving "Don't Care" Output Values In A Finite State Machine
81966995	Granted	7065137	1/24/2002	6/20/2006	10/056659	US	DIFFERENCE MESSAGING PROTOCOL THAT USES PRIOR STATE INFORMATION
81968303	Granted	6636960	2/16/2000	10/21/2003	09/505093	US	Method And Apparatus For Resteering Failing Speculation Check Instructions
81968864	Granted	6591393	2/18/2000	7/8/2003	09/507208	US	Masking Error Detection/Correction Latency In Multilevel Cache Transfers
81970055	Granted	7400591	6/1/2005	39644	11/142643	US	METHOD OF CREATING AN ADDRESS AND A DISCONTIGUOUS MASK FOR A NETWORK SECURITY POLICY AREA
81972047	Granted	6665818	4/27/2000	12/16/2003	09/560659	US	Apparatus And Method For Detecting, Diagnosing, And Handling Deadlock Errors
81972551	Granted	6654760	6/4/2001	37950	09/874586	US	System And Method Of Providing A Cache-Efficient, Hybrid, Compressed Digital Tree With Wide Dynamic Ranges And Simple Interface Requiring No Configuration Or Tuning
81974798	Granted	7143268	12/29/2000	39049	09/751674	US	Circuit And Method For Instruction Compression And Dispersal In Wide-issue Processors
81976979	Granted	6662289	5/15/2001	37964	09/858850	US	Method And Apparatus For Direct Conveyance Of Physical Addresses From User Level Code To Peripheral Devices In Virtual Memory Systems
81976982	Granted	7360054	10/23/2003	39553	10/693147	US	Method And Apparatus For Direct Conveyance Of Physical Addresses From User Level Code To Peripheral Devices In Virtual Memory Systems

PATENT
REEL: 038498 FRAME: 0583

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81979856	Granted	6694457	3/6/2001	38034	09/799999	US	System And Method For Monitoring Execution Of Privileged Instructions
81984224	Granted	6738783	2/9/2001	38125	09/779968	US	Dynamically Configurable Generic Container
81986348	Granted	7240324	2/28/2001	39266	09/797536	US	Event-based Scheduling Method And System For Workflow Activities
81993026	Granted	6696906	5/30/2001	2/24/2004	09/870839	US	LOW DIELECTRIC LOSS SIGNAL LINE HAVING A CONDUCTIVE TRACE SUPPORTED BY FILAMENTS
81993218	Granted	7237037	10/1/2001	39259	09/969369	US	Combined Message Broker
81993527	Granted	6715101	3/15/2001	38076	09/810103	US	Redundant Controller Data Storage System Having An On-line Controller Removal System And Method
81994154	Granted	7051166	4/21/2003	5/23/2006	10/419477	US	DIRECTORY-BASED CACHE COHERENCY SCHEME FOR REDUCING MEMORY BANDWIDTH LOSS
81994586	Granted	6957202	5/26/2001	10/18/2005	09/866411	US	MODEL SELECTION FOR DECISION SUPPORT SYSTEMS
81995087	Granted	6918021	4/9/2002	7/12/2005	10/118801	US	System Of And Method For Flow Control Within A Tag Pipeline
81995900	Granted	6675242	3/17/2001	1/6/2004	09/811196	US	COMMUNICATION BUS CONTROLLER INCLUDING DESIGNATION OF PRIMARY AND SECONDARY STATUS ACCORDING TO SLOT POSITION
81997961	Granted	6789312	7/30/2001	9/14/2004	09/918764	US	BOLSTER PLATE BOW COMPENSATION
82000829	Granted	6731136	11/1/2001	5/4/2004	10/002813	US	Differential CMOS Logic With Dynamic Bias
82002206	Granted	6967350	4/2/2002	11/22/2005	10/116497	US	Memory Structures
82002326	Granted	6627092	7/27/2001	37894	09/917093	US	Method For The Fabrication Of Electrical Contacts
82002458	Granted	7318120	12/24/2004	1/8/2008	11/023091	US	Hardware Assisted Communication Between Processors
82003517	Granted	6831861	1/12/2004	12/14/2004	10/756450	US	Methods And Memory Structures Using Tunnel-Junction Device As Control Element
82003955	Granted	6643159	4/2/2002	37929	10/116213	US	Cubic Memory Array
82011821	Granted	6091896	12/22/1995	7/18/2000	08/577364	US	Debugging Optimized Code Using Data Change Points
82012379	Granted	5797013	11/29/1995	36025	08/564514	US	Intelligent Loop Unrolling
82014191	Granted	5760610	3/1/1996	35948	08/609306	US	QUALIFIED UNIVERSAL CLOCK BUFFER CIRCUIT FOR GENERATING HIGH GAIN, LOW SKEW LOCAL CLOCK SIGNALS
82015439	Granted	5818364	6/19/1996	10/6/1998	08/666964	US	High Bit-Rate Huffman Decoding
82017626	Granted	5901157	10/29/1996	5/4/1999	08/744717	US	Method And Apparatus For Reducing The Access Time For Storage Systems
82017812	Granted	5850553	11/12/1996	12/15/1998	08/747054	US	Reducing The Number Of Executed Branch Instructions In A Code Sequence
82026119	Granted	6088525	6/19/1997	7/11/2000	08/878958	US	Loop Profiling By Instrumentation
82030484	Granted	6282143	5/26/1998	8/28/2001	09/084689	US	MULTI-PORT STATIC RANDOM ACCESS MEMORY DESIGN FOR COLUMN INTERLEAVED ARRAYS
82031111	Granted	6470374	2/21/2000	37551	09/510129	US	Carry Look-ahead For Bi-endian Adder

PATENT
REEL: 038498 FRAME: 0584

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82032671	Granted	6457645	4/13/1999	10/1/2002	09/290842	US	Optical Assembly Having Lens Offset From Optical Axis
82035920	Granted	6154769	3/27/1998	36858	09/049688	US	Scheduling Server Requests To Decrease Response Time And Increase Server Throughput
82040786	Granted	7596694	3/8/2004	9/29/2009	10/796690	US	SYSTEM AND METHOD FOR SAFELY EXECUTING DOWNLOADED CODE ON A COMPUTER SYSTEM
82040978	Granted	6243668	8/7/1998	37047	09/131187	US	INSTRUCTION SET INTERPRETER WHICH USES A REGISTER STACK TO EFFICIENTLY MAP AN APPLICATION REGISTER STATE
82041722	Granted	6941569	12/3/2002	38601	10/308836	US	SYSTEM AND METHOD UTILIZING A CONDUCTIVE BRUSH FOR PROVIDING POWER SIGNALS TO A CARTRIDGE ACCESS DEVICE
82043099	Granted	6153946	10/30/1998	36858	09/183333	US	METHOD AND APPARATUS FOR PROVIDING REDUNDANT POWER BY CONNECTING POWER SUPPLIES INTO A SEGMENT OR RING
82045286	Granted	6704842	4/12/2000	38055	09/548009	US	Multi-processor System With Proactive Speculative Data Transfer
82046777	Granted	6118598	4/13/1999	9/12/2000	09/290949	US	Method And Apparatus For Setting Focus In An Imaging Device
82048028	Granted	6751677	8/24/1999	6/15/2004	09/379755	US	Method And Apparatus For Allowing A Secure And Transparent Communication Between A User Device And Servers Of A Data Access Network System Via A Firewall And A Gateway
82049213	Granted	6166946	1/21/2000	12/26/2000	09/489380	US	System And Method For Writing To And Reading From A Memory Cell
82051964	Granted	6675209	7/19/1999	1/6/2004	09/356477	US	METHOD AND SYSTEM FOR ASSINGING PRIORITY AMONG NETWORK SEGMENTS
82055018	Granted	6697330	11/26/1999	2/24/2004	09/449841	US	Method And System For Output Flow Control In Network Multiplexers
82057268	Granted	6681322	11/26/1999	1/20/2004	09/449846	US	METHOD AND APPARATUS FOR EMULATING AN INSTRUCTION SET EXTENSION IN A DIGITAL COMPUTER SYSTEM
82082426	Granted	6746892	8/8/2003	6/8/2004	10/637941	US	LOW HEAT LOSS AND SMALL CONTACT AREA COMPOSITE ELECTRODE FOR A PHASE CHANGE MEDIA MEMORY DEVICE
82083239	Granted	7266598	10/22/2002	9/4/2007	10/278508	US	Programmable Data Center
82086671	Granted	6654308	12/23/2002	11/25/2003	10/326779	US	MEMORY HAVING MULTIPLE WRITE PORTS AND MULTIPLE CONTROL MEMORY UNITS, AND METHOD OF OPERATION
82086674	Granted	7263192	3/20/2002	8/28/2007	10/103020	US	Establishing An Encrypted Session
82088357	Granted	6793507	12/13/2002	9/21/2004	10/318067	US	Cable Connector Riser
82092668	Granted	6789610	8/28/2003	9/14/2004	10/651129	US	High Performance Cooling Device With Vapor Chamber

PATENT
REEL: 038498 FRAME: 0585

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82095725	Granted	6694759	1/27/2003	2/24/2004	10/351427	US	PRESSURE CONTROL OF COOLING FLUID WITHIN A PLENUM USING AUTOMATICALLY ADJUSTABLE VENTS
82096223	Granted	7607136	10/28/2003	10/20/2009	10/695461	US	Method And Apparatus For Interfacing With A Distributed Computing Service
82100351	Granted	7200778	3/28/2003	4/3/2007	10/402122	US	System And Method For Verifying HDL Events For Observability
82100471	Granted	6946877	12/12/2003	38615	10/735415	US	Circuit And Associated Methodology
82100537	Granted	6954706	8/20/2003	10/11/2005	10/644376	US	METHOD FOR MEASURING INTEGRATED CIRCUIT PROCESSOR POWER DEMAND AND ASSOCIATED SYSTEM
82100846	Granted	6866540	4/18/2003	38426	10/418924	US	INDICIA-EQUIPPED ACTUATOR ASSEMBLY
82104152	Granted	6802680	1/20/2004	38272	10/760737	US	Torque Limiting Fastener
82105283	Granted	6868899	8/25/2003	38433	10/649519	US	Variable Height Thermal Interface
82105526	Granted	7565361	4/12/2005	7/21/2009	11/103567	US	Method And System For Lexical Mapping Between Document Sets Having A Common Topic
82106963	Granted	7305497	5/24/2004	12/4/2007	10/852984	US	PERFORMING RESOURCE ANALYSIS ON ONE OR MORE CARDS OF A COMPUTER SYSTEM WHEREIN A PLURALITY OF SEVERITY LEVELS ARE ASSIGNED BASED ON A PREDETERMINED CRITERIA
82110461	Granted	6728958	7/31/1998	4/27/2004	09/127659	US	VOLATILE RESOURCE MANAGER WITH PRE-PREPARE NOTIFICATION
82110584	Granted	6082695	8/14/1998	36711	09/134745	US	MOUNTING APPARATUS
82117205	Granted	6710675	10/3/2001	3/23/2004	09/970550	US	TRANSMISSION LINE PARASITIC ELEMENT DISCONTINUITY CANCELLATION
82117700	Granted	6625730	3/31/2000	9/23/2003	09/540812	US	A SYSTEM FOR VALIDATING A BIOS PROGRAM AND MEMORY COUPLED THEREWITH BY USING A BOOT BLOCK PROGRAM HAVING A VALIDATION TOUTINE
82118078	Granted	6681295	8/31/2000	1/20/2004	09/652451	US	FAST LANE PREFETCHING
82118330	Granted	6671652	12/26/2001	12/30/2003	10/036889	US	CLOCK SKEW MEASUREMENT CIRCUIT ON A MICROPROCESSOR DIE
82118639	Granted	6774904	1/4/2002	8/10/2004	10/037984	US	Operating System Independent Method And Apparatus For Graphical Remote Access Having Improved Latency
82119635	Granted	7240106	4/25/2001	7/3/2007	09/842572	US	System And Method For Remote Discovery And Configuration Of A Network Device
82120136	Granted	6792429	12/19/2001	9/14/2004	10/027407	US	METHOD FOR FAULT TOLERANT MODIFICATION OF DATA REPRESENTATION IN A LARGE DATABASE
82120262	Granted	6650537	10/31/2001	11/18/2003	09/999575	US	Low Profile DC Distribution Module For A Power Supply Unit
82120388	Granted	6832286	6/25/2002	12/14/2004	10/179081	US	Memory Auto-Precharge
82120577	Granted	6666340	12/18/2001	12/23/2003	10/029767	US	UNIVERSAL RACK RAIL

PATENT
REEL: 038498 FRAME: 0586

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82120760	Granted	7089188	3/27/2002	8/8/2006	10/108534	US	METHOD TO EXPAND INPUTS FOR WORD OR DOCUMENT SEARCHING
82121699	Granted	6898060	5/27/2003	5/24/2005	10/445617	US	Gated Diode Overvoltage Protection
82122008	Granted	7051175	1/17/2003	5/23/2006	10/346793	US	Techniques For Improved Transaction Processing
82128002	Granted	6205507	6/13/1996	3/20/2001	08/662480	US	MEMORY COHERENCY IN A PROCESSOR-TO-BUS CYCLE IN A MULTI-PROCESSOR SYSTEM
82128380	Granted	6055590	6/5/1996	4/25/2000	08/658533	US	BRIDGE CIRCUIT COMPRISING INDEPENDENT TRANSACTION BUFFERS WITH CONTROL LOGIC ADAPTED TO STORE OVERFLOW DATA IN SECOND BUFFER WHEN TRANSACTION SIZE EXCEEDS THE FIRST BUFFER SIZE
82128881	Granted	5987546	4/21/1998	11/16/1999	09/063707	US	MULTIPLE LONG BUS ARCHITECTURE HAVING A NON-TERMINAL TERMINATION ARRANGEMENT
82128938	Granted	6041377	2/2/1999	3/21/2000	09/243235	US	METHOD AND APPARATUS FOR DISTRIBUTING INTERRUPTS IN A SCALABLE SYMMETRIC MULTIPROCESSOR SYSTEM WITHOUT CHANGING THE BUS WIDTH OR BUS PROTOCOL
82129940	Granted	5887163	4/4/1997	3/23/1999	08/834495	US	METHOD AND APPARATUS FOR PROVIDING DUAL BOOTING CAPABILITIES TO A COMPUTER SYSTEM
82130873	Granted	6018810	12/12/1997	1/25/2000	08/989450	US	FAULT-TOLERANT INTERCONNECTION MEANS IN A COMPUTER SYSTEM
82131686	Granted	6725226	6/18/2001	4/20/2004	09/883631	US	COMPUTER SYSTEM USING A QUEUING SYSTEM AND METHOD FOR MANAGING A QUEUE AND HETEROGENEOUS DATA STRUCTURES
82133123	Granted	6738857	9/9/2002	5/18/2004	10/237422	US	COMBINED SINGLE-ENDED/DIFFERENTIAL DATA BUS CONNECTOR
82133315	Granted	6647415	9/30/1999	11/11/2003	09/409485	US	DISK STORAGE WITH TRANSPARENT OVERFLOW TO NETWORK STORAGE
82133435	Granted	6886109	5/18/2001	4/26/2005	09/860266	US	Method And Apparatus For Expediting System Initialization
82133810	Granted	6886065	9/29/2001	4/26/2005	09/967613	US	Improving Signal Integrity In Differential Signal Systems
82133873	Granted	5835297	12/31/1996	11/10/1998	08/778389	US	DETECTING DISKETTE INSERTION
82134749	Granted	5991760	6/26/1997	11/23/1999	08/883240	US	METHOD AND APPARATUS FOR MODIFYING COPIES OF REMOTELY STORED DOCUMENTS USING A WEB BROWSER
82134869	Granted	5892973	11/15/1996	4/6/1999	08/751536	US	SYSTEM AND METHOD FOR DETERMINING ATTRIBUTES AND COUPLING CHARACTERISTICS OF COMPONENTS BY COMPARATIVELY OBSERVING PROVIDED REFERENCE SIGNAL
82136057	Granted	5943492	12/5/1997	8/24/1999	08/985597	US	APPARATUS AND METHOD FOR GENERATING EXTERNAL INTERFACE SIGNALS IN A MICROPROCESSOR
82136309	Granted	6076176	3/19/1998	6/13/2000	09/044275	US	ENCODING OF FAILING BIT ADDRESSES TO FACILITATE MULTI-BIT FAILURE DETECT USING A WIRED-OR SCHEME

PATENT
REEL: 038498 FRAME: 0587

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82136558	Granted	6226734	6/10/1998	5/1/2001	09/090027	US	METHOD AND APPARATUS FOR PROCESSOR MIGRATION FROM DIFFERENT PROCESSOR STATES IN A MULTI-PROCESSOR COMPUTER SYSTEM
82136681	Granted	7093105	2/13/2004	8/15/2006	10/779503	US	METHOD AND APPARATUS FOR DETERMINING AVAILABILITY OF A QUEUE TO WHICH A PROGRAM STEP IS ISSUED OUT OF PROGRAM ORDER
82136930	Granted	6665304	12/31/1998	12/16/2003	09/224372	US	METHOD AND APPARATUS FOR PROVIDING AN INTEGRATED CLUSTER ALIAS ADDRESS
82164152	Granted	5781201	5/1/1996	7/14/1998	08/642149	US	METHOD FOR PROVIDING IMPROVED GRAPHICS PERFORMANCE THROUGH ATYPICAL PIXEL STORAGE IN VIDEO MEMORY
82164155	Granted	5664221	11/14/1995	9/2/1997	08/557473	US	A SYSTEM FOR RECONFIGURING ADDRESSES OF SCSI DEVICES VIA A DEVICE ADDRESS BUS INDEPENDENT OF THE SCSI BUS
82164464	Granted	5659739	10/2/1995	8/19/1997	08/538113	US	SKIP LIST DATA STRUCTURE ENHANCEMENTS
82164530	Granted	5897400	6/30/1997	4/27/1999	08/884986	US	TOWER BUILDING BLOCK SYSTEM
82165088	Granted	6101276	6/21/1996	8/8/2000	08/670199	US	METHOD AND APPARATUS FOR PERFORMING TWO PASS QUALITY VIDEO COMPRESSION THROUGH PIPELINING AND BUFFER MANAGEMENT
82165091	Granted	6760478	7/10/2000	7/6/2004	09/613359	US	METHOD AND APPARATUS FOR PERFORMING QUALITY VIDEO COMPRESSION AND MOTION ESTIMATION
82165154	Granted	5966292	6/30/1997	10/12/1999	08/884938	US	POWER BUS SYSTEM IN A TOWER BUILDING BLOCK SYSTEM
82165460	Granted	5835961	5/3/1996	11/10/1998	08/642730	US	SYSTEM FOR NON-CURRENT PAGE TABLE STRUCTURE ACCESS
82165526	Granted	6046984	4/11/1997	4/4/2000	08/827868	US	PRUNING OF SHORT PATHS IN STATIC TIMING VERIFIER
82166336	Granted	6664883	6/11/2002	12/16/2003	10/167944	US	APPARATUS AND METHOD FOR PCB WINDING PLANAR MAGNETIC DEVICES
82167335	Granted	6614764	2/1/2000	9/2/2003	09/496294	US	BRIDGED NETWORK TOPOLOGY ACQUISITION
82168961	Granted	7165187	6/6/2003	1/16/2007	10/456863	US	Batch based distributed data redundancy
82169768	Granted	8046279	1/14/2004	10/25/2011	10/757323	US	System And Method For Comparing Results Of Multiple Lot Auctions Using Different Sequencing Rules
82170770	Granted	7608194	7/6/2007	10/27/2009	11/774397	US	Photonic Structures, Devices, And Methods
82174016	Granted	7200734	7/31/2004	4/3/2007	10/909786	US	Operating-system-transparent Distributed Memory
82178510	Granted	7228460	1/23/2004	6/5/2007	10/764198	US	MULTI-STATE STATUS REPORTING FOR HIGH-AVAILABILITY CLUSTER NODES
82179887	Granted	7571163	7/13/2004	8/4/2009	10/890965	US	Method For Sorting A Data Structure
82181945	Granted	7376794	1/13/2004	5/20/2008	10/756636	US	Coherent Signal In A Multi-processor System
82181948	Granted	7406565	1/13/2004	7/29/2008	10/756637	US	Multi-processor Systems And Methods For Backup For Non-coherent Speculative Fills

PATENT
REEL: 038498 FRAME: 0588

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82182317	Granted	7330940	2/2/2005	2/12/2008	11/049024	US	Method And System For Cache Utilization By Limiting Prefetch Requests
82187813	Granted	7416128	3/22/2005	8/26/2008	11/086123	US	Methods And Systems For Determining The Position Of A Hand-held Object From The Acceleration Of The Hand-held Object
82190372	Granted	7275183	4/30/2004	9/25/2007	10/836538	US	Method Of Restoring Processes Within Process Domain
82191311	Granted	7779257	12/6/2005	8/17/2010	11/294604	US	SYSTEM AND METHOD FOR CONSTRAINT RESOLUTION
82192001	Granted	7748005	9/10/2004	6/29/2010	10/938961	US	System And Method For Allocating A Plurality Of Resources Between A Plurality Of Computing Domains
82196303	Granted	7275122	4/28/2005	9/25/2007	11/117881	US	Method And System For Maintaining A Desired Service Level For A Processor Receiving Excessive Interrupts
82197428	Granted	7440226	10/14/2005	10/21/2008	11/250657	US	Cartridge Loading Devices
82200926	Granted	7995339	11/1/2004	8/9/2011	10/976786	US	Control Of Vent Tilles Correlated With A Rack
82205042	Granted	7480424	9/19/2005	1/20/2009	11/230159	US	Method And Apparatus For Modifying An Electromagnetic Radiation Beam
82206731	Granted	7394587	1/28/2005	7/1/2008	11/046587	US	APPARATUS HAVING A PHOTONIC CRYSTAL
82206854	Granted	7409524	8/17/2005	8/5/2008	11/205622	US	System And Method For Responding To TLB Misses
82208732	Granted	7495552	4/15/2005	2/24/2009	11/107127	US	Prescription-customized Medical Hardware
82210976	Granted	7651871	11/30/2005	1/26/2010	11/290879	US	Device For Forming Magnetic Well For Nanoparticles
82212287	Granted	7558724	4/19/2005	7/7/2009	11/109172	US	Operation Region Describing A Virtual Device
82214096	Granted	7472292	10/3/2005	12/30/2008	11/242686	US	System And Method For Throttling Memory Power Consumption Based On Status Of Cover Switch Of A Computer System
82216532	Granted	7652911	12/10/2008	1/26/2010	12/331642	US	Nanoscale Shift Register And Signal Demultiplexing Using Microscale/nanoscale Shift Registers
82220339	Granted	8390086	7/19/2010	3/5/2013	12/815590	US	A SOLAR CELL EMPLOYING A NANOWIRE
82232705	Granted	6810494	2/24/2003	10/26/2004	10/372600	US	SOFTWARE SYSTEM AND METHODS FOR TESTING TRANSACTIONAL SERVERS
82240946	Granted	7567097	9/29/2007	7/28/2009	11/906010	US	PRE-DRIVER CIRCUIT AND APPARATUS USING SAME
82252055	Granted	6721752	10/31/1997	4/13/2004	08/962428	US	Computer-Based System and Method for Inferring a Four-Digit Calendar Year from a Date Expressed in a Format Having a Two-Digit Calendar Year
82252616	Granted	5790780	7/16/1996	8/4/1998	08/682974	US	Analysis Of Failures In A Computing Environment
82253120	Granted	6687873	3/9/2000	2/3/2004	09/522056	US	METHOD AND SYSTEM FOR REPORTING XML DATA FROM A LEGACY COMPUTER SYSTEM
82254614	Granted	7469285	6/1/2007	12/23/2008	11/757209	US	Generation Of Computer Resource Utilization Data Per Computer Application
82254743	Granted	6721652	11/22/2002	4/13/2004	10/301994	US	IMPLEMENTING GEO-FENCING ON MOBILE DEVICES
82261421	Granted	8109151	1/26/2010	2/7/2012	12/694260	US	FLOW SENSING SYSTEMS AND METHODS
82265918	Granted	5793994	1/31/1996	8/11/1998	08/594868	US	Synchronous Event Posting By A High Throughput Bus

PATENT
REEL: 038498 FRAME: 0589

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82266041	Granted	5649189	11/29/1995	7/15/1997	08/564630	US	Method and apparatus for single pass data encoding of binary words using a stack for writing in reverse order
82266914	Granted	5907566	5/29/1997	5/25/1999	08/865246	US	Continuous Byte-Stream Encoder/decoder Using Frequency Increase and Cyclic Redundancy Check
82267475	Granted	6188669	6/17/1997	2/13/2001	08/877531	US	Apparatus For Statistical Multiplexing And Flow Control Of Digital Subscriber Loop Modems
82268228	Granted	6115379	9/11/1997	9/5/2000	08/927914	US	UNICAST, MULTICAST, AND BROADCAST METHOD AND APPARATUS
82268600	Granted	6662135	12/9/1998	12/9/2003	09/207781	US	Method And Apparatus For Reflective Mixer Testing Of A Cable Modem
82268729	Granted	6331987	5/27/1998	12/18/2001	09/085586	US	METHOD AND SYSTEM FOR BUNDLING DATA IN A DATA-OVER-CABLE SYSTEM
82268852	Granted	6201792	5/14/1998	3/13/2001	09/079003	US	BACKPRESSURE RESPONSIVE MULTICAST QUEUE
82268915	Granted	6697862	5/21/1999	2/24/2004	09/316488	US	SYSTEM AND METHOD FOR NETWORK ADDRESS MAINTENANCE USING DYNAMIC HOST CONFIGURATION PROTOCOL MESSAGES IN A DATA-OVER-CABLE SYSTEM
82269410	Granted	6674745	12/31/1998	1/6/2004	09/223856	US	Method and System for Mapping Phone Numbers to IP Addresses
82269662	Granted	6728309	1/14/2000	4/27/2004	09/483440	US	METHOD AND APPARATUS FOR HIGH SPEED DATA TRANSMISSION OVER A FOUR-WIRE SUBSCRIBER LINE.
82269665	Granted	6700871	5/4/1999	3/2/2004	09/305133	US	Increased Throughput Across Data Network Interface by Dropping Redundant Packets
82269851	Granted	6704325	4/6/1999	3/9/2004	09/287229	US	Method To Recognize Streaming Memory Aligned And Non-Memory Aligned Data Patterns With Optimal Hardware Reuse
82270658	Granted	6829239	5/9/2003	12/7/2004	10/434898	US	APPARATUS AND METHODS FOR DETERMINING THE CORRECT WORKSTATION WITHIN A LAN FOR A LAN MODEM TO ROUTE A PACKET
82270850	Granted	6633542	12/29/1999	10/14/2003	09/474686	US	Method Of Establishing A Flow In An ATM Based MPOA Network
82271033	Granted	6665362	9/14/2000	12/16/2003	09/660976	US	Digital Receive Phase Lock Loop With Phase-Directed Sample Selection
82271039	Granted	6633628	1/5/2001	10/14/2003	09/755765	US	Apparatus and Method for Selecting A Supported Signal Path For A Transceiver
82271411	Granted	6622018	4/24/2000	9/16/2003	09/558413	US	Portable Device Control Console With Wireless Connection
82271537	Granted	6763061	7/31/2000	7/13/2004	09/628842	US	FREQUENCY DOMAIN TECHNIQUE FOR NARROWBAND NOISE CANCELLATION IN DMT RECEIVERS
82271597	Granted	6665275	12/3/1999	12/16/2003	09/453720	US	Network Device Including Automatic Detection Of Duplex Mismatch

PATENT
REEL: 038498 FRAME: 0590

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82271789	Granted	6788782	1/20/2000	9/7/2004	09/488340	US	Method and Apparatus for Switching Between Multiple Communication Lines
82271909	Granted	6865673	3/21/2000	3/8/2005	09/532050	US	METHOD FOR SECURE INSTALLATION OF DEVICE IN PACKET BASED COMMUNICATION NETWORK
82272224	Granted	7359326	2/5/2003	4/15/2008	10/358872	US	METHOD FOR SPLITTING DATA AND ACKNOWLEDGEMENTS IN A TCP SESSION
82272470	Granted	6697464	9/19/2000	2/24/2004	09/665531	US	System and Method For Interfacing A Modem's Digital Interface To A PBX Telephone
82272536	Granted	6862286	5/8/2000	3/1/2005	09/566563	US	Tracking Dynamic Addresses on a Network
82273100	Granted	6735297	1/12/2001	5/11/2004	09/760520	US	SYSTEM FOR MAINTAINING PBX LICENSE KEY INFORMATION IN THE EVENT OF A HARDWARE FAILURE REDUCING MTTR
82273160	Granted	6839360	2/20/2001	1/4/2005	09/785271	US	FIFO Storage Including Pointer Misalignment Detection
82273349	Granted	6718493	5/17/2001	4/6/2004	09/859867	US	Method and Apparatus for Selection of ARQ Parameters and Estimation of Improved Communications
82275344	Granted	5864681	8/9/1996	1/26/1999	08/689456	US	VIDEO ENCODER/DECODER SYSTEM
82948295	Granted	6792419	10/30/2000	9/14/2004	09/703538	US	SYSTEM AND METHOD FOR RANKING HYPERLINKED DOCUMENTS BASED ON A STOCHASTIC BACKOFF PROCESSES
82002767	Granted	6708260	3/14/2002	3/16/2004	10/098049	US	Managing Data In A Queue
82116392	Granted	5889957	6/7/1995	3/30/1999	08/472227	US	METHOD AND APPARATUS FOR CONTEXT SENSITIVE PATHSEND
81989783	Published		10/19/2006		11/583504	US	Autobiographical And Other Data Collection System
81997523	Granted	7493280	7/10/2001	2/17/2009	09/902928	US	Method And System For Setting An Optimal Reserve Price For An Auction
81998210	Granted	7536338	9/10/2001	5/19/2009	09/955264	US	METHOD AND SYSTEM FOR AUTOMATED BID ADVICE FOR AUCTIONS
82004141	Granted	7046247	5/15/2002	5/16/2006	10/146974	US	METHOD FOR VISUALIZING GRAPHICAL DATA SETS HAVING A NON-UNIFORM GRAPHICAL DENSITY FOR DISPLAY
82020251	Granted	6003079	2/27/1997	12/14/1999	08/807073	US	SYSTEM AND METHOD FOR CONTINUOUSLY MEASURING QUALITY OF SERVICE IN A FEDERATED APPLICATION ENVIRONMENT
82040534	Granted	6189033	7/16/1998	2/13/2001	09/116716	US	METHOD AND SYSTEM FOR PROVIDING PERFORMANCE GUARNTEES FOR A DATA SERVICE SYSTEM OF A DATA ACCESS NETWORK SYSTEM
82046531	Granted	8200837	4/26/1999	6/12/2012	09/299684	US	METHOD AND SYSTEM FOR MAINTAINING A CONTENT SERVER AT SAFE LOAD CONDTIONS
82050026	Granted	7181678	1/29/2004	2/20/2007	10/767151	US	Document Clustering Method And System
82058708	Granted	7069434	6/13/2000	6/27/2006	09/592322	US	Secure Data Transfer Method And System
82059020	Granted	6584433	10/4/2000	6/24/2003	09/684719	US	Harmonic Average Based Clustering Method And System

PATENT
REEL: 038498 FRAME: 0591

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0592

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82084676	Granted	7150014	10/4/2002	12/12/2006	10/264468	US	AUTOMATICALLY DEPLOYING SOFTWARE PACKAGES USED IN COMPUTER SYSTEMS
82099352	Published		10/30/2003		10/699359	US	Method And Apparatus For Representing Data Available In A Peer-to-peer Network Using Bloom-filters
82171643	Granted	7640217	4/8/2004	12/29/2009	10/822066	US	Identifying Exceptional Managed Systems
82172204	Granted	8214461	11/23/2004	7/3/2012	10/999639	US	Method Of Processing Request By Server Computer System
82173455	Granted	7539690	10/27/2003	5/26/2009	10/694367	US	Data Mining Method And System Using Regression Clustering
82173518	Granted	7027950	11/19/2003	4/11/2006	10/716855	US	Regression Clustering And Classification
82188563	Granted	7593903	12/3/2004	9/22/2009	11/004317	US	METHOD AND MEDIUM FOR FEATURE SELECTION OF PARTIALLY LABELED DATA
82188998	Application		12/16/2004		11/013142	US	Automatically Determining A System Workflow
82190933	Granted	7269689	6/17/2004	9/11/2007	10/870783	US	System And Method For Sharing Storage Resources Between Multiple Files
82197242	Allowed		4/28/2006		11/414481	US	Method And System For Data Retention
82197245	Granted	7428486	1/31/2005	9/23/2008	11/047163	US	SYSTEM AND METHOD FOR GENERATING PROCESS SIMULATION PARAMETERS
82200299	Granted	7363306	1/27/2005	4/22/2008	11/045563	US	METHOD AND SYSTEM FOR GRAPHICAL REPRESENTATION
82208918	Granted	9047290	4/29/2005	6/2/2015	11/118786	US	Computing A Quantification Measure Associated With Cases In A Category
82212722	Granted	9021094	4/28/2005	4/28/2015	11/116728	US	Allocation Of Resources For Tiers Of Multi-tiered System Based On Selecting Items From Respective Sets
82213970	Granted	7797282	9/29/2005	9/14/2010	11/241082	US	System And Method For Modifying A Training Set
82213976	Granted	9152475	9/29/2005	10/6/2015	11/239719	US	Notifying Listeners Of Change Events
82220342	Granted	7558766	9/29/2006	7/7/2009	11/536643	US	Classification Using Enhanced Feature Sets
82225025	Granted	8021163	10/31/2006	9/20/2011	11/555001	US	Skill-set Identification
82226150	Granted	8963969	1/31/2007	2/24/2015	11/700429	US	Providing An Automated Visualization Of A Collection Of Data Values Divided Into A Number Of Bins Depending Upon A Change Feature Of The Data Values
82229141	Granted	7760203	4/30/2007	7/20/2010	11/742512	US	GRAPHIC COLOR-PIXEL-BASED VISUAL-ANALYTIC REPRESENTATIONS FOR DATASETS
82238699	Published		9/30/2008		12/242646	US	System and Method for Future Period Forecasting
82239569	Published		11/8/2007		12/741204	US	Navigational Ranking For Focused Crawling
82240070	Granted	8688723	9/30/2008	4/1/2014	12/241305	US	Methods And Apparatus Using Range Queries For Multi-dimensional Data In A Database
82242758	Granted	8627330	10/22/2008	1/7/2014	12/256361	US	Managing A Workload In A Database
82248245	Granted	8489633	3/6/2009	7/16/2013	12/399843	US	Correlated Query Process (CQP) And Peer-to-peer (P2P) Execution
82248308	Published		3/10/2009		12/401503	US	Progress Analyzer For Database Queries
82248311	Granted	8572039	11/30/2009	10/29/2013	12/627935	US	Focused Backup Scanning

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82248497	Granted	9043353	10/14/2008	5/26/2015	12/251220	US	QUERY STREAM EXECUTION USING PRIORITY GRADIENT MULTIPROGRAMMING
82248500	Granted	8365174	10/14/2008	1/29/2013	12/251272	US	MIXED WORKLOAD SCHEDULER
82248560	Granted	8572068	2/2/2009	10/29/2013	12/364086	US	Evaluation Of Set Of Represenative Query Performance Using Robustness Mapping
82248626	Published		2/2/2009		12/364170	US	Database System Testing Using Robustness Maps
82250810	Granted	8176080	3/6/2009	5/8/2012	12/399675	US	Densensitizing Character Strings
82258112	Allowed		8/10/2009		12/538405	US	Method And System For Characterizing Web Content
82258175	Granted	8185535	10/30/2009	5/22/2012	12/609327	US	Methods And Systems For Determining Unknowns In Collaborative Filtering
82259609	Published		1/13/2010		12/686615	US	Data Value Replacement In A Database
82260857	Published		4/27/2010		12/768088	US	COLUMN ORIENTED STORAGE IN A ROW ORIENTED DATABASE MANAGEMENT SYSTEM
82261049	Granted	8719007	9/27/2010	5/6/2014	12/891150	US	Determining Offer Terms From Text
82262045	Granted	8799310	7/23/2010	8/5/2014	12/842434	US	Method And System For Processing A Uniform Resource Locator
82262543	Published		7/13/2010		12/835044	US	Generating Machine-understandable Representations Of Content
82263608	Granted	9158815	10/19/2010	10/13/2015	12/907325	US	ESTIMATE A NUMBER A UNIQUE VALUES IN A LIST
82264604	Granted	8620985	10/14/2010	12/31/2013	12/904829	US	METHOD, SYSTEM, AND PRODUCT FOR PERFORMING UNIFORMLY FINE-GRAIN DATA PARALLEL COMPUTING
82265291	Published		1/14/2011		13/007487	US	SYSTEMS AND METHODS OF BLOCK COMPUTATION
82275530	Granted	8631017	12/16/2010	1/14/2014	12/970262	US	Collaborative Filtering With Hashing
82613056	Published		5/3/2011		13/100073	US	Processing Notifications
82617324	Published		7/8/2011		13/178994	US	HASH JOIN AND HASH AGGREGATION INTEGRATION SYSTEM
82618452	Published		3/31/2011		13/077460	US	Merge Optimization System
82663149	Granted	8917872	7/6/2011	12/23/2014	13/177228	US	ENCRYPTION KEY STORAGE WITH KEY FRAGMENT STORES (as amended)
82850130	Published		5/22/2012		13/477789	US	TREE DATA STRUCTURE
82892257	Published		1/25/2012		13/357850	US	DETERMINING WHETHER TO LAUNCH A PARTICULAR OFFERING
82892271	Published		3/8/2012		13/415814	US	EVALUATING EMAIL INFORMATION AND AGGREGATING EVALUATION RESULTS
82901929	Published		5/31/2012		13/484396	US	SEARCHING BASED ON AN IDENTIFIER OF A SEARCHER
82929174	Granted	9087143	3/30/2012	7/21/2015	13/435597	US	OVERLAYING TRANSPARENCY IMAGES INCLUDING PIXELS CORRESPONDING TO DIFFERENT HEIRARCHICAL LEVELS OVER A GEOGRAPHIC MAP
82944090	Published		2/10/2012		13/370938	US	Presenting Streaming Media For An Event
82962988	Published		4/30/2012		13/460541	US	Identifying News Events that Cause a Shift in Sentiment

PATENT
REEL: 038498 FRAME: 0593

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82963111	Published		4/26/2012		13/457444	US	In-Database Parallel Analytics
82963529	Published		6/21/2012		13/528972	US	Tree-Based Regression
83013831	Published		7/31/2012		13/563198	US	OPEN STATION CANONICAL OPERATOR FOR DATA STREAM PROCESSING
83014412	Granted	8924316	7/31/2012	12/30/2014	13/563690	US	MULTICLASS CLASSIFICATION OF POINTS
83019112	Allowed		6/1/2012		29/423605	US	A COMPUTING DEVICE DISPLAYING A COMPUTER-GENERATED ICON REPRESENTING A COLLECTION OF RESOURCES (As Amended)
83106288	Published		11/14/2012		13/676957	US	SUPPLIER QUANTITY SELECTION
83108369	Granted	9152679	1/31/2013	42283	13/755814	US	DISPLAYING RECOMMENDED ENTITIES IN A RELEVANCE MAP
83138840	Published		1/31/2013		13/755633	US	BUILDING A SEMANTICS GRAPH FOR AN ENTERPRISE COMMUNICATION NETWORK
83139109	Published		1/31/2013		13/755051	US	AMPLITUDE AND FREQUENCY-BASED DETERMINATION
83163022	Published		7/22/2010		13/809683	US	Context-based Item Bookmarking
83186617	Granted	D735732	3/12/2013	8/4/2015	29/448460	US	Display Screen with Graphical User Interface (as amended)
83199541	Published		6/6/2013		13/912090	US	Visual Analytics of Spatial Time Series Data Using A Pixel Calendar Tree
83200274	Published		2/28/2013		13/779826	US	OPTIMIZING AND MANAGING EXECUTION OF HYBRID FLOWS
83204639	Published		2/27/2013		13/778455	US	Determining Explanatoriness of a Segment
83209674	Published		4/30/2013		13/873889	US	RESENDING MESSAGES
83225973	Published		10/19/2010		13/878481	US	Managing Content From Structured And Unstructured Data Sources
83862634	Application		3/19/2014		14/219209	US	User Defined Functions Including Requests for Analytics by External Analytic Engines
83996545	Published		4/27/2012		14/372712	US	Similarity Score Lookup and Representation
84122559	Published		6/29/2012		14/410005	US	CAPACITY PLANNING SYSTEM
84164202	Application		9/12/2012		14/421777	US	METADATA TREE WITH KEY ROTATION INFORMATION
84208501	Published		9/30/2012		14/432290	US	ELECTRONIC HEALTH RECORD SYSTEM WITH CUSTOMIZABLE COMPLIANCE POLICIES
84237933	Application		10/31/2012		14/439832	US	CASE MANAGEMENT USING ACTIVE ENTITIES IN A SOCIAL NETWORK
84264445	Application		11/29/2012		14/647138	US	IMAGE ANALYSIS
82064201	Granted	7634656	9/12/2002	40162	10/241894	US	Method And Apparatus For Identifying A Voice Caller
82065014	Granted	6873270	10/30/2002	3/29/2005	10/283503	US	Data Storage And Analysis
82066013	Granted	7076655	6/18/2002	38909	10/175183	US	Multiple Trusted Computing Environments With Verifiable Environment Identities

PATENT
REEL: 038498 FRAME: 0594

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82069010	Granted	6978379	5/26/2000	12/20/2005	09/578503	US	Configuring Computer Systems
82069631	Granted	7302698	9/19/2000	11/27/2007	09/728827	US	Operation Of Trusted State In Computing Platform
82097291	Granted	8230497	11/4/2002	7/24/2012	10/287125	US	A Method Of Identifying Software Vulnerabilities On A Computer System
82101974	Granted	8392995	1/11/2005	3/5/2013	11/033182	US	Network Management
82198556	Granted	8379538	6/22/2005	2/19/2013	11/158756	US	MODEL-DRIVEN MONITORING ARCHITECTURE
82203920	Allowed		10/28/2005		11/718122	US	Virtual Computing Infrastructure
82206668	Granted	9083748	12/14/2005	7/14/2015	11/302637	US	Modelling Network To Assess Security Properties
82237013	Published		10/16/2008		12/252395	US	System And Method For Sizing Enterprise Application Systems
82242317	Granted	8170214	10/1/2008	5/1/2012	12/286854	US	QKD Transmitter And Transmission Method
82243193	Allowed		10/15/2008		12/252053	US	Capacity Planning Of Multi-tiered Applications From Application Logs
82276154	Published		10/29/2010		12/916277	US	METHOD AND SYSTEM FOR ANALYZING AN ENVIRONMENT
82277090	Granted	7143316	4/8/2003	39049	10/409239	US	Fault Diagnosis In A Network
82577075	Granted	8781334	10/26/2009	7/15/2014	13/319372	US	Quantum Repeater And System And Method For Creating Extended Entanglements
82820538	Granted	8650637	8/24/2011	2/11/2014	13/217010	US	NETWORK SECURITY RISK ASSESSMENT
82853044	Allowed		10/26/2009		13/387111	US	Method And Apparatus For Selectively Routing Entanglement Building
82891945	Granted	9111229	10/26/2009	42234	13/378383	US	Quantum Repeater And System And Method For Creating Extended Entanglements
82901497	Granted	9152640	5/10/2012	10/6/2015	13/468823	US	DETERMINING FILE ALLOCATION BASED ON FILE OPERATIONS
82934043	Granted	8370610	2/24/2012	2/5/2013	13/405098	US	Remote Configuration Of Computing Platforms
83093244	Granted	8990900	6/23/2010	3/24/2015	13/805160	US	Authorization Control
83138425	Application		1/31/2013		13/754974	US	IDENTIFYING PARTICIPANTS FOR COLLABORATION IN A THREAT EXCHANGE COMMUNITY
83728691	Application		6/16/2011		14/118847	US	System and Method for Policy Generation
83995343	Published		4/30/2012		14/371709	US	BLOCK LEVEL STORAGE
84262401	Application		5/22/2015		14/719847	US	SECURITY MODELLING FOR INFORMATION TECHNOLOGY SYSTEMS
90022883	Application		2/28/2013		14/770261	US	RESOURCE REFERENCE CLASSIFICATION
82133936	Granted	7451388	9/8/1999	39763	09/392170	US	RANKING SEARCH ENGINE RESULTS
82206671	Granted	8781977	3/29/2005	41835	11/092247	US	System And Method Of Pricing Resources
82250867	Granted	8296253	6/15/2009	10/23/2012	12/484938	US	Managing Online Content Based On Its Predicted Popularity
82930651	Granted	8819698	4/2/2012	8/26/2014	13/437703	US	CROSS-PLATFORM WEB-BASED NATIVE DEVICE FEATURE ACCESS

PATENT
REEL: 038498 FRAME: 0595

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83141127	Application		1/14/2013		29/443192	US	DOCUMENT LOCATOR USER INTERFACE FOR PRESENTING DOCUMENTS TO A USER BASED ON TOPICS AND COLLECTIVE OPINIONS EXPRESSED IN THE DOCUMENTS
84027637	Application		9/16/2014		14/487976	US	CONTROVERSY DETECTOR
81979793	Granted	8069157	4/17/2001	11/29/2011	09/836952	US	System And Method For Providing Context-aware Computer Management Using Smart Identification Badges
82171142	Granted	7945648	10/27/2003	40680	10/695259	US	METHODS AND SYSTEMS FOR DYNAMICALLY CONFIGURING A NETWORK COMPONENT TO REROUTE MEDIA STREAMS
82186001	Granted	7922919	10/3/2007	4/12/2011	11/906886	US	Crossbar-array Designs And Wire Addressing Methods That Tolerate Misalignment Of Electrical Components At Wire Overlap Points
82189436	Granted	7358614	3/8/2005	39553	11/079763	US	Antisymmetric Nanowire Crossbars
82201925	Granted	7405462	1/31/2006	39658	11/343304	US	FPGA Architecture At Conventional And Submicron Scales
82216535	Granted	7436209	10/30/2006	39735	11/590491	US	Nanoscale Electronic Latch
82219595	Granted	7517794	10/21/2005	4/14/2009	11/256513	US	Method For Fabricating Nanoscale Features
82240442	Granted	7899091	10/15/2008	40603	12/288035	US	Defect-tolerant Demultiplexers Based On Threshold Logic
82248875	Granted	8081850	4/30/2009	40897	12/433850	US	DEVICE WITH TUNABLE PLASMON RESONANCE
82258361	Granted	8283649	7/28/2009	41191	12/510753	US	MEMRISTOR WITH A NON-PLANAR SUBSTRATE
82260296	Granted	8384401	3/31/2010	41331	12/751739	US	Fast Time-tagged Event Detection Using Resistive Switching Devices
82260359	Granted	8111494	1/28/2010	2/7/2012	12/695995	US	MEMRISTOR-PROTECTION INTEGRATED CIRCUIT AND METHOD FOR PROTECTION OF A MEMRISTOR DURING SWITCHING
82261487	Granted	8023307	4/30/2010	40806	12/771158	US	PERIPHERAL SIGNAL HANDLING IN EXTENSIBLE THREE DIMENSIONAL CIRCUITS
82261922	Granted	8467253	5/24/2010	41443	12/786073	US	READING MEMORY ELEMENTS WITHIN A CROSSBAR ARRAY
82262105	Granted	8546785	3/31/2010	41548	12/751977	US	MEMRISTIVE DEVICE
82262108	Granted	8203171	4/5/2010	41079	12/754300	US	DEFECTIVE GRAPHENE-BASED MEMRISTOR
82263854	Allowed		10/28/2010		12/914935	US	MEMRISTIVE DEVICES WITH LAYERED JUNCTIONS AND METHODS FOR FABRICATING THE SAME
82678323	Granted	8927346	12/31/2008	1/6/2015	13/121916	US	Electrically And/or Thermally Actuated Device
82747643	Granted	8891283	1/5/2009	41961	13/130820	US	Memristive Device Based On Current Modulation By Trapped Charges
82756399	Granted	8711594	8/18/2011	41758	13/212428	US	Asymmetric Switching Rectifier
82775051	Granted	8830727	10/21/2011	9/9/2014	13/278581	US	Multi-level Memory Cell with Continuously Tunable Switching

PATENT
REEL: 038498 FRAME: 0596

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82837232	Published		3/27/2009		13/255158	US	SWITCHABLE JUNCTION WITH INTRINSIC DIODE
82853050	Granted	8530880	7/27/2009	41527	13/259168	US	Reconfigurable Multilayer Circuit
82853070	Allowed		7/28/2009		13/322291	US	MEMRISTORS WITH ASYMMETRIC ELECTRODES
82853130	Granted	8982601	9/4/2009	3/17/2015	13/259183	US	SWITCHABLE JUNCTION WITH AN INTRINSIC DIODE FORMED WITH A VOLTAGE DEPENDENT RESISTOR
82902121	Granted	8928560	3/20/2012	42010	13/424776	US	DISPLAY MATRIX WITH RESISTANCE SWITCHES
82924259	Granted	8891284	9/4/2009	41961	13/383572	US	MEMRISTORS BASED ON MIXED-METAL-VALENCE COMPOUNDS
82925135	Published		3/12/2010		13/384004	US	INTERCONNECTION ARCHITECTURE FOR MEMORY STRUCTURES
83013639	Granted	8779409	9/28/2012	41835	13/629946	US	LOW ENERGY MEMRISTORS WITH ENGINEERED SWITCHING CHANNEL MATERIALS
83096719	Allowed		1/31/2013		13/755667	US	Crossbar Memory to Provide Content Addressable Functionality
83100752	Granted	9035272	1/16/2013	42143	13/742939	US	NANOPARTICLE-BASED MEMRISTOR STRUCTURE
83168704	Published		8/30/2010		13/811023	US	Multilayer Memory Array
83255751	Published		1/31/2011		13/884107	US	METHOD AND CIRCUIT FOR SWITCHING A MEMRISTIVE DEVICE
84020498	Published		4/25/2012		14/385259	US	NONLINEAR MEMRISTORS
84020521	Allowed		4/26/2012		14/385544	US	CUSTOMIZABLE NONLINEAR ELECTRICAL DEVICES
84193771	Application		1/18/2013		14/759725	US	INTERCONNECTION ARCHITECTURE FOR MULTILAYER CIRCUITS
82081493	Granted	7487508	5/16/2002	39847	10/147256	US	System And Method For Reconstructing Client Web Page Accesses From Captured Network Packets
82081496	Granted	7246101	5/16/2002	7/17/2007	10/147619	US	Knowledge-based System And Method For Reconstructing Client Web Page Accesses From Captured Network Packets
82087733	Granted	7953858	1/17/2003	5/31/2011	10/346067	US	Method And Apparatus For Mapping Peers To An Overlay Network
82087736	Granted	7266082	8/30/2002	9/4/2007	10/231184	US	Expressway Routing Among Peers
82136492	Granted	6262987	3/26/1998	7/17/2001	09/048650	US	SYSTEM AND METHOD FOR REDUCING LATENCIES WHILE TRANSLATING INTERNET HOST NAME-ADDRESS BINDINGS
82200677	Granted	7529196	12/7/2004	5/5/2009	11/006041	US	Routing A Service Query In An Overlay Network
82205858	Granted	7636325	12/7/2004	12/22/2009	11/006068	US	Determining Highest Workloads For Nodes In An Overlay Network
82217966	Granted	7733913	7/31/2006	6/8/2010	11/496321	US	Striping Data Over Transmission Channels
82231577	Granted	8125991	7/31/2007	2/28/2012	11/831890	US	Network Switch Using Managed Addresses For Fast Route Lookup
82250243	Granted	8625485	4/30/2009	41646	12/433718	US	Dataflow Routing In A Multi-hop Wireless Network
82258178	Application		8/31/2009		12/551281	US	End-point Multi-pathing For Scalable Ethernet
82259552	Published		12/9/2009		12/634224	US	Packet-based Networking System

PATENT
REEL: 038498 FRAME: 0597

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82261106	Granted	8503307	5/10/2010	8/6/2013	12/662885	US	Distributing Decision Making In A Centralized Flow Routing System
83140543	Granted	9001927	1/31/2013	42101	13/755694	US	TRANSMITTING A WIRELESS SIGNAL BASED ON DETECTED SIGNAL INTERFERENCE
84064706	Application		10/2/2014		14/504932	US	Tenant Isolation In A Multi-tent Cloud System
84084076	Application		4/20/2012		14/395612	US	CONTROLLING DATA RATES OF DATA FLOWS BASED ON INFORMATION INDICATING CONGESTION
84103246	Published		7/31/2012		14/400370	US	BANDWIDTH GUARANTEE AND WORK CONSERVATION
84312617	Application		1/14/2013		14/760698	US	WIRELESS TRANSMITTER TO OPTIMIZE THROUGHPUT BY CONTROLLING TIME-AVERAGE BLOCK SIZE OF RECEIVERS
90017124	Application		1/31/2013		14/763810	US	Performing an Index Operation in a MapReduce Environment
82168088	Granted	6922496	1/31/2003	7/26/2005	10/355663	US	Integrated Vcsels On ASIC Module Using Flexible Electrical Connections
82178447	Granted	7251388	8/10/2004	7/31/2007	10/915641	US	APPARATUS FOR PROVIDING OPTICAL COMMUNICATION BETWEEN INTEGRATED CIRCUITS OF DIFFERENT PC BOADS AND AN INTEGRATED CIRCUIT ASSEMBLY FOR USE THEREIN
82198427	Granted	7692840	6/4/2008	4/6/2010	12/156876	US	Composite Material With Controllable Resonant Cells
82201859	Granted	7050659	3/31/2005	5/23/2006	11/096670	US	Optically Modulable Photonic Bandgap Medium
82201862	Granted	7492803	6/10/2005	39861	11/149511	US	Fiber-coupled Single Photon Source
82212848	Granted	7349613	1/24/2006	39532	11/338305	US	Photonic Crystal Devices Including Gain Material And Methods For Using The Same
82214600	Granted	7546013	5/31/2006	39973	11/444222	US	Nanoparticle Coupled To Waveguide
82214660	Granted	7389014	3/31/2006	39616	11/393845	US	Integrated Semiconductor Circuits And Methods Of Making Integrated Semiconductor Circuits
82214663	Granted	7359111	1/8/2007	39553	11/651315	US	Optical Steering Device And Method
82224152	Granted	8212235	4/25/2007	7/3/2012	11/790446	US	NANOWIRE-BASED OPTO-ELECTRONIC DEVICES
82225271	Granted	7570409	10/12/2006	8/4/2009	11/581193	US	Radiation Modulation By Reflection From Controlled Composite Material
82226957	Granted	7711213	1/29/2007	5/4/2010	11/699092	US	Nanowire-based Modulators
82227020	Granted	7561761	1/3/2007	7/14/2009	11/648968	US	Photonic Systems And Methods For Encoding Data In Carrier Electromagnetic Waves
82227707	Granted	7446929	4/25/2007	39756	11/796085	US	Photonic Device Including At Least One Electromagnetic Resonator Operably Coupled To A State-change Material
82227767	Granted	7805041	3/21/2007	40449	11/726104	US	Electromagnetic Radiation Amplification Systems Based On Photonic Gratings
82230521	Granted	7719771	7/25/2007	5/18/2010	11/881182	US	Deformable Optical Element, Methods Of Making And Uses Thereof
82230578	Granted	7989841	7/31/2007	8/2/2011	11/831704	US	FAST INJECTION OPTICAL SWITCH

PATENT
REEL: 038498 FRAME: 0598

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82230581	Granted	8746989	10/15/2007	6/10/2014	11/974692	US	Board To Board Optical Interconnect Using An Optical Interconnect Assembly
82230704	Granted	7593606	7/30/2007	9/22/2009	11/888032	US	OPTICAL MODULATOR INCLUDING WAVEGUIDE GRATING STRUCTURE AND MULTIPLE QUANTUM WELL LAYER
82234514	Granted	8315526	6/18/2007	11/20/2012	11/820299	US	Misalignment Tolerant Free Space Optical Transceiver
82234760	Granted	7668420	7/26/2007	2/23/2010	11/829048	US	Optical Waveguide Ring Resonator With An Intracavity Active Element
82234763	Granted	7639903	10/15/2007	12/29/2009	11/974711	US	Daisy Chain Optical Interconnect
82238321	Granted	8767301	1/31/2008	7/1/2014	12/864214	US	MEMS-BASED PELLICLE BEAMSPLITTER
82239629	Granted	7845860	10/20/2008	12/7/2010	12/254490	US	Method For Connecting Multicore Fibers To Optical Devices
82239821	Granted	8202012	10/31/2008	6/19/2012	12/263352	US	ELECTRO-OPTICAL CONNECTOR AND METHODS FOR ALIGNING
82258424	Granted	8194302	12/15/2009	6/5/2012	12/638182	US	ACTIVE CHIRAL PHOTONIC METAMATERIAL
82262609	Granted	8472808	10/6/2010	6/25/2013	12/898798	US	OPTICAL DATA PATH SYSTEMS
82263983	Granted	8909007	10/29/2010	12/9/2014	12/915964	US	CIRCUIT SWITCHABLE OPTICAL DEVICE
82275782	Granted	8503848	1/27/2011	8/6/2013	13/015546	US	WAVEGUIDE ARRAYS
82276091	Granted	8654812	1/25/2011	2/18/2014	13/013609	US	Q-SWITCHED GRATING VERTICAL-CAVITY SURFACE-EMITTING LASER SYSTEM AND METHOD FOR FABRICATING THE SAME
82395255	Granted	8711484	5/6/2008	4/29/2014	12/991106	US	FABRICATION OF THIN PELLICLE BEAM SPLITTERS
82405288	Granted	8737845	5/7/2008	41786	12/991109	US	OPTICAL ENGINE FOR POINT-TO-POINT COMMUNICATIONS
82573374	Granted	8391714	6/17/2008	3/5/2013	12/999620	US	Optical Broadcast Systems And Methods
82576826	Granted	8600203	6/9/2008	12/3/2013	12/995881	US	Cylindrical Resonators For Optical Signal Routing
82654576	Granted	8526771	9/15/2008	9/3/2013	13/061459	US	IN-PLANE OPTICAL WAVE GUIDE WITH AREA BASED SPLITTER
82853147	Granted	8526816	10/29/2009	9/3/2013	13/259560	US	OPTICAL DATA BUS AND METHOD
82859851	Granted	8965212	4/29/2009	42059	13/262807	US	OPTICAL MEMORY EXPANSION
82951982	Granted	8983248	7/31/2012	3/17/2015	13/562487	US	OPTICAL TRANSMISSION MEDIA TO INDEPENDENTLY SUPPORT SINGLE-MODE AND MULTIMODE SIGNALS
83013665	Published		7/30/2012		13/561751	US	COPLANAR ROUTING FOR OPTICAL TRANSMISSION
83013742	Published		7/27/2012		13/560450	US	SPATIAL MULTIPLEXING FOR OPTICAL TRANSMISSION
83097054	Published		4/13/2010		13/640348	US	CONTROLLING PHASE RESPONSE IN A SUB-WAVELENGTH GRATING LENS
83119816	Granted	8947796	5/7/2010	2/3/2015	13/640343	US	TELECENTRIC OPTICAL ASSEMBLY
83242146	Granted	9013784	10/29/2010	42115	13/881195	US	NANOPARTICLE WAVEGUIDE APPARATUS, SYSTEM AND METHOD
83277168	Published		1/7/2011		13/991461	US	DYNAMIC OPTICAL CROSSBAR ARRAY
83699786	Granted	9103973	4/20/2011	42227	14/009775	US	SUB-WAVELENGTH GRATING-BASED OPTICAL ELEMENTS
83706052	Published		4/20/2011		14/111720	US	LIGHT-DETECTION SYSTEMS

PATENT
REEL: 038498 FRAME: 0599

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83734834	Published		5/23/2011		14/118743	US	OPTICAL TRANSMISSION SYSTEM
83776646	Published		2/6/2014		14/174119	US	Optical Bus System
83959900	Published		1/31/2012		14/365294	US	HYBRID ELECTRO-OPTICAL PACKAGE FOR AN OPTO-ELECTRONIC ENGINE
83959983	Published		1/31/2012		14/365261	US	OPTICAL ARCHITECTURES, OPTICAL DISTRIBUTION MATRICES, AND METHODS OF MANUFACTURING OPTICAL STRUCTURES
84195016	Application		1/28/2013		14/764005	US	RADIUSED ALIGNMENT POST FOR SUBSTRATE MATERIAL
84295471	Application		7/28/2015		14/811385	US	UNIDIRECTIONAL RING LASERS
82976914	Granted	9106578	5/31/2012	8/11/2015	13/485837	US	CORE NETWORK ARCHITECTURE
83130081	Application		11/30/2012		13/691120	US	NETWORK ROUTING
84260111	Application		7/31/2015		14/814786	US	SHORT-TERM SECURITY CERTIFICATES
81942209	Granted	5982573	12/15/1993	11/9/1999	08/168805	US	Disk Drive And Method For Minimizing Shock-Induced Damage
82097534	Granted	8046624	10/20/2003	10/25/2011	10/687694	US	Propagation Of Viruses Through An Information Technology Network
82274846	Allowed		12/21/2006		11/643553	US	Network Traffic Redirection In Bi-planar Networks
82274906	Application		7/31/2008		12/183642	US	Zero Copy Packet Buffering Using Shadow Sends
82920017	Granted	8570866	2/9/2012	10/29/2013	13/369813	US	System and Method for Processing Network Packet Flows
83235754	Allowed		4/26/2013		13/871797	US	METHODS AND SYSTEMS FOR FULL PATTERN MATCHING IN HARDWARE
82929503	Granted	8935409	1/20/2011	42017	13/387334	US	Method for Controlling Flow in a Stack System and Chassis Switch in a Stack System
82579242	Application		11/11/2009		12/616649	US	Network Monitoring System Employing Bi-Directional Communication
82579259	Granted	7260844	9/3/2003	8/21/2007	10/655062	US	Threat Detection In A Network Security System
82579265	Granted	7565696	12/10/2003	7/21/2009	10/733073	US	Synchronizing Network Security Devices Within A Network Security System
82579279	Granted	9027120	10/10/2003	42129	10/683191	US	Hierarchical Architecture In A Network Security System
82579322	Granted	9100422	10/27/2004	42220	10/974105	US	Network Zone Identification In A Network Security System
82579328	Granted	8065732	12/3/2009	40869	12/630573	US	Object Reference In A System
82579348	Granted	7437359	4/5/2006	39735	11/398863	US	Merging Multiple Log Entries In Accordance With Merge Properties And Mapping Properties
82579554	Allowed		9/4/2009		12/554541	US	Storing Log Data Efficiently While Supporting Querying
82962722	Granted	8745010	4/12/2012	6/3/2014	13/445725	US	DATA STORAGE AND ARCHIVING SPANNING MULTIPLE DATA STORAGE SYSTEMS
83012895	Granted	8793251	7/31/2012	7/29/2014	13/562728	US	INPUT PARTITIONING AND MINIMIZATION FOR AUTOMATON IMPLEMENTATIONS OF CAPTURING GROUP REGULAR EXPRESSIONS

PATENT
REEL: 038498 FRAME: 0600

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0601

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83082902	Published		7/31/2012		13/563506	US	DATA STORAGE COMBINING ROW-ORIENTED AND COLUMN-ORIENTED DATA STORES
83131990	Granted	9009139	6/10/2011	4/14/2015	13/699953	US	QUERY PIPELINE
83137586	Published		6/1/2011		13/700330	US	Dynamic Multidimensional Schemas for Event Monitoring
83817971	Published		11/18/2011		14/358500	US	QUERY SUMMARY GENERATION USING ROW-COLUMN DATA STORAGE
84111773	Acknowledged					US	Multi-Agent System powered Precognitive and Prescriptive Security Analytics detects anomalies using supervised and unsupervised models and analyzing instructions & data flow across multiple levels of network & µ-architecture
82098659	Granted	7246222	4/21/2003	7/17/2007	10/420287	US	PROCESSOR TYPE DETERMINATION BASED ON RESET VECTOR CHARACTERISTICS
82118579	Granted	7003563	11/2/2001	2/21/2006	10/003649	US	REMOTE MANAGEMENT SYSTEM FOR MULTIPLE SERVERS
82119638	Granted	7340512	8/26/2005	3/4/2008	11/213162	US	System And Method For Remote Discovery And Configuration Of A Network Device
82128629	Granted	6070253	12/31/1996	5/30/2000	08/775819	US	COMPUTER DIAGNOSTIC BOARD THAT PROVIDES SYSTEM MONITORING AND PERMITS REMOTE TERMINAL ACCESS
82129937	Granted	5964875	9/2/1997	10/12/1999	08/921968	US	METHOD AND APPARATUS FOR IDENTIFICATION OF FEATURES ASSOCIATED WITH COMPUTERS
82129943	Granted	6167538	3/6/1998	12/26/2000	09/036263	US	METHOD AND APPARATUS FOR MONITORING COMPONENTS OF A COMPUTER SYSTEM
82131998	Granted	6223271	7/15/1998	4/24/2001	09/116048	US	SYSTEM AND METHOD FOR DETECTING SYSTEM MEMORY SIZE USING ROM BASED PAGING TABLES
82132436	Granted	6052288	5/6/1999	4/18/2000	09/306133	US	SWELL-LATCH PRINTED CIRCUIT BOARD ENGAGEMENT MECHANISM
82136561	Granted	6247109	6/10/1998	6/12/2001	09/095187	US	DYNAMICALLY ASSIGNING CPUs TO DIFFERENT PARTITIONS EACH HAVING AN OPERATION SYSTEM INSTANCE IN A SHARED MEMORY SPACE
82170149	Granted	7363484	9/15/2003	4/22/2008	10/662563	US	Apparatus And Method For Selectively Mapping Proper Boot Image To Processors Of Heterogeneous Computer Systems
82204112	Granted	8392546	10/28/2005	3/5/2013	11/262020	US	Distributed Managed System, System Components, And Methods Of Communicating Commands
82260545	Granted	8713350	12/8/2009	4/29/2014	12/633648	US	Handling Errors In A Data Processing System
82260608	Granted	8230261	12/17/2009	7/24/2012	12/641043	US	Field Replaceable Unit Acquittal Policy
82660112	Granted	8205016	3/11/2011	6/19/2012	13/046339	US	CONTROLLER RECEIVING A CONFIGURATION COMMAND WHILE RECEIVING AN AUXILIARY SUPPLY VOLTAGE.
82852234	Granted	8839032	12/8/2009	9/16/2014	13/258392	US	Managing Errors In A Data Processing System
84027726	Published		2/23/2012		14/379747	US	Firmware Package to Modify Active Firmware

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84114999	Application		1/26/2015		14/605384	US	HARDWARE SIGNAL LOGGING IN EMBEDDED BLOCK RANDOM ACCESS MEMORY
84291309	Application		1/15/2013		14/759199	US	Dynamic Firmware Updating
82836837	Published		8/2/2006		11/461926	US	AUTOMATIC VERTICAL-DATABASE DESIGN
82850153	Published		4/30/2012		13/459722	US	DATABASE RECOVERY BY CONTAINER
82094978	Granted	7509395	11/13/2003	3/24/2009	10/712819	US	Data Delivery
82192247	Granted	7581108	4/21/2004	8/25/2009	10/829714	US	METHOD AND SYSTEM FOR GENERATING TIME-BASED IDENTIFIERS
82257737	Published		8/1/2008		12/184835	US	PLATFORM PROVISIONING SYSTEM AND METHOD
82190684	Granted	8805803	8/12/2004	8/12/2014	10/916877	US	INDEX EXTRACTION FROM DOCUMENTS
82947648	Granted	8224642	11/20/2008	7/17/2012	12/275027	US	AUTOMATED IDENTIFICATION OF DOCUMENTS AS NOT BELONGING TO ANY LANGUAGE
82948106	Granted	6738100	12/20/2000	5/18/2004	09/742937	US	METHOD FOR DETECTING SCENE CHANGES IN A DIGITAL VIDEO STREAM
82948298	Granted	6738764	5/8/2001	5/18/2004	09/851618	US	APPARATUS AND METHOD FOR ADAPTIVELY RANKING SEARCH RESULTS
82948633	Granted	8311986	9/16/2010	11/13/2012	12/883788	US	DETERMINING DATABASE RECORD CONTENT CHANGES
82948647	Granted	6259969	2/3/1998	7/10/2001	09/017760	US	System and method for automatically verifying the performance of a virtual robot
82951896	Granted	8171509	6/18/2004	5/1/2012	10/872191	US	SYSTEM AND METHOD FOR APPLYING A DATABASE TO VIDEO MULTIMEDIA
82951899	Granted	6999971	5/8/2001	2/14/2006	09/851640	US	APPARATUS AND METHOD FOR PARAMETRIC GROUP PROCESSING
90068711	Instructed					US	Encryption technique to enable secure deduplication of data
82118201	Granted	7120248	3/26/2001	39000	09/818914	US	Multiple Prime Number Generation Using A Parallel Prime Number Search Algorithm
82122077	Granted	7660421	6/28/2002	40218	10/187404	US	Method And System For Secure Storage, Transmission And Control Of Cryptographic Keys
82171334	Granted	8045713	3/30/2004	10/25/2011	10/814608	US	Cryptographic Key Update Management Method And Apparatus
82833030	Granted	8930154	1/20/2012	1/6/2015	13/355315	US	FIRST AND SECOND VOLTAGE MEASUREMENTS TO ADJUST A VOLTAGE MEASURER
82962805	Published		4/25/2012		13/455867	US	MICROPROCESSOR TESTING CIRCUIT
84265690	Application		7/31/2015		14/815659	US	KEY OBFUSCATION
81974795	Granted	6922773	12/29/2000	38559	09/751408	US	System And Method For Encoding Constant Operands In A Wide Issue Processor
81977360	Granted	7028164	12/29/2000	38818	09/751679	US	Instruction Fetch Apparatus For Wide Issue Processors And Method Of Operation
81977915	Granted	7246213	7/28/2004	39280	10/902406	US	Data Address Security Device And Method

PATENT
REEL: 038498 FRAME: 0602

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81984722	Granted	6762907	6/7/2001	38181	09/876566	US	Disc Drive Having Integral Base Cooling
81991091	Granted	6993754	11/13/2001	38748	09/992642	US	Annotations To Executable Images For Improved Dynamic Optimization Of Functions
81991094	Granted	6915513	11/29/2001	38538	09/997062	US	System And Method For Dynamically Replacing Code
81998207	Granted	8209371	11/7/2002	41086	10/289379	US	Method & System For Managing Communication In A Computer Network Using Aliases Of Computer Network Adresses
82041788	Granted	6839739	2/9/1999	1/4/2005	09/246479	US	Computer Architecture With Caching Of History Counters For Dynamic Page Placement
82043156	Granted	6880045	10/12/2001	38454	09/976495	US	MULTI-PROCESSOR COMPUTER SYSTEM WITH TRANSACTIONAL MEMORY
82055144	Granted	6418017	3/30/2000	37446	09/539724	US	Heat Dissipating Chassis Member
82078871	Granted	6628520	2/6/2002	9/30/2003	10/066726	US	Method, Apparatus, And System For Cooling Electronic Components
82085489	Granted	8798964	11/6/2002	8/5/2014	10/289662	US	Methods And Apparatus For Designing The Ranking And Wiring Configurations For Pieces Of Hardware
82090361	Granted	7073029	1/27/2003	38902	10/351357	US	Storage System Using Fast Storage And Log-structured Storage
82097039	Granted	7424528	11/27/2002	39700	10/306279	US	System And Method For Measuring The Capacity Of A Streaming Media Server
82097228	Granted	6970387	9/15/2003	11/29/2005	10/662643	US	System And Method For Determining The Value Of A Memory Element
82099346	Granted	7272732	6/30/2003	39343	10/608206	US	Controlling Power Consumption Of At Least One Computer System
82099349	Granted	6813897	7/29/2003	11/9/2004	10/628284	US	Supplying Power To At Least One Cooling System Component
82100222	Granted	7913226	10/1/2003	40624	10/676557	US	INTERPOSING A VIRTUAL MACHINE MONITOR AND DEVIRTUALIZING COMPUTER HARDWARE AT RUNTIME
82103966	Granted	7184267	12/12/2003	2/27/2007	10/735467	US	Longitudinally Cooled Electronic Assembly
82135994	Granted	6173293	3/13/1998	1/9/2001	09/039057	US	SCALABLE DISTRIBUTED FILE SYSTEM
82136243	Granted	6195748	11/26/1997	2/27/2001	08/979033	US	APPARATUS FOR SAMPLING INSTRUCTION EXECUTION INFORMATION IN A PROCESSOR PIPELINE
82136369	Granted	6332178	11/26/1997	12/18/2001	08/980165	US	METHOD FOR ESTIMATING STATISTICS OF PROPERTIES OF MEMORY SYSTEM TRANSACTIONS
82136372	Granted	6237059	11/26/1997	5/22/2001	08/979398	US	METHOD FOR ESTIMATING STATISTICS OF PROPERTIES OF MEMORY SYSTEM INTERACTIONS AMONG CONTEXTS IN A COMPUTER SYSTEM
82136873	Granted	6480876	5/28/1998	11/12/2002	09/085795	US	SYSTEM FOR INTEGRATING TASK AND DATA PARALLELISM IN DYNAMIC APPLICATIONS

PATENT
REEL: 038498 FRAME: 0603

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0604

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82165523	Granted	5933598	7/17/1996	36375	08/682348	US	A METHOD FOR SHARING VARIABLE-GRAINED MEMORY OF WORKSATIONS BY SENDING PARTICULAR BLOCK INCLUDING LINE AND SIZE OF THE BLOCK TO EXCHANGE SHARED DATA STRUCTURES
82169087	Granted	7451146	6/30/2004	11/11/2008	10/883118	US	Almost Non-blocking Linked Stack Implementation
82171766	Granted	7272945	7/29/2003	9/25/2007	10/628369	US	Environmental Condition Measurement System
82175513	Granted	7437559	11/19/2003	39735	10/716588	US	Electronic Message Authentication
82178633	Granted	7250695	10/31/2003	7/31/2007	10/697686	US	Controlling Power Supplied To A Circuit Using An Externally Applied Magnetic Field
82178888	Granted	7673027	5/20/2004	40239	10/850784	US	Method And Apparatus For Designing Multi-tier Systems
82180133	Granted	7757237	6/16/2004	40372	10/870721	US	Synchronization Of Threads In A Multithreaded Computer Program
82190375	Granted	7546600	38107	39973	10/837110	US	Method Of Assigning Virtual Process Identifier To Process Within Process Domain
82190438	Granted	8214523	6/22/2004	7/3/2012	10/874128	US	Interconnection Fabric Connection
82197116	Granted	7536585	6/23/2005	5/19/2009	11/166670	US	Method Of Estimating Storage System Availability
82197119	Granted	7467329	6/23/2005	12/16/2008	11/166851	US	Method Of Estimating Storage System Reliability
82197800	Granted	7761663	2/16/2006	7/20/2010	11/357776	US	OPERATING A REPLICATED CACHE THAT INCLUDES RECEIVING CONFIRMATION THAT A FLUSH OPERATION WAS INITIATED
82197803	Granted	9047306	10/17/2005	6/2/2015	11/252335	US	Method Of Writing Data
82198175	Granted	7376867	12/8/2004	5/20/2008	11/008744	US	Method Of Seeking Consensus Among Computer Processes
82198616	Granted	7784063	6/14/2004	8/24/2010	10/867048	US	Method and apparatus for system caller authentication
82199552	Granted	8312003	12/16/2004	11/13/2012	11/014600	US	Computer Method And Apparatus For Collaborative Web Searches
82200923	Granted	7568360	11/1/2005	8/4/2009	11/264772	US	Air Re-circulation Effect Reduction System
82201235	Granted	8185697	1/7/2005	5/22/2012	11/030937	US	Methods And Sysyems For Coherence Protocol Tuning
82202177	Granted	7426453	1/14/2005	9/16/2008	11/035320	US	Workload Placement Based Upon CRAC Unit Capacity Utilizations
82207604	Granted	7669431	4/7/2005	3/2/2010	11/101238	US	Cooling Provisioning For Heat Generating Devices
82207853	Allowed		6/9/2005		11/148482	US	System And Method For Inferring Causal Paths In A Distributed Computing Environment
82214846	Granted	8296760	10/27/2006	10/23/2012	11/588518	US	Migrating A Virtual Machine From A First Physical Machine In Response To Receiving A Command To Lower A Power Mode Of The First Physical Machine
82217654	Granted	9135074	7/20/2006	9/15/2015	11/489968	US	System And Method For Evaluating Performance Of A Workload Manager
82217657	Granted	8336054	7/20/2006	41261	11/489967	US	System And Method For Allocating Capacity Of Shared Resources To A Workload

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82217660	Granted	8112756	7/20/2006	40946	11/489971	US	System And Method For Evaluating A Workload And Its Impact On Performance Of A Workload Manager
82218968	Granted	8214838	7/26/2006	41093	11/493492	US	System And Method For Attributing To A Corresponding Virtual Machine CPU Utilization Of A Network Driver Domain Based On Weighted Communication
82218971	Granted	8032882	7/26/2006	40820	11/493348	US	System And Method For Controlling Aggregate CPU Usage By Virtual Machines And Driver Domains
82225457	Granted	8095803	3/9/2007	40918	11/684534	US	Protecting The Privacy Of Files Referenced By Their Hash
82227275	Granted	7901131	12/22/2006	3/8/2011	11/644158	US	Apparatus State Determination Method And System
82227956	Granted	7779127	3/9/2007	8/17/2010	11/684567	US	SYSTEM AND METHOD FOR DETERMINING A SUBSET OF TRANSACTIONS OF A COMPUTING SYSTEM FOR USE IN DETERMINING RESOURCE COSTS
82227959	Granted	9135075	3/9/2007	42262	11/684569	US	CAPACITY PLANNING FOR COMPUTING SYSTEMS HOSTING MULTI-TIER APPLICATION BASED ON THINK TIME VALUE AND RESOURCE COST OF COMPOSITE TRANSACTION USING STATISTICAL REGRESSION ANALYSIS (as amended)
82229081	Granted	8939824	4/30/2007	1/27/2015	11/796947	US	Air Moving Device With A Movable Louver
82229144	Granted	7882508	4/27/2007	2/1/2011	11/796234	US	Tracing Information Flow Using A Signature
82230143	Application		4/30/2007		11/796944	US	System And Method For Modular Computing
82232204	Granted	7902966	6/18/2007	3/8/2011	11/764410	US	Microcontroller For Controling An Actuator
82232762	Granted	8046113	7/27/2007	10/25/2011	11/829716	US	System And Method For Cooling A Heat-generating Device
82234385	Granted	7756690	7/27/2007	7/13/2010	11/829654	US	SYSTEM AND METHOD FOR SUPPORTING PERFORMANCE PREDICTION OF A SYSTEM HAVING AT LEAST ONE EXTERNAL INTERACTOR
82239635	Granted	8332847	9/23/2008	12/11/2012	12/236271	US	Validating Manual Virtual Machine Migration
82239758	Published		10/20/2008		12/254571	US	Designing An Apparatus To Substantially Minimize Exergy Destruction
82240136	Granted	7945128	10/27/2008	5/17/2011	12/258674	US	Optical-based Barrier Synchronization Methods And Systems For Implementing The Same
82240196	Granted	7966519	10/13/2008	6/21/2011	12/250381	US	Reconfiguration In A Multi-core Processor System With Configurable Isolation
82241009	Granted	8560141	4/1/2008	10/15/2013	12/936000	US	Management Of A 3D Package And Cooling System
82242503	Granted	8677208	9/19/2008	3/18/2014	12/679449	US	Generating A Parallel Recovery Plan For A Data Storage System
82242626	Granted	8082400	10/1/2008	40897	12/243657	US	Partitioning A Memory Pool Among Plural Computing Nodes
82242689	Granted	7966394	10/14/2008	40715	12/250924	US	Information Model Registry And Brokering In Virtualized Environments
82242695	Published		10/31/2008		12/263411	US	Power Management Using Clustering In A Multicore System

PATENT
REEL: 038498 FRAME: 0605

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82243130	Granted	8904383	4/10/2008	12/2/2014	12/936900	US	Virtual Machine Migration According To Environmental Data
82244624	Granted	7818145	9/30/2008	10/19/2010	12/241972	US	Detecting AN Error IN A Prediction OF Resource Usage OF AN APPLICATION IN A VIRTUAL Environment
82244627	Granted	8145456	9/30/2008	3/27/2012	12/241998	US	Optimizing A Prediction Of Resource Usage Of An Application In A Virtual Environment
82244630	Granted	8180604	9/30/2008	5/15/2012	12/242034	US	Optimizing A Prediction Of Resource Usage Of Multiple Applications In A Virtual Environment
82245125	Granted	8074456	10/29/2008	12/13/2011	12/260741	US	THERMAL MANAGEMENT SYSTEM HAVING THERMOELECTRIC MODULES
82248620	Granted	9069730	6/29/2009	6/30/2015	12/493602	US	Coordinated Reliability Management In Virtual Machines In A Virtualized System
82249619	Granted	8326807	1/23/2009	12/4/2012	12/359190	US	Methods Of Measuring Consistability Of A Distributed Storage System
82249622	Granted	8458710	9/3/2009	6/4/2013	12/553643	US	Scheduling Jobs For Execution On A Computer System
82258172	Granted	8296496	9/17/2009	10/23/2012	12/561273	US	Main Memory With Non-volatile Memory And Dram
82258364	Granted	8537677	10/13/2009	9/17/2013	12/577972	US	Incremental Adaptive Packet Routing In A Multi-dimensional Network
82259486	Published		10/30/2009		12/609706	US	Determining Regions Of Influence Of Fluid Moving Devices
82259612	Granted	8122125	9/8/2009	2/21/2012	12/555552	US	Deep Packet Inspection (DPI) Using A DPI Core
82261112	Granted	9104482	12/11/2009	8/11/2015	12/636526	US	Differentiated Storage Qos
82261799	Granted	8407560	7/14/2010	3/26/2013	12/836405	US	SYSTEMS AND METHODS FOR ENCODING INFORMATION FOR STORAGE IN AN ELECTRONIC MEMORY AND FOR DECODING ENCODED INFORMATION RETRIEVED FROM AN ELECTRONIC MEMORY
82262483	Granted	8812400	7/9/2010	8/19/2014	12/833438	US	Managing A Memory Segment Using A Memory Virtual Appliance
82263044	Published		10/28/2010		12/913921	US	MANAGING REPLACEMENT OF AN EXISTING COMPONENT
82263047	Published		6/28/2010		12/824699	US	DETERMINING ENVIRONMENTAL IMPACT
82263173	Granted	8392574	10/29/2010	3/5/2013	12/915866	US	PROVIDING SERVICES BASED ON AN ENVIRONMENTAL METRIC
82263356	Granted	8688288	2/7/2011	4/1/2014	13/022260	US	MANAGING AN INFRASTRUCTURE HOUSING DISAGGREGATED HEAT SOURCES
82467426	Granted	8683479	2/16/2011	3/25/2014	13/028974	US	SHIFTING INFORMATION TECHNOLOGY WORKLOAD DEMANDS
82467429	Application		2/16/2011		13/028979	US	INFORMATION TECHNOLOGY WORKLOAD SHEDDING
82467469	Published		4/14/2011		13/086964	US	PROVISIONING DATA CENTER RESOURCES
82595721	Granted	8892728	7/21/2011	11/18/2014	13/187962	US	Automatic Zone-Based Management of a Data Center
82595727	Granted	8909762	3/17/2011	12/9/2014	13/050359	US	NETWORK SYSTEM MANAGEMENT

PATENT
REEL: 038498 FRAME: 0606

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0607

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82621131	Granted	8788747	8/8/2008	7/22/2014	13/058188	US	Independently Controlled Virtual Memory Devices In Memory Modules
82642817	Granted	8392035	2/9/2011	3/5/2013	13/024159	US	System And Method For Cooling An Electronic Device
82718128	Published		11/3/2011		13/288669	US	MANAGING THE CARBON FOOTPRINT OF A STRUCTURE
82833817	Published		10/26/2011		13/282394	US	MANAGING WORKLOAD AT A DATA CENTER
82853256	Granted	8788739	6/29/2009	7/22/2014	13/259113	US	HYPERVISOR-BASED MANAGEMENT OF LOCAL AND REMOTE VIRTUAL MEMORY PAGES
82901995	Published		12/14/2012		13/715163	US	MULTIPLE SUBARRAY MEMORY ACCESS
82902095	Granted	8819376	4/23/2012	8/26/2014	13/453982	US	MERGING ARRAYS USING SHIFTABLE MEMORY
82963446	Granted	8959118	4/30/2012	2/17/2015	13/460597	US	File System Managing and Balancing
82963512	Published		4/4/2012		13/439410	US	AUTOMATING WORKLOAD VIRTUALIZATION
82963549	Published		4/27/2012		13/458069	US	Workload Manager for MapReduce Environments
82963632	Granted	8909987	4/27/2012	12/9/2014	13/458680	US	RECOVERY SEGMENTS
82979745	Published		3/29/2012		13/434744	US	CONTROLLED LOCK VIOLATION FOR DATA TRANSACTIONS
83013473	Granted	9128845	7/30/2012	9/8/2015	13/561219	US	DYNAMICALLY PARTITION A VOLATILE MEMORY FOR A CACHE AND A MEMORY PARTITION (as amended)
83105687	Published		1/10/2013		13/738346	US	DYNAMICALLY BALANCING EXECUTION RESOURCES TO MEET A BUDGET AND A QoS of PROJECTS
83105793	Allowed		1/31/2013		13/755768	US	MANAGING AN ENTITY USING A STATE MACHINE ABSTRACT
83130012	Published		7/21/2010		13/810187	US	ACCESSING A LOCAL STORAGE DEVICE USING AN AUXILIARY PROCESSOR
83135110	Published		7/7/2010		13/808856	US	Obtaining Rendering Co-ordinates Of Visible Text Elements
83156567	Allowed		3/13/2013		13/799176	US	DISTRIBUTING PROCESSING OF ARRAY BLOCK TASKS
83220872	Granted	9081880	3/25/2013	7/14/2015	13/850162	US	Determining Sustainability Of A Data Center
83680994	Published		4/19/2011		14/009366	US	SCHEDULING MAP AND REDUCE TASKS FOR JOBS FOR EXECUTION ACCORDING TO PERFORMANCE GOALS
83681020	Published		3/14/2011		14/005196	US	MEMORY INTERFACE
84076024	Application		10/31/2014		14/529993	US	PRIORITY QUEUE HAVING ARRAY AND TREES
84077713	Published		6/8/2012		14/396324	US	CHECKPOINTING USING FPGA
84192543	Published		3/10/2015		14/643763	US	MANAGING ARRAY COMPUTATIONS DURING PROGRAMMATIC RUN-TIME IN A DISTRIBUTED COMPUTING ENVIRONMENT
81951443	Granted	6049851	2/14/1994	4/11/2000	08/196618	US	Method And Apparatus For Checking Cache Coherency In A Computer Architecture
81966359	Granted	6711619	12/15/1999	3/23/2004	09/464351	US	Method, System, And Apparatus For Distributing And Using Computer-based Applications Over A Network
81966488	Granted	6874138	11/28/2000	3/29/2005	09/724616	US	Method And Apparatus For Resuming Execution Of A Failed Computer Program

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0608

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81967112	Granted	6662282	4/17/2001	12/9/2003	09/837311	US	Unified Data Sets Distributed Over Multiple I/O-Device Arrays
81968480	Granted	6745322	2/18/2000	6/1/2004	09/507505	US	Apparatus And Method For Conditionally Flushing A Pipeline Upon A Failure Of A Test Condition
81971234	Granted	6675344	5/1/2000	1/6/2004	09/562135	US	Multiple ECC Schemes To Improve Bandwidth
81972731	Granted	6671160	3/16/2001	12/30/2003	09/811078	US	ESD Prevention Device Enabled Latch
81974162	Granted	6718434	5/31/2001	4/6/2004	09/871043	US	Method And Apparatus For Assigning Raid Levels
81974789	Granted	7337306	12/29/2000	39504	09/751410	US	Executing Conditional Branch Instructions In A Data Processor Having Clustered Architecture
81974792	Granted	7779240	9/14/2007	8/17/2010	11/900978	US	System And Method For Reducing Power Consumption In A Data Processor Having A Clustered Architecture
81977471	Granted	7216184	5/1/2001	5/8/2007	09/846645	US	System And Method For Identification Of Devices Associated With Input/output Paths
81978845	Granted	6661748	3/5/2001	12/9/2003	09/799316	US	Position Control For Plunge Mechanism
81980099	Granted	7003799	1/30/2001	2/21/2006	09/774951	US	Secure Routable File Upload/Download Across The Internet
81983528	Granted	6691139	1/31/2001	38027	09/774839	US	Recreation Of Archives At A Disaster Recovery Site
81991082	Granted	6928536	11/29/2001	8/9/2005	09/995775	US	DYNAMIC EXECUTION LAYER INTERFACE FOR REPLACING INSTRUCTIONS REQUIRING UNAVAILABLE HARDWARE FUNCTIONALITY WITH PATCH CODE AND CACHING
81992522	Granted	6661651	12/11/2001	12/9/2003	10/015071	US	Mounting Of Data Storage Devices With Compliant Storage Module Covers
81993518	Granted	6708285	3/15/2001	3/16/2004	09/810108	US	Redundant Controller Data Storage System Having System And Method For Handling Controller Resets
81994958	Granted	7774611	5/6/2002	8/10/2010	10/138644	US	Enforcing File Authorization Access
81995201	Granted	6870466	4/3/2002	3/22/2005	10/116183	US	Data Display System And Method For An Object Traversing A Circuit
81999323	Granted	8051176	11/7/2002	11/1/2011	10/289259	US	Method And System For Predicting Connections In A Computer Network
82000199	Granted	6918027	7/30/2001	38545	09/917983	US	SYSTEM AND METHOD FOR IN-SYSTEM PROGRAMMING THROUGH AN ON-SYSTEM JTAG
82002011	Granted	6910142	7/28/2001	6/21/2005	09/917413	US	System For Detection And Routing Of Platform Events In A Multi-Cell Computer
82003505	Granted	6711045	9/6/2002	3/23/2004	10/236274	US	Methods And Memory Structures Using Tunnel-Junction Device As Control Element
82003943	Granted	7051195	10/26/2001	5/23/2006	10/002971	US	Method Of Optimization Of CPU And Chipset Performance By Support Of Optional Reads By CPU And Chipset
82004255	Granted	6634898	7/30/2001	10/21/2003	09/918670	US	Switch Mechanism For Online Replacement Of PCI Cards
82004504	Granted	6721857	10/23/2001	4/13/2004	10/002671	US	Flexible Allegiance Storage And Computing Architecture
82005377	Granted	6634890	10/8/2001	10/21/2003	09/972545	US	Spring-Loaded Heat Sink Assembly For A Circuit Assembly
82005380	Granted	6746270	6/23/2003	6/8/2004	10/602221	US	Spring-Loaded Heat Sink Assembly For A Circuit Assembly

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82007378	Granted	6993750	12/13/2001	1/31/2006	10/016955	US	Dynamic Registration Of Dynamically Generated Code And Corresponding Unwind Information
82007381	Granted	6996810	12/13/2001	2/7/2006	10/016948	US	Lazy And Precise Update Of Unwind Information For Dynamically Generated Code
82013810	Granted	5760608	10/21/1996	6/2/1998	08/731817	US	High Speed, Low Clock Load Register Dump Circuit
82014185	Granted	5726596	3/1/1996	35864	08/609592	US	HIGH-PERFORMANCE, LOW-SKEW CLOCKING SCHEME FOR SINGLE-PHASE, HIGH-FREQUENCY GLOBAL VLSI PROCESSOR
82016435	Granted	5875340	5/31/1996	2/23/1999	08/658909	US	Optimized Storage System And Method For A Processor That Executes Instructions Out Of Order
82016615	Granted	5878261	5/15/1996	3/2/1999	08/648468	US	Method For Restructuring Code To Reduce Procedure Call Overhead
82016618	Granted	5903010	10/29/1997	5/11/1999	08/959887	US	Quantum Wire Switch And Switching Method
82016621	Granted	6060724	1/11/1999	5/9/2000	09/228214	US	QUANTUM WIRE LOGIC GATE
82016741	Granted	6466926	3/5/1997	37544	09/142328	US	METHOD FOR OPTIMIZING A RECOGNITION DICTIONARY TO DISTINGUSH BETWEEN PATTERNS THAT ARE DIFFICULT TO DISTINGUISH
82016867	Granted	5835773	4/17/1996	36109	08/633615	US	Method For Achieving Native Performance Across A Set Of Incompatible Architectures Using A Single Binary File
82016996	Granted	5848262	6/17/1996	12/8/1998	08/664483	US	SIMULATING DIGITAL SYSTEMS BY USING VECTOR PROCESSING
82017677	Granted	5909578	9/30/1996	6/1/1999	08/719854	US	USE OF DYNAMIC TRANSLATION TO BURST PROFILE COMPUTER APPLICATIONS
82019114	Granted	5682298	6/13/1996	10/28/1997	08/664074	US	Balancing Power Distribution In A Power Supply System With Redundant Power Sources
82021679	Granted	5790959	11/13/1996	36011	08/747082	US	Programmable Band Select And Transfer Module For Local Multipoint Distribution Service Basestation
82022297	Granted	5751735	11/14/1996	35927	08/749188	US	Integrated Debug Trigger Method And Apparatus For An Integrated Circuit
82022300	Granted	5771240	11/14/1996	6/23/1998	08/749189	US	TEST SYSTEMS FOR OBTAINING A SAMPLE-ON-THE-FLY EVENT TRACE FOR AN INTEGRATED CIRCUIT WITH AN INTEGRATED DEBUG TRIGGER APPARATUS AND AN EXTERNAL PULSE PIN
82025669	Granted	6059841	6/19/1997	5/9/2000	08/879210	US	Updating Data Dependencies For Loop Strip Mining
82030790	Granted	6748587	1/2/1998	6/8/2004	09/002404	US	Programmatic Access To The Widest Mode Floating-Point Arithmetic Supported By A Processor
82031231	Granted	6550041	3/22/1999	4/15/2003	09/274162	US	METHOD AND APPARATUS FOR EVALUATING THE DESIGN QUALITY OF NETWORK NODES
82031786	Granted	6772316	8/29/2002	38202	10/230188	US	METHOD AND APPARATUS FOR UPDATING AND INVALIDATING STORE DATA

PATENT
REEL: 038498 FRAME: 0609

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82031789	Granted	6920531	11/4/2003	38552	10/699666	US	Method And Apparatus For Updating And Invalidating Store Data
82061570	Granted	7424621	9/19/2001	9/9/2008	09/955223	US	Data Protection
82062572	Granted	6804073	10/30/2001	38272	09/984625	US	VARIABLE GAIN AMPLIFIER CONTROLLER
82064066	Granted	6718410	1/18/2001	4/6/2004	09/761854	US	SYSTEM FOR TRANSFERRING DATA IN A CD IMAGE FORMAT SIZE OF A HOST COMPUTER
82065566	Granted	7000085	12/28/2001	2/14/2006	10/034888	US	System And Method For Securing Drive Access To Data Storage Media Based On Medium Identifiers
82067687	Granted	6378007	10/30/1998	37369	09/182307	US	DATA ENCODING SCHEME ENCODING ALL BUT ONE MEMBER OF A PREDEFINED GROUP OF DATA WITH M-BIT CODEWORDS AND OTHER DATA CODEWORDS IN EXCESS OF M-BITS
82068191	Granted	6275348	7/31/1998	37117	09/126992	US	Magnetic Tape Apparatus And Method
82079240	Granted	7603449	6/10/2002	10/13/2009	10/064080	US	System And Method For Inquiry Caching
82083857	Granted	8136048	11/5/2004	40981	10/982279	US	Methods And Apparatus For Providing Menu Data To A Storage Automation Library
82095785	Granted	7251544	7/1/2003	7/31/2007	10/612757	US	Storage System
82095971	Granted	6462906	5/11/2001	37537	09/852635	US	Magnetic Tape Cartridge
82097471	Granted	6816917	1/15/2003	38300	10/346045	US	Storage System With LUN Virtualization
82175882	Granted	6929207	11/3/2003	38580	10/699721	US	Tape Cartridge
82186991	Granted	7480113	8/8/2007	39833	11/835869	US	Tape Drive Apparatus
82190555	Granted	6992857	2/2/2004	38748	10/770746	US	Weighting Servo Signals For Head Positioning
82197173	Granted	7349177	10/14/2005	3/25/2008	11/251387	US	Cartridge Loading Devices
82197734	Granted	7307924	10/27/2004	39427	10/974130	US	Systems And Methods For Cartridge Identification
82197923	Granted	7078627	1/27/2005	38916	11/044407	US	Ribbon Cable Having An Offset Rolling Loop
82199480	Granted	7502198	7/21/2006	39882	11/490037	US	Tape Deployment Systems And Methods Of Deploying Tape In Digital Data Transfer Apparatus
82200293	Granted	7301718	1/31/2005	39413	11/047171	US	Recording Errors In Tape Drives
82200296	Granted	7206156	7/27/2005	39189	11/191115	US	Tape Drive Error Management
82201103	Granted	7613975	8/31/2005	11/3/2009	11/217000	US	Predictive Diagnosis Of A Data Read System
82202225	Granted	7321478	2/23/2006	1/22/2008	11/359500	US	Data Transfer Apparatus Head Cleaning
82216154	Granted	8549297	7/26/2006	10/1/2013	11/494294	US	Data Transfer Device Library And Key Distribution
82220894	Granted	8432634	4/3/2006	4/30/2013	11/396669	US	Identifying Error Built Into A Medium
82223018	Published		10/28/2006		11/589544	US	Methods And Systems For Managing Removable Media
82225262	Granted	D588595	3/14/2007	3/17/2009	29/273816	US	A NEW DESIGN FOR AN OPERATOR CONTROL PANEL WITH DISPLAY AND TOGGLE BUTTON FOR A STORAGE LIBRARY
82228013	Granted	8004797	4/27/2007	8/23/2011	11/796673	US	Tape Drive with a Clamping Mechanism Coupled to a Flexible Circuit
82231196	Granted	7697230	7/17/2007	4/13/2010	11/879353	US	TAPE DRIVE POSITION CONTROL

PATENT
REEL: 038498 FRAME: 0610

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82232324	Granted	7913076	12/18/2007	3/22/2011	11/958802	US	Method For Changing The Configuration Of A Media Drive Apparatus, Computer Readable Medium, And Media Drive Apparatus
82240439	Granted	8341429	9/28/2008	12/25/2012	12/239806	US	Data Transfer Device
82246676	Published		1/6/2009		12/349007	US	Data Processing Aparatus
82247426	Granted	8149977	1/28/2009	4/3/2012	12/361012	US	Recovering Data Samples
82261229	Allowed		3/21/2010		12/728249	US	DETERMINING IMPACT OF VIRTUAL STORAGE BACKUP JOBS
82643432	Granted	8060900	2/15/2011	11/15/2011	13/027431	US	Data Storage Means
82846964	Granted	8670200	2/23/2012	3/11/2014	13/403119	US	SERVO PATTERN READ-BACK SIGNAL PROCESSING FOR STORAGE DEVICES
82901628	Granted	8896958	1/19/2012	11/25/2014	13/353442	US	TAPE WIDTH MEASUREMENTS
83097978	Published		11/2/2012		13/667421	US	Tape Storage Device Having At Least One Redundant Read Data Element
83137849	Granted	8549237	11/27/2012	10/1/2013	13/686026	US	METHOD AND APPARATUS FOR USE IN DATA TRANSFER
83261925	Granted	6715033	10/21/2002	3/30/2004	10/274104	US	METHOD OF AND APPARATUS FOR TRACKING APPENDED DATA ON STORAGE MEDIUM
81982970	Granted	8392586	5/15/2001	3/5/2013	09/858080	US	Method And Apparatus To Manage Transactions At A Network Storage Device
82099337	Granted	7509589	9/30/2003	3/24/2009	10/673834	US	Storage Domain GUI
82232756	Granted	7730218	7/31/2007	6/1/2010	11/888596	US	METHOD AND SYSTEM FOR CONFIGURATION AND MANAGEMENT OF CLIENT ACCESS TO NETWORK-ATTACHED-STORAGE
82232759	Granted	8898682	10/19/2007	11/25/2014	11/875556	US	Cooling In High-density Storage Systems
82245557	Granted	8560524	10/30/2008	10/15/2013	12/261064	US	Allocating Priorities To Prevent Deadlocks In A Storage System
82261541	Granted	6782389	9/11/2001	8/24/2004	09/950555	US	DISTRIBUTING FILES ACROSS MULTIPLE, PERMISSIBLY HETEROGENEOUS, STORAGE DEVICES
82261604	Granted	7890529	2/16/2007	2/15/2011	11/676136	US	Delegations And Caching In A Distributed Segmented File System
82262036	Granted	8849880	5/18/2011	9/30/2014	13/110424	US	PROVIDING VIRTUAL FILES TO STORE METADATA
82929208	Published		4/30/2012		13/460624	US	DURABLY RECORDING EVENTS FOR PERFORMING FILE SYSTEM OPERATIONS
81976415	Granted	6757849	8/3/2001	6/29/2004	09/922541	US	System And Method For Developing Customized Integration Tests And Network Peripheral Device Evaluations
81986336	Granted	7016056	12/16/2000	3/21/2006	09/738716	US	Authoring Tool For Bayesian Network Diagnostic Systems
81988397	Granted	6820221	4/13/2001	11/16/2004	09/833650	US	System And Method For Detecting Process And Network Failures In A Distributed System

PATENT
REEL: 038498 FRAME: 0611

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81988400	Granted	6782489	4/13/2001	8/24/2004	09/833771	US	System And Method For Detecting Process And Network Failures In A Distributed System Having Multiple Independent Networks
81988403	Granted	6782496	4/13/2001	8/24/2004	09/833572	US	Adaptive Heartbeats
81990020	Granted	7076539	7/30/2001	7/11/2006	09/918418	US	Network Connectivity Establishment At User Log-in
81992957	Granted	6836750	4/23/2001	12/28/2004	09/840784	US	Systems And Methods For Providing An Automated Diagnostic Audit For Cluster Computer Systems
81997514	Granted	6593862	3/28/2002	7/15/2003	10/109426	US	METHOD FOR LOSSILY COMPRESSING TIME SERIES DATA
82003574	Granted	7040826	1/31/2003	5/9/2006	10/356777	US	Imaging Devices And Related Cleaning Means
82032848	Granted	6211877	7/20/1998	4/3/2001	09/119369	US	Method For Communicating Between Programming Language Controlled Frames And CGI/HTML Controlled Frames Within The Same Browser Window
82035098	Granted	6148402	4/1/1998	11/14/2000	09/053571	US	Apparatus And Method For Remotely Executing Commands Using Distributed Computing Environment Remote Procedure Calls
82060073	Granted	7603450	4/26/2002	10/13/2009	10/132418	US	METHODS AND APPLETS FOR PROVIDING AND CONTRIBUTING TO AN IT NETWORK MANAGEMENT SERVICE
82061381	Granted	6757709	4/5/2000	6/29/2004	09/543182	US	Method And Apparatus For Providing A Client System With Information Via A Network
82072307	Granted	6662316	2/23/2000	12/9/2003	09/511342	US	Electronic Apparatus Having Improved Diagnostic Interface
82072310	Granted	6963998	9/10/2003	11/8/2005	10/659851	US	Electronic Apparatus Having Improved Diagnostic Interface
82088225	Granted	6907356	10/10/2002	6/14/2005	10/268516	US	Encoder Strip Damage Detector
82088228	Granted	7056041	12/7/2004	6/6/2006	11/007541	US	Encoder Strip Damage Detector
82088291	Granted	7143415	8/22/2002	11/28/2006	10/226514	US	METHOD FOR USING SELF-HELP TECHNOLOGY TO DELIVER REMOTE ENTERPRISE SUPPORT
82090349	Granted	7325170	3/19/2004	1/29/2008	10/804290	US	Method And System For Providing Information For Remote Device Support
82096157	Granted	7482536	7/30/2003	1/27/2009	10/629703	US	Underfloor Cable Junction Unit And Computer Center Equipped With Such Junction Units
82171016	Granted	7403566	6/3/2003	7/22/2008	10/453044	US	SYSTEM, COMPUTER PROGRAM PRODUCT, AND METHOD FOR TRANSMITTING COMPRESSED SCREEN IMAGES FROM ONE COMPUTER TO ANOTHER OR MANY COMPUTERS.
82178564	Allowed		6/7/2005		11/147770	US	System And Method For Enabling Electronic Presentations
82189244	Granted	8266272	11/7/2005	9/11/2012	11/267287	US	Methods For IT Network Representation And Associated Computer Program Products
82192424	Published		3/27/2006		11/389503	US	Communication System And Method
82192430	Granted	7633928	3/27/2006	12/15/2009	11/389307	US	COMMUNICATION DATA METHOD AND SYSTEM FOR VOICE APPLICATIONS EXCECUTABLE BY USER EQUIPMENT.

PATENT
REEL: 038498 FRAME: 0612

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82210841	Granted	8082509	4/22/2005	12/20/2011	11/112136	US	SYSTEMS AND METHODS FOR PROVIDING IMMEDIATE ACCESS TO VIRTUAL COLLABORATION FACILITIES
82930390	Published		10/8/2010		13/387449	US	METHOD AND SYSTEM FOR PRINTING
83137892	Published		7/12/2010		13/703911	US	FLEXIBLE DATA CENTER AND METHODS FOR DEPLOYMENT
83209064	Published		4/29/2013		13/872484	US	Large-Scale Data Transfer
82092722	Granted	8620777	11/19/2001	12/31/2013	10/495635	US	Methods, Software Modules And Software Application For Logging Transaction-tax Related Transactions
81993143	Granted	8103605	4/12/2002	1/24/2012	10/121268	US	Customs Information System With Selective Transaction Audit
83204593	Published		5/24/2013		13/902401	US	CENTRALIZED VERSATILE TRANSACTION VERIFICATION
82165079	Granted	5995080	6/21/1996	11/30/1999	08/668199	US	METHOD AND APPARATUS FOR INTERLEAVING AND DE-INTERLEAVING YUV PIXEL DATA
82165205	Granted	5790753	1/22/1996	8/4/1998	08/589294	US	SYSTEM FOR DOWNLOADING COMPUTER SOFTWARE PROGRAMS
82165208	Granted	5877930	3/27/1997	3/2/1999	08/833014	US	INPUT AND OUTPUT NOISE REDUCTION CIRCUIT
82165334	Granted	5953538	11/12/1996	9/14/1999	08/748145	US	METHOD AND APPARATUS PROVIDING DMA TRANSFERS BETWEEN DEVICES COUPLED TO DIFFERENT HOST BUS BRIDGES
82166081	Granted	6961825	1/24/2001	11/1/2005	09/768418	US	Cache Coherency Mechanism Using Arbitration Masks
82178819	Granted	7590872	9/17/2004	9/15/2009	10/944123	US	Hot Swappable Power Supply Device And Method Of Operation
82180502	Published		4/24/2006		11/409649	US	System And Method For Clearing Information In A Stalled Output Queue Of A Crossbar
82180811	Granted	7817432	3/6/2008	10/19/2010	12/043490	US	Communicating With An Electronic Module That Is Slidably Mounted In A System
82183871	Granted	7428655	9/8/2004	9/23/2008	10/936256	US	Smart Card For High-availability Clustering
82184687	Granted	7282640	3/23/2004	10/16/2007	10/807628	US	Electronic Device Housing And Systems And Methods For Forming Same
82188992	Granted	7298612	10/25/2005	11/20/2007	11/259467	US	Server With Vertical Drive Arrangement
82189181	Granted	7725212	10/21/2005	5/25/2010	11/255819	US	DATACENTER WITH AUTOMATED ROBOTIC MAINTENANCE
82192118	Granted	7436674	4/12/2005	10/14/2008	11/104252	US	Electronic Device Display Panel
82203848	Granted	7613937	10/31/2005	11/3/2009	11/263433	US	Method And Apparatus For Utilizing A Microcontroller To Provide An Automatic Order And Timing Power And Reset Sequencer
82210592	Granted	7558075	3/27/2006	40001	11/389787	US	Accessing An Interior Of An Electronic System
82211408	Granted	7594143	10/31/2006	9/22/2009	11/590318	US	Analysis Engine For Analyzing A Computer System Condition
82215842	Granted	7420816	9/15/2006	9/2/2008	11/532312	US	Apparatus And Method For Installing An Electrical Support Structure
82220018	Granted	7686229	3/27/2006	3/30/2010	11/389750	US	RFID Reader Device Having Closely Packed Antennas

PATENT
REEL: 038498 FRAME: 0613

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82220831	Granted	6747878	7/20/2000	6/8/2004	09/620108	US	Data I/O Management System And Method
82222640	Granted	7694091	10/23/2006	4/6/2010	11/585007	US	NON-VOLATILE STORAGE FOR BACKING UP VOLATILE STORAGE
82224638	Granted	7424630	10/31/2006	39700	11/590316	US	MULTIPROCESSOR SYSTEM WITH SELECTIVE PROCESSOR POWER DOWN OF CORE AND INTER-PROCESSOR COMMUNICATIONS PORTS
82224644	Granted	8649180	1/22/2007	2/11/2014	11/656170	US	System And Method For Tool-less Mounting Of A Bezel With An Electronic Device
82227572	Granted	7623356	4/25/2007	40141	11/789601	US	System And Method To Conjoin Blade Modules
82228262	Granted	7876580	7/31/2007	1/25/2011	11/831016	US	Rotating Cable Strain Relief
82234634	Granted	8670971	7/31/2007	3/11/2014	11/831556	US	Datacenter Workload Evaluation
82236314	Granted	8200903	8/20/2008	6/12/2012	12/194687	US	Computer Cache System With Stratified Replacement
82237688	Granted	7551039	10/19/2007	39987	11/875497	US	PHASE ADJUSTMENT IN PHASE-LOCKED LOOPS USING MULTIPLE OSCILLATOR SIGNALS
82237874	Granted	7619484	10/19/2007	11/17/2009	11/875421	US	Oscillator Phase Matching
82240685	Published		3/25/2008		12/933833	US	Locking Mechanism With Movable And Fixed Members Each Having Single And Double Locking Features
82260539	Granted	8239539	12/16/2009	8/7/2012	12/639360	US	MANAGEMENT PROCESSORS COOPERATING TO CONTROL PARTITION RESOURCES
82261535	Granted	D629807	3/19/2010	12/28/2010	29/357986	US	Computer Having A Front Bezel
82554430	Granted	8924597	6/20/2008	12/30/2014	12/997138	US	DOMAIN MANAGEMENT PROCESSOR
82846958	Granted	D673959	10/13/2011	1/8/2013	29/404002	US	Cover Plate for A Computing Device
82868581	Granted	D678295	12/7/2011	3/19/2013	29/408108	US	A Security Bezel for a Computing Device
82894243	Granted	9148974	12/20/2011	9/29/2015	13/331940	US	SERIAL CONNECTION RISER CARDS INCLUDING PARALLEL CONNECTION MEMORY MODULES (as amended)
82906188	Granted	8806147	12/28/2011	8/12/2014	13/338781	US	System And Method For Creating Ordering Points
82961860	Published		9/27/2012		13/628791	US	FAULT-TOLERANT POWER CONTROL IN A COMPUTER SYSTEM
82962690	Granted	8923000	4/30/2012	42003	13/459915	US	SERVER CHASSIS
83140972	Granted	D711387	1/4/2013	8/19/2014	29/441455	US	BEZEL FOR A TOP LOADING SERVER CARTRIDGE
83197623	Granted	9060436	10/28/2010	6/16/2015	13/822702	US	LAND GRID ARRAY SOCKET ASSEMBLY
83197703	Published		10/29/2010		13/824457	US	COMPUTER SYSTEM FABRIC SWITCH HAVING A BLIND ROUTE
83527489	Allowed		8/26/2013		29/465274	US	Door Design for the FlexRack SL-Server Rack Solution
83539623	Published		4/12/2011		14/005244	US	DATA AND DIGITAL CONTROL COMMUNICATION OVER POWER
83693683	Published		6/30/2011		14/123091	US	A MEMORY MODULE THAT INCLUDES A MEMORY MODULE COPY ENGINE FOR COPYING DATA FROM AN ACTIVE MEMORY DIE TO A SPARE MEMORY DIE

PATENT
REEL: 038498 FRAME: 0614

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83987030	Published		1/31/2012		14/370962	US	MEMORY MODULE BUFFER DATA STORAGE
84031315	Application		10/31/2014		14/530539	US	SERVER RACK LIFT
84106340	Application		5/30/2012		14/404315	US	A SOURCE TO PROVIDE A REDUNDANT OUTPUT TO A CONVERTER
84114824	Application		1/27/2015		14/606414	US	CONFIGURABLE CARD SLOTS
84191538	Application		9/3/2015		29/538432	US	SERVER MODULE
84252680	Application		1/25/2013		14/760620	US	QUEUE BUFFER DE-QUEUING
84304290	Application		7/9/2015		29/532734	US	MICROSERVER
90056906	To Be Filed		4/3/2013			US	Managing Firmware Updates
81970856	Granted	6667960	4/29/2000	12/23/2003	09/562594	US	PROTOCOL FOR IDENTIFYING COMPONENTS IN A POINT-TO-POINT COMPUTER SYSTEM
81972230	Granted	6775640	4/28/2000	8/10/2004	09/560189	US	PERFORMANCE ADDER FOR TRACKING OCCURRENCE OF EVENTS WITHIN A CIRCUIT
81972854	Granted	6788754	10/10/2000	9/7/2004	09/686111	US	Method And Apparatus For De-Skewing Clock Edges For Systems With Distributed Clocks
82013495	Granted	5757686	11/30/1995	5/26/1998	08/566415	US	Method Of Decoupling The High Order Portion Of The Addend From The Multiply Result In An FMAC
82015868	Granted	5668818	8/6/1996	9/16/1997	08/692736	US	System And Method For Scan Control Of A Programmable Fuse Circuit In An Integrated Circuit
82019612	Granted	5881224	9/10/1996	3/9/1999	08/711574	US	Apparatus And Method For Tracking Events In A Microprocessor That Can Retire More Than One Instruction During A Clock Cycle
82022303	Granted	5812830	11/14/1996	9/22/1998	08/749863	US	Debug System With Raw Mode Trigger Capability
82031351	Granted	6163473	2/2/2000	36879	09/496854	US	Memory For Storing Encoded Mask And Data Bits
82084418	Granted	7370232	6/16/2006	5/6/2008	11/454087	US	Method And Apparatus For Recovery From Loss Of Lock Step
82085981	Granted	6847909	11/1/2002	38377	10/285785	US	System And Method For Generating A SHMOO Plot By Tracking The Edge Of The Passing Region
82098401	Granted	7103756	9/30/2002	9/5/2006	10/261131	US	Data Processor With Individually Writable Register Subword Locations
82100528	Granted	8037445	8/20/2003	10/11/2011	10/644625	US	A System For And Method Of Controlling A VLSI Environment
82105268	Granted	7373555	5/9/2003	39581	10/434920	US	Systems And Methods Controlling Transaction Draining For Error Recovery
82117322	Granted	6757811	5/30/2000	38167	09/584034	US	SLACK FETCH TO IMPROVE PERFORMANCE IN A SIMULTANEOUS AND REDUNDANTLY THREADED PROCESSOR

PATENT
REEL: 038498 FRAME: 0615

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82118696	Granted	7143300	7/25/2001	39049	09/915082	US	AUTOMATED POWER MANAGEMENT SYSTEM FOR A NETWORK OF COMPUTERS
82119815	Granted	7003648	3/28/2002	2/21/2006	10/109255	US	FLEXIBLE DEMAND-BASED RESOURCE ALLOCATION FOR MULTIPLE REQUESTORS IN A SIMULTANEOUS MULTI-THREADED CPU
82121753	Granted	7472283	5/30/2002	12/30/2008	10/158359	US	METHOD AND APPARATUS FOR SECURED DIGITAL VIDEO AND ACCESS TRACKING
82127996	Granted	5752265	6/13/1996	35927	08/662479	US	MEMORY ACCESSING IN A MULTI-PROCESSOR SYSTEM USING SNOOPING
82127999	Granted	6141735	4/29/1998	10/31/2000	09/071768	US	PERFORMING A MEMORY ACCESS CYCLE IN A MULTI-PROCESSOR COMPUTER SYSTEM
82133615	Granted	6848015	11/30/2001	1/25/2005	09/998514	US	ARBITRATION TECHNIQUE BASED ON PROCESSOR TASK PRIORITY
82135301	Granted	6260166	6/1/1998	7/10/2001	09/088306	US	OBSERVABILITY REGISTER ARCHITECTURE FOR EFFICIENT PRODUCTION TEST AND DEBUG
82136297	Granted	6098166	4/10/1998	8/1/2000	09/058487	US	SPECULATIVE ISSUE OF INSTRUCTION UNDER A LOAD MISS SHADOW
82165955	Granted	6282095	4/27/2000	8/28/2001	09/559195	US	METHOD AND SYSTEM FOR CONTROLLING RADIO FREQUENCY RADIATION IN MICROELECTRONIC PACKAGES USING HEAT DISSIPATION STRUCTURES
82166078	Granted	6675374	10/12/1999	1/6/2004	09/416436	US	INSERTION OF PREFETCH INSTRUCTIONS INTO COMPUTER PROGRAM CODE
82166141	Granted	6463547	12/8/1999	37537	09/457604	US	DUAL ON-CHIP AND IN-PACKAGE CLOCK DISTRIBUTION SYSTEM
82180442	Granted	7739536	2/25/2005	6/15/2010	11/065883	US	Intelligent Frequency And Voltage Margining
82184189	Granted	7378598	2/19/2004	5/27/2008	10/782640	US	Printed Circuit Board Substrate And Method For Constructing Same
82190432	Granted	8392377	11/23/2004	3/5/2013	10/996254	US	Method For Performing A Fine-grained Undo Operation In An Interactive Editor
82192364	Granted	7817849	8/18/2005	10/19/2010	11/206693	US	Method And Apparatus For Graphical Data Compression
82192367	Granted	7920744	9/7/2010	4/5/2011	12/876908	US	Method And Apparatus For Graphical Data Compression
82197110	Granted	7500056	7/21/2004	3/3/2009	11/089586	US	System And Method To Facilitate Reset In A Computer System
82206599	Granted	7373565	8/23/2005	5/13/2008	11/209215	US	Start/stop Circuit For Performance Counter
82206788	Granted	8091090	1/5/2005	1/3/2012	11/030530	US	Method For Providing Scratch Registers For Use By A Virtual-machine Monitor
82209785	Granted	7757107	6/27/2006	7/13/2010	11/475778	US	Maintaining A Power Budget
82223708	Granted	8219996	5/9/2007	7/10/2012	11/746067	US	COMPUTER PROCESSOR WITH FAIRNESS MONITOR
82235378	Granted	7783823	7/31/2007	8/24/2010	11/831385	US	HARDWARE DEVICE DATA BUFFER

PATENT
REEL: 038498 FRAME: 0616

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82237004	Granted	9032397	5/28/2008	5/12/2015	12/128511	US	Virtual Machine Migration With Direct Physical Access Control
82240934	Granted	7518418	9/25/2007	4/14/2009	11/903948	US	Ratio Granularity Clock Divider Circuit And Method
82241687	Granted	8041896	4/30/2008	10/18/2011	12/113076	US	VIRTUALIZATION PLATFORM WITH DEDICATED CACHE ACCESS
82243682	Granted	8423803	4/23/2008	4/16/2013	12/937677	US	Method And System For Forcing One Or More Power States On A Display
82249799	Granted	8225048	4/29/2009	7/17/2012	12/432348	US	Systems And Methods For Resource Access
82562920	Granted	9015454	5/2/2008	4/21/2015	12/988954	US	Binding Data To Computers Using Cryptographic Co-Processor and Machine-Specific and Platform-Specific Keys (as amended)
82573926	Published		1/27/2011		13/014996	US	Compatible Operating System
82651092	Published		8/22/2008		13/060199	US	Remote Graphics Console And Virtual Media Access To Virtual Machine Guests
82827920	Granted	8782466	2/3/2012	7/15/2014	13/366185	US	MULTIPLE PROCESSING ELEMENTS
82853974	Granted	8782450	4/17/2009	7/15/2014	13/262809	US	Power Capping System And Method
82911830	Published		3/5/2012		13/412146	US	DEDUPLICATING A FILE SYSTEM
82928813	Published		1/29/2010		13/384353	US	Configuration Of Network Links In A Virtual Connection Environment
83011847	Granted	8964384	7/27/2012	2/24/2015	13/560356	US	Component Cooling
83092468	Granted	9011170	12/16/2010	4/21/2015	13/823916	US	Detachable Lid (as amended)
84060887	Published		4/30/2012		14/387598	US	HIDDEN CORE TO FETCH DATA
84061757	Published		4/30/2012		14/387887	US	PROCESSOR PROVIDING MULTIPLE SYSTEM IMAGES
84138259	Application		9/28/2012		14/419387	US	SYNCHRONIZING TIMESTAMP COUNTERS
81967613	Granted	6567891	3/14/2001	5/20/2003	09/808648	US	Methods And Arrangements For Improved Stripe-Based Processing
81968918	Granted	6782416	1/12/2001	38223	09/760235	US	Distributed And Geographically Dispersed Quorum Resource Disks
82044464	Granted	6021909	11/13/1998	2/8/2000	09/191963	US	Equipment Enclosure Rack Support Rail System
82052579	Granted	6647514	3/23/2000	11/11/2003	09/534921	US	HOST I/O PERFORMANCE AND AVAILABILTY OF A STORAGE ARRAY DURING REBUILD BY PRIORITIZING I/O REQUEST
82058945	Granted	8102904	9/2/2003	1/24/2012	10/653568	US	Methods And Systems For Data Rate Detection For Multi-Speed Embedded Clock Serial Receivers
82059260	Granted	7031928	10/2/2000	38825	09/678168	US	Method And System For Throttling I/O Request Servicing On Behalf Of An I/O Request Generator To Prevent Monopolization Of A Storage Device By The I/O Request Generator
82065749	Granted	7058708	6/12/2001	38874	09/878185	US	METHOD OF AND APPARATUS FOR MANAGING PREDICTED FUTURE USER ACCOUNTS ASSIGNED TO A COMPUTER
82068503	Granted	6772305	1/31/2002	38202	10/060032	US	Data Reading And Protection

PATENT
REEL: 038498 FRAME: 0617

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0618

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82080671	Granted	6807605	10/3/2002	38279	10/264915	US	Managing A Data Storage Array, A Data Storage System, And A RAID Controller
82080677	Granted	7337269	10/3/2002	39504	10/264573	US	Method Of Managing A Data Storage Array, And A Computer System Including A RAID Controller
82085165	Granted	7805525	4/30/2003	40449	10/425599	US	System And Method For Processing Fibre Channel (FC) Layer Service Requests In An FC Network
82090541	Granted	7586944	8/30/2002	40064	10/233230	US	Method And System For Grouping Clients Of A Storage Area Network According To Priorities For Bandwidth Allocation
82099400	Published		1/28/2004		10/767356	US	Transaction-based Storage Operations
82102148	Granted	7627627	4/30/2004	40148	10/837115	US	CONTROLLING COMMAND MESSAGE FLOW IN A NETWORK
82105331	Granted	7171531	1/14/2004	39112	10/759772	US	Process Job Flow Analysis
82106579	Granted	8639866	8/6/2003	41667	10/636440	US	Systems And Methods For Dividing A Communications Channel
82117505	Granted	6785785	1/25/2001	38230	09/770759	US	METHOD FOR SUPPORTING MULTI-LEVEL STRIPPING OF NON-HOMOGENEOUS MEMORY TO MAXIMIZE CONCURRENCY
82117508	Granted	7010652	8/27/2004	3/7/2006	10/928046	US	METHOD FOR SUPPORTING MULTI-LEVEL STRIPING OF NON-HOMOGENEOUS MEMORY TO MAXIMIZE CONCURRENCY
82119878	Granted	6961838	6/1/2001	11/1/2005	09/872597	US	GENERATING UPDATED VIRTUAL DISKS USING DISTRIBUTED MAPPING TABLES ACCESIBLE BY MAPPING AGENTS AND MANAGED BY A CENTRALIZED CONTROLLER
82119881	Granted	7366868	6/10/2005	4/29/2008	11/149850	US	GENERATING UPDATED VIRTUAL DISKS USING DISTRIBUTED MAPPING TABLES ACCESSIBLE BY MAPPING AGENTS AND MANAGED BY A CENTRALIZED CONTROLLER
82119884	Granted	7269631	6/1/2001	9/11/2007	09/872970	US	Architecture For Parallel Distributed Table Driven I/O Mapping
82119941	Granted	6996672	3/26/2002	2/7/2006	10/106865	US	System And Method For Active-active Data Replication
82119947	Granted	6920511	10/19/2001	7/19/2005	10/086599	US	Method And Apparatus For Controlling Communications In Data Storage Complexes
82120130	Granted	6745207	6/1/2001	6/1/2004	09/872583	US	SYSTEM AND METHOD FOR MANAGING VIRTUAL STORAGE
82120691	Granted	7028177	1/31/2002	4/11/2006	10/062186	US	Array Controller ROM Cloning In Redundant Controllers
82120694	Granted	7093043	12/27/2001	8/15/2006	10/034138	US	Data Array Having Redundancy Messaging Between Array Controllers Over The Host Bus
82126874	Granted	5809224	10/13/1995	9/15/1998	08/542897	US	ON-LINE DISK ARRAY RECONFIGURATION
82133369	Granted	6543004	7/29/1999	4/1/2003	09/363512	US	METHOD AND APPARATUS FOR ARCHIVING AND RESTORING DATA
82133429	Granted	6370616	4/4/2000	4/9/2002	09/542760	US	MEMORY INTERFACE CONTROLLER FOR DATUM RAID OPERATIONS WITH A DATUM MULTIPLIER

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82133432	Granted	6370611	4/4/2000	4/9/2002	09/542624	US	Raid XOR operations to synchronous dram using a read buffer and pipelining of synchronous dram burst read data
82133552	Granted	7467274	12/31/2001	12/16/2008	10/039018	US	METHOD TO INCREASE THE LIFE SPAN OF LIMITED CYCLE READ/WRITE MEDIA
82134551	Granted	6018125	11/15/1996	1/25/2000	08/751127	US	HIGH FREQUENCY EMI SHIELD WITH AIR FLOW FOR ELECTRONIC DEVICE ENCLOSURE
82165454	Granted	5775418	9/20/1996	7/7/1998	08/717338	US	T-SHAPED LOCKING MEMBER FOR ENGAGING A PASSAGEWAY IN A HEAT SINK FOR SECUREMENT TO A MOUNTING BOARD
82172510	Granted	7990849	2/1/2005	8/2/2011	11/048523	US	Automated Recovery From A Split Segment Condition In A Layer2 Network For Teamed Network Resources Of A Computer System
82193300	Granted	7305530	11/2/2004	12/4/2007	10/979716	US	Copy Operations In Storage Networks
82194986	Granted	8549226	5/14/2004	10/1/2013	10/846455	US	Providing An Alternative Caching Scheme At The Storage Area Network Level
82195550	Granted	7272012	9/30/2004	9/18/2007	10/954685	US	Removable Storage Modules
82198610	Granted	8121051	2/26/2007	2/21/2012	11/711260	US	Network Resource Teaming On A Per Virtual Network Basis
82201352	Granted	7472307	11/2/2004	12/30/2008	10/979730	US	Recovery Operations In Storage Networks
82201607	Published		7/26/2006		11/493425	US	A Method And Apparatus For Transferring Data Between Databases
82204478	Granted	7831750	1/29/2008	11/9/2010	12/022035	US	METHOD, APPARATUS AND SOFTWARE FOR PROCESSING INPUT OR OUTPUT REQUESTS FOR A MIRRORED STORAGE VOLUME
82207469	Granted	8688904	5/23/2005	4/1/2014	11/136593	US	A Method For Managing Data Storage
82209161	Granted	8650268	8/17/2005	2/11/2014	11/205709	US	Remotely Associating Network Ports To A Server
82211219	Granted	8903766	10/31/2005	12/2/2014	11/264571	US	Data Mirroring Using A Virtual Connection
82213838	Granted	7721053	10/24/2005	5/18/2010	11/256912	US	Intelligent Logical Unit Provisioning
82215089	Granted	8369212	8/29/2006	2/5/2013	11/512460	US	Network Path Validation Based On User-specified Criteria
82217648	Granted	8145941	10/31/2006	3/27/2012	11/590958	US	Detection And Correction Of Block-level Data Corruption In Fault-Tolerant Data-Storage Systems
82218587	Granted	8370416	4/26/2006	2/5/2013	11/411732	US	Compatibility Enforcement In Clustered Computing Systems
82219019	Granted	7725654	7/25/2006	5/25/2010	11/492350	US	AFFECTING A CACHING ALGORITHM USED BY A CACHE OF A STORAGE SYSTEM
82220024	Published		3/27/2006		11/389785	US	Managing Assets Using At Least One Policy And Asset Locations
82225019	Granted	7797468	10/31/2006	9/14/2010	11/590957	US	Method And System For Achieving Fair Command Processing In Storage Systems That Implement Command-associated Priority Queuing
82226204	Granted	8395896	2/24/2007	3/12/2013	11/678590	US	Redundant Cooling Systems And Methods

PATENT
REEL: 038498 FRAME: 0619

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82227641	Granted	8874841	4/30/2007	10/28/2014	11/799307	US	Method And System For Distributing Snapshots Across Arrays Of Any Array Cluster
82230257	Granted	7694079	4/4/2007	4/6/2010	11/732621	US	TAGGED SEQUENTIAL READ OPERATIONS
82237751	Granted	7941578	10/1/2008	5/10/2011	12/243874	US	Managing Command Request Time-outs In QOS Priority Queues
82238816	Granted	8648568	1/17/2008	2/11/2014	12/812570	US	Backup Power System Management
82249742	Granted	8370688	4/22/2010	2/5/2013	12/765088	US	IDENTIFYING A STORAGE DEVICE AS FAULTY FOR A FIRST STORAGE VOLUME WITHOUT IDENTIFYING THE STORAGE DEVICE AS FAULTY FOR A SECOND STORAGE VOLUME
82249802	Granted	8001425	4/8/2009	8/16/2011	12/420438	US	PRESERVING STATE INFORMATION OF A STORAGE SUBSYSTEM IN RESPONSE TO COMMUNICATION LOSS TO THE STORAGE SUBSYSTEM
82261286	Published		3/19/2010		12/727998	US	NON-DISRUPTIVE DISK OWNERSHIP CHANGE IN DISTRIBUTED STORAGE SYSTEMS
82578815	Granted	6833995	11/21/2001	38342	09/990121	US	Enclosure Having a Divider Wall for Removable Electronic Devices
82578878	Granted	7539790	11/15/2005	39959	11/280828	US	Reducing Latency in SCSI Protocol
82578881	Granted	7644300	4/20/2007	1/5/2010	11/738396	US	Fast Resynchronization of Data from a Remote Copy
82578921	Granted	8694563	4/18/2009	4/8/2014	12/426224	US	Space Recovery for Thin-Provisioned Storage Volumes
82662244	Granted	8667236	9/29/2010	41702	12/893335	US	HOST BASED WRITE ORDERING FOR ASYNCHRONOUS REPLICATION
82752131	Granted	8909864	9/30/2011	41982	13/250630	US	MULTICAST WRITE COMMANDS
82752151	Granted	8880769	11/1/2011	11/4/2014	13/286334	US	MANAGEMENT OF TARGET DEVICES
82847482	Published		3/15/2012		13/421060	US	BALANCING LOGICAL UNITS IN STORAGE SYSTEMS
82848209	Granted	9037772	1/5/2012	42143	13/344139	US	HOST BASED ZONE CONFIGURATION
82856493	Published		10/5/2011		13/253687	US	Key-Configured Topology With Connection Management
82858886	Published		10/21/2011		13/278541	US	Intelligent Cache Management
82899693	Granted	9009311	7/24/2012	4/14/2015	13/556994	US	INITIATOR ZONING IN PROGRESS COMMAND
82961980	Granted	8874821	4/17/2012	10/28/2014	13/449091	US	DETERMINATION OF A ZONED PORTION OF A SERVICE DELIVERY SYSTEM
82962501	Granted	8996783	4/29/2012	3/31/2015	13/459240	US	Managing Nodes in a Storage System
82969955	Granted	8892939	11/21/2012	11/18/2014	13/683765	US	OPTIMIZING A RAID VOLUME
83014449	Granted	8959374	7/31/2012	2/17/2015	13/563122	US	POWER MANAGEMENT FOR DEVICES IN A DATA STORAGE FABRIC
83014463	Granted	9037924	7/26/2012	5/19/2015	13/558702	US	Managing Operation Performance
83014469	Granted	9063937	7/31/2012	6/23/2015	13/563622	US	Storage Array Reservation Forwarding
83014486	Granted	8898386	7/31/2012	11/25/2014	13/562419	US	LOGICAL VOLUME GROUP DRIVE CONTROL
83038668	Granted	8726044	7/31/2012	5/13/2014	13/562821	US	Encrypting data on primary storage device and on cache storage device

PATENT
REEL: 038498 FRAME: 0620

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83038814	Granted	8914576	7/30/2012	12/16/2014	13/561986	US	BUFFER FOR RAID CONTROLLER WITH DISABLED POST WRITE CACHE
83095857	Granted	8793406	11/16/2012	7/29/2014	13/679013	US	SAS SWITCH THAT SUPPORTS BULK DISCOVERY WHEREIN THE BULK DISCOVERY IS EITHER ON A PUSH BASIS OR PULL BASIS
83119999	Allowed		6/8/2011		13/642045	US	STORAGE CACHING
83135436	Published		11/12/2012		13/674592	US	METHOD AND SYSTEM FOR CONFIGURING A STORAGE ARRAY
83136939	Granted	D699720	1/25/2013	2/18/2014	29/444110	US	Hard Drive Carrier
83137603	Granted	D683347	1/25/2013	5/28/2013	29/444114	US	Hard Drive Carrier
83140769	Granted	9015527	1/29/2013	4/21/2015	13/752646	US	DATA BACKUP AND RECOVERY
83931364	Published		1/31/2012		14/356598	US	DRIVERS AND CONTROLLERS
83946426	Application		3/8/2012		14/367880	US	DATA SAMPLING DEDUPLICATION
83946492	Published		4/27/2012		14/368786	US	COLLABORATIVE CACHING
84141339	Application		12/21/2012		14/433675	US	MEMORY MODULE HAVING ERROR CORRECTION LOGIC
84223938	Application		4/2/2013		14/765150	US	SATA INITIATOR ADDRESSING AND STORAGE DEVICE SLICING
84224877	Application		3/28/2013		14/647120	US	COORDINATING REPLICATION OF DATA STORED IN A NON-VOLATILE MEMORY-BASED SYSTEM
90058695	Acknowledged					US	System And Method For Message Routing In A Network
81994952	Granted	7505486	11/19/2002	3/17/2009	10/300444	US	Degradable Network Data Path Transmission Scheme
82042406	Granted	6066964	10/6/1998	5/23/2000	09/167032	US	DYNAMIC BUS
82079486	Granted	8363538	2/14/2003	1/29/2013	10/366932	US	Orthogonal Data Link, And Associated Methods
82120757	Granted	6941407	9/27/2002	9/6/2005	10/259215	US	METHOD AND APPARATUS FOR ORDERING INTERCONNECT TRANSACTIONS IN A COMPUTER SYSTEM
82128245	Granted	6075929	5/14/1998	6/13/2000	08/658496	US	PREFETCHING DATA IN RESPONSE TO A READ TRANSACTION FOR WHICH THE REQUESTING DEVICE RELINQUISHES CONTROL OF THE DATA BUS WHILE AWAITING DATA REQUESTED IN THE TRANSACTION
82129304	Granted	6125418	11/27/1996	9/26/2000	08/757429	US	METHOD AND APPARATUS FOR ENABLING A COMPUTER USER TO CONVERT A COMPUTER SYSTEM TO AN INTELLIGENT I/O SYSTEM
82130930	Granted	6134579	1/25/2000	10/17/2000	08/911842	US	SEMAPHORE IN SYSTEM I/O SPACE
82132055	Granted	6173341	8/26/1998	1/9/2001	09/140040	US	SYSTEM AND METHOD FOR CONFIGURING ADAPTERS IN A COMPUTER SYSTEM
82132988	Granted	6557068	12/22/2000	4/29/2003	09/747422	US	HIGH SPEED PERIPHERAL INTERCONNECT APPARATUS, METHOD AND SYSTEM
82132991	Granted	6816934	4/28/2003	11/9/2004	10/424896	US	High Speed Peripheral Interconnect Apparatus, Method And System

PATENT
REEL: 038498 FRAME: 0621

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82132994	Granted	7099986	9/20/2004	8/29/2006	10/945003	US	High Speed Peripheral Interconnect Apparatus, Method And System
82171259	Granted	7676621	9/12/2003	3/9/2010	10/662034	US	COMMUNICATIONS BUS TRANSCEIVER
82177754	Granted	8291145	8/10/2004	10/16/2012	10/915174	US	Method And Apparatus For Setting A Primary Port On A PCI Bridge
82180436	Granted	7984219	8/8/2005	7/19/2011	11/199523	US	Enhanced CPU Rasum Feature In ISS Servers
82180937	Granted	7606253	1/12/2004	10/20/2009	10/756667	US	Successful Transactions
82200419	Granted	7464284	3/22/2005	12/9/2008	11/086027	US	SYSTEMS AND METHODS FOR DRIVING DATA OVER A BUS WHERE THE SYSTEMS EMPLOY A BUS CLOCK THAT IS DERIVED FROM A SYSTEM CLOCK AND A DATA CLOCK DESIGNED TO LEAD THE BUS CLOCK.
82225577	Granted	8948166	10/30/2006	42038	11/554294	US	System Of Implementing Switch Devices In A Server System (as amended)
82651112	Granted	8732331	10/2/2008	5/20/2014	13/122331	US	MANAGING LATENCIES IN A MULTIPROCESSOR INTERCONNECT
82816579	Granted	8966353	10/31/2011	2/24/2015	13/285293	US	Receiver With Tap-Coefficient Adjustments
82837160	Granted	8880760	4/27/2012	11/4/2014	13/458678	US	SELF ORGANIZING HEAP METHOD INCLUDES A PACKET REORDERING METHOD BASED ON PACKET PASSING RULES ONLY REORDERING PACKETS FROM A LOAD/UNLOAD INPUT SIGNAL IS ASSERTED (AS AMENDED)
82866188	Granted	9148384	2/10/2012	9/29/2015	13/370730	US	POSTED AND UNENCUMBERED QUEUES
82934011	Published		1/11/2010		13/386632	US	SYSTEM INCLUDING DRIVER CIRCUIT FOR ELECTRICAL SIGNALING AND OPTICAL SIGNALING
83543642	Published		4/13/2011		14/009769	US	INPUT/OUTPUT PROCESSING
84069692	Published		10/31/2014		14/530175	US	SYSTEM OF IMPLEMENTING SWITCH DEVICES IN A SERVER SYSTEM (as amended)
84191329	Application		2/18/2015		14/625606	US	Shared Video Management Subsystem
82245122	Granted	8484705	9/5/2008	7/9/2013	12/205700	US	System And Method For Installing Authentication Credentials On A Remote Network Device
82616004	Granted	8619585	1/13/2011	41639	13/006131	US	DETERMINING LINK COSTS
82962567	Granted	9148400	7/3/2012	9/29/2015	13/541236	US	AUTOMATIC DETECTION OF AN END NODE BEHIND A PHONE ON A COMPUTER NETWORK
83100600	Published		8/31/2012		13/600318	US	PUBLIC KEY GENERATION UTILIZING MEDIA ACCESS CONTROL ADDRESS
83629003	Published		10/18/2013		14/058013	US	NETWORK RESOURCE AUTOMATION MANAGEMENT
81960242	Granted	5787360	8/8/1996	7/28/1998	08/694135	US	Telecommunications Systems
82068251	Granted	6665520	8/23/2001	12/16/2003	09/934569	US	POWER MANAGEMENT METHOD OF AND APPARATUS FOR USE IN A WIRELESS LOCAL AREA NETWORK (LAN)

PATENT
REEL: 038498 FRAME: 0622

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0623

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82182998	Granted	7624009	9/2/2004	11/24/2009	10/933793	US	Method And System For Producing Variable Length Context Models
82202912	Granted	8375202	9/30/2004	2/12/2013	10/957490	US	Communications Methods And Appliances
82266845	Granted	5875175	5/1/1997	2/23/1999	08/846900	US	Method And Apparatus For Time-Based Download Control
82267157	Granted	5903759	6/4/1997	36291	08/868573	US	Software Performance Analysis using Hardware Analyzer
82267592	Granted	6259691	7/24/1998	7/10/2001	09/122201	US	SYSTEM AND METHOD FOR EFFICIENTLY TRANSPORTING DUAL-TONE MULTI-FREQUENCY/MULTIPLE FREQUENCY (DTMF/MF) TONES IN A TELEPHONE CONNECTION ON A NETWORK-BASED TELEPHONE SYSTEM
82267844	Granted	5901219	8/27/1997	5/4/1999	08/921636	US	Method For Ring Signal Detection
82268279	Granted	6260084	5/18/1998	7/10/2001	09/080484	US	MODEM APPARATUS COMPRISING AN USB AND SERIAL PORT WHEREIN DATA IS
82268405	Granted	6185624	6/20/2000	2/6/2001	09/018404	US	METHOD AND SYSTEM FOR CABLE MODEM MANAGEMENT OF A DATA-OVER-CABLE SYSTEM
82268654	Granted	6047047	4/29/1998	4/4/2000	09/069421	US	TELECOMMUNICATION CONFIGURATIONS FOR TRANSCEIVING E-MAIL AND METHODS OF USING SAME
82268903	Granted	6675218	8/14/1998	1/6/2004	09/134496	US	SYSTEM FOR USER-SPACE NETWORK PACKET MODIFICATION
82270094	Granted	6253265	2/29/2000	6/26/2001	09/516270	US	Reinitialization Circuit for a Data Communications Interface
82270151	Granted	6570884	11/5/1999	37768	09/434253	US	Receive Filtering For Communication Interface
82270529	Granted	6192440	2/26/1999	2/20/2001	09/258501	US	System And Method For Dynamically Selecting Interrupt Storage Time Threshold Parameters
82270652	Granted	6314525	10/1/1997	37201	08/943379	US	Means For Allowing Two Or More Network Interface Controller Cards To Appear As One Card To An Operating System
82271093	Granted	6130944	2/27/1998	36809	09/031627	US	MULTI-POSITION TELEPHONE UNIT
82271528	Granted	6775268	3/3/2000	8/10/2004	09/518445	US	METHOD AND SYSTEM FOR MAPPING PACKET SERVICE CATEGORIES TO ASYMMETRIC DIGITAL SUBSCRIBER LINE LATENCY PATHS
82271843	Granted	6650901	2/29/2000	11/18/2003	09/515366	US	SYSTEM AND METHOD FOR PROVIDING USER-CONFIGURED TELEPHONE SERVICE IN A DATA NETWORK TELEPHONY SYSTEM
82272026	Granted	6982962	4/10/2000	1/3/2006	09/546887	US	System and Method for Selecting a Network Access Provider Using A Portable Information Device
82272092	Granted	6834326	3/17/2000	12/21/2004	09/527904	US	RAID Method and Device with Network Protocol Between Controller and Storage Devices
82272212	Granted	6266376	2/4/2000	7/24/2001	09/499088	US	System and method for adjusting PCM data frames for robbed bit signaling in a telephone network

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82272653	Granted	6779047	2/20/2001	8/17/2004	09/790037	US	SERIAL COMMUNICATION PORT ARBITRATION BETWEEN A HOTSYNC MANAGER AND A WIRELESS CONNECTION MANAGER
82273340	Granted	6766020	2/23/2001	7/20/2004	09/792826	US	System and Method for Comfort Noise Generation
82273772	Granted	7460533	11/15/2001	12/2/2008	10/002832	US	System and Method for Multi-Casting Announcements
82274396	Granted	8027333	9/5/2008	9/27/2011	12/204837	US	Ip-based Enhanced Emergency Services Using Intelligent Client Devices
82274459	Granted	7480260	5/13/2004	1/20/2009	10/845382	US	Method and Apparatus for Implementing a Presence-Based Universal Camp-On Feature in Packet-Based Telephony Systems
82274528	Granted	8767974	6/15/2005	7/1/2014	11/153673	US	System And Method For Generating Comfort Noise
82274777	Granted	7711744	1/18/2006	40302	11/334136	US	Simple and Fast Directory Search with Reduced Keystrokes and Reduced Server Calls
82275272	Granted	6072830	8/9/1996	36683	08/689519	US	VIDEO ENCODER/DECODER SYSTEM
82275398	Granted	6088334	3/13/1997	7/11/2000	08/816699	US	SYSTEM AND METHOD FOR DETERMINING END-TO-END CHARACTERISTICS OF A DATA COMMUNICATION CHANNEL
82275464	Granted	6125343	5/29/1997	9/26/2000	08/865399	US	SYSTEM AND METHOD FOR SELECTING A LOUDEST SPEAKER BY COMPARING AVERAGE FRAME GAINS
82016933	Granted	5727146	6/4/1996	3/10/1998	08/658191	US	Source Address Security For Both Training And Non-Training Packets
82018739	Granted	5920699	11/7/1996	36347	08/744335	US	Broadcast Isolation And Level 3 Network Switch
82020986	Granted	5802319	10/23/1996	36039	08/740047	US	Method And Apparatus For Employing An Intelligent Agent To Cause A Packet To Be Sent To Update A Bridge's Filtering Database When A Station Is Moved In A Network
82035719	Granted	6493318	1/11/1999	37600	09/228890	US	Cost Propagation Switch Protocols
82035722	Granted	6473403	1/11/1999	37558	09/228159	US	IDENTIFY NEGOTIATION SWITCH PROTOCOLS
82035725	Granted	7283476	10/1/2002	39371	10/263394	US	Identity Negotiation Switch Protocols
82087979	Granted	6889295	3/5/2002	38475	10/091760	US	Re-Ordering Requests For Shared Resources
82088039	Granted	6668849	37323	37985	10/094527	US	Check Valve
82090415	Granted	6779092	5/15/2002	8/17/2004	10/146621	US	REORDERING REQUESTS FOR ACCESS TO SUBDIVIDED RESOURCE
82169261	Granted	7570591	8/3/2004	8/4/2009	10/911312	US	Method And Apparatus For Negotiating Link Speed And Configuration
82169264	Granted	7467228	8/25/2003	12/16/2008	10/648148	US	Diversified Host Based Route Selection Metric
82169267	Granted	8255503	1/11/2005	8/28/2012	11/033244	US	Method And Apparatus For Communicating Text-based Commands Through A Network
82173632	Granted	7738467	7/15/2003	6/15/2010	10/620109	US	Output Port Based Double Q Tagging
82173947	Granted	7506065	11/26/2003	3/17/2009	10/723041	US	Remote Mirroring Using IP Encapsulation
82186556	Granted	7693975	3/2/2004	4/6/2010	10/792325	US	Network Device Applying Kalman Filter

PATENT
REEL: 038498 FRAME: 0624

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82191863	Granted	7843854	2/1/2006	11/30/2010	11/346916	US	Network Loop Detection Using Known Static Addresses
82191866	Granted	8203941	5/28/2004	6/19/2012	10/856325	US	Virus/worm Throttle Threshold Settings
82198922	Granted	8009668	8/17/2004	8/30/2011	10/919760	US	Method And Apparatus For Router Aggregation
82204847	Granted	7756124	3/23/2005	7/13/2010	11/088394	US	Encapsulating Packets For Network Chip Conduit Port
82204853	Granted	7469356	2/22/2005	12/23/2008	11/063274	US	Signals Crossing Multiple Clock Domains
82205102	Granted	7672293	3/10/2006	3/2/2010	11/373631	US	Hardware Throttling Of Network Traffic Sent To A Processor Based On New Address Rates
82205540	Granted	7571371	8/18/2005	8/4/2009	11/207387	US	PARALLEL PARITY CHECKING FOR CONTENT ADDRESSABLE MEMORY AND TERNARY CONTENT ADDRESSABLE MEMORY
82206098	Published		2/11/2005		11/056990	US	Switching Mesh With User-configurable Paths
82206101	Published		4/30/2007		11/799403	US	Stacked Tagging For Broadcasting Through Hierarchy Of Meshes
82214093	Published		8/30/2005		11/216240	US	Method For Prohibiting An Unauthorized Component From Functioning With A Host Device
82217147	Granted	7657491	10/31/2006	2/2/2010	11/590049	US	APPLICATION OF FUZZY LOGIC TO RESPONSE AND UNSOLICITED INFORMATION.
82217150	Granted	7634682	10/30/2006	12/15/2009	11/590038	US	Method And System For Monitoring Network Health
82217153	Granted	8149797	6/30/2006	4/3/2012	11/477915	US	Visualization Of RF Neighbor Correlation In A Single View
82217213	Published		10/17/2006		11/582269	US	In Flight TCP Window Adjustment To Improve Network Performance
82221893	Published		10/31/2006		11/591411	US	Systems And Methods For Managing Event Messages
82230200	Granted	7760530	6/4/2007	40379	11/810072	US	Content Addressable Memory Address Resolver
82231256	Granted	7940709	4/30/2007	40673	11/742520	US	Service Provision At A Network Access Point
82231259	Granted	8046569	4/30/2007	40841	11/796810	US	Processing Element Having Dual Control Stores To Minimize Branch Latency
82233071	Granted	8132232	7/12/2007	3/6/2012	11/776870	US	Controlling Access Privileges In A Wireless Domain
82234694	Granted	8510419	9/18/2007	8/13/2013	11/917722	US	IDENTIFYING A SUBNET ADDRESS RANGE FROM DNS INFORMATION
82241621	Granted	7975052	1/29/2009	7/5/2011	12/361561	US	METHODS AND SYSTEMS FOR MANAGING NETWORK ACCESS
82241624	Granted	8670332	11/7/2008	41709	12/267514	US	Systems And Methods For Notifying Users Of A Network Resource Outage
82243685	Allowed		3/24/2008		12/079013	US	System And Method For Securing A Network From Zero-day Vulnerability Exploits
82247243	Granted	8095815	10/14/2008	1/10/2012	12/250829	US	System For Reducing Power Consumption In An Electronic Chip
82248740	Granted	8432912	4/22/2010	4/30/2013	12/765832	US	Router Packet Filtering And Mapping
82249112	Granted	8086728	3/12/2009	12/27/2011	12/403209	US	A Method And Apparatus Of Correlating Power Usage With Data Traffic Flow For A Network Device

PATENT
REEL: 038498 FRAME: 0625

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82249118	Granted	8117321	1/26/2009	2/14/2012	12/359544	US	Network Connection Management Using Connection Profiles
82249736	Published		4/22/2010		12/765813	US	Router Method And System
82250051	Granted	8825889	5/11/2009	9/2/2014	12/464021	US	Network Traffic Rate Limiting System And Method
82250111	Granted	8416701	4/30/2009	4/9/2013	12/433779	US	A System And Method For Updating Forwarding Tables
82251239	Granted	7512379	10/27/2005	3/31/2009	11/259866	US	Wireless Access Point (AP) Automatic Channel Selection
82258604	Granted	7801490	3/17/2004	9/21/2010	10/803172	US	INTERFERENCE BASED SCHEDULING USING COGNITIVE RADIOS
82265288	Granted	8654769	11/15/2010	2/18/2014	12/946241	US	Convergence Of Multicast Traffic In Response To A Topology Change
82265906	Granted	5802278	1/23/1996	9/1/1998	08/599473	US	BRIDGE/ROUTER ARCHITECTURE FOR HIGH PERFORMANCE SCALABLE NETWORKING
82265909	Granted	5784582	10/28/1996	7/21/1998	08/738929	US	Data Processing System Having Memory Controller For Supplying Current Request And Next Request For Access To The Shared Memory Pipeline
82266470	Granted	5994998	5/29/1997	11/30/1999	08/865016	US	POWER TRANSFER APPARATUS FOR CONCURRENTLY TRANSMITTING DATA AND POWER OVER DATA WIRES
82266473	Granted	6140911	10/12/1999	10/31/2000	09/416067	US	POWER TRANSFER APPARATUS FOR CONCURRENTLY TRANSMITTING DATA AND POWER OVER DATA WIRES
82266533	Granted	5793260	4/26/1996	8/11/1998	08/641101	US	CURRENT CONTROLLED OSCILLATOR WITH VOLTAGE INDEPENDENT CAPACITANCE
82266719	Granted	6208662	1/15/1998	3/27/2001	09/007803	US	Method For Distributing And Recovering Buffer Memories In An Asynchronous Transfer Mode Edge Device
82266911	Granted	6108345	8/4/1999	8/22/2000	08/865739	US	CONFIGURABLE WAN/LAN BRIDGE
82267154	Granted	6052383	5/29/1997	4/18/2000	08/865242	US	LAN To ATM Backbone switch Module
82267406	Granted	6182135	2/5/1998	1/30/2001	09/019461	US	Method For Determining Whether Two Pieces Of Network Equipment Are Directly Connected
82267658	Granted	5870412	12/12/1997	2/9/1999	08/989483	US	Forward Error Correction System For Packet Based Real Time Media
82267904	Granted	6058500	1/20/1998	5/2/2000	09/009480	US	HIGH-SPEED SYNDROME CALCULATION
82267910	Granted	6219815	2/18/2000	4/17/2001	09/506995	US	High-speed syndrome calculation
82268033	Granted	6034993	11/14/1997	3/7/2000	08/970836	US	Method And Apparatus For Adaptively Equalizing A Signal Received From A Remote Transmitter
82268219	Granted	6205149	5/25/2000	3/20/2001	08/927650	US	Quality Of Service Control Mechanism And Apparatus
82268222	Granted	6185214	9/11/1997	2/6/2001	08/927915	US	USE OF CODE VECTORS FOR FRAME FORWARDING IN A BRIDGE/ROUTER
82268342	Granted	6118785	4/7/1998	9/12/2000	09/056280	US	Point-To-Point Protocol With A Signaling Channel
82268594	Granted	6275853	5/27/1998	8/14/2001	09/090595	US	System And Method For Extending Communications Features Using Generic Management Information Base Objects

PATENT
REEL: 038498 FRAME: 0626

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82268777	Granted	6182193	5/28/1998	1/30/2001	09/085766	US	A CACHING SYSTEM USING CACH INDEXES FOR CALL GROUP DATA OF CALL REQUESTS IN ATM NETWORK DEVICES
82268840	Granted	6262977	8/28/1998	7/17/2001	09/141803	US	High Availability Spanning Tree With Rapid Reconfiguration
82268843	Granted	6233074	5/18/1998	5/15/2001	09/080450	US	Ring Networks Utilizing Wave Division Multiplexing
82269032	Granted	6721334	2/18/1999	4/13/2004	09/252128	US	METHOD AND APPARATUS FOR PACKET AGGREGATION IN PACKET-BASED NETWORK
82269092	Granted	6253269	12/22/1998	6/26/2001	09/218330	US	BUS ARBITER SYSTEM AND METHOD FOR MANAGING COMMUNICATION BUSES
82269221	Granted	6328480	11/17/1999	12/11/2001	09/442237	US	Connectors For Providing Fibre Optic Connection To Ethernet Devices Having Twisted-Pair Connections
82269281	Granted	6182125	10/13/1998	1/30/2001	09/170437	US	METHODS FOR DETERMINING SENDABLE INFORMATION CONTENT BASED ON A DETERMINED NETWORK LATENCY
82269404	Granted	6892229	9/30/1998	5/10/2005	09/163817	US	System and Method for Assigning Dynamic Host Configuration Protocol Parameters in Devices Using Resident Network Interfaces
82269407	Granted	6351524	1/20/1999	2/26/2002	09/234187	US	Toll Saving Method and Apparatus for a Remote access System
82269590	Granted	6198632	11/30/1998	3/6/2001	09/201642	US	Slim Media Jack
82269596	Granted	6033240	10/30/1998	3/7/2000	09/183839	US	RETRACTABLE MEDIA JACK OPERABLE WITH TWO DISCRETE MEDIA CONNECTORS
82269719	Granted	6570848	7/14/1999	5/27/2003	09/353609	US	System And Method For Congestion Control In Packet-based Communication Networks
82269776	Granted	7660408	4/28/2000	2/9/2010	09/560581	US	ATTENUATION AND TERMINATION CIRCUIT USING IMPEDANCE SYNTHESIS
82269779	Granted	8472614	12/22/2009	6/25/2013	12/644201	US	Attenuation And Termination Circuit Using Impedance Synthesis
82269839	Granted	6377667	3/15/1999	4/23/2002	09/268610	US	TELEPHONE LINE-ASSIST POWERED APPARATUS WITH PROGRAMMABLE HOLD CURRENT
82269905	Granted	6611502	1/15/1999	8/26/2003	09/232742	US	Improved Spanning Tree With Rapid Propagation Of Topology Changes
82269908	Granted	6680917	1/28/2003	1/20/2004	10/352717	US	SPANNING TREE WITH RAPID PROPAGATION OF TOPOLOGY CHANGES
82270031	Granted	6771288	3/8/2001	8/3/2004	09/802257	US	Methods and Apparatus for Updating Information in a Display Containing Fixed and Variable Information
82270088	Granted	7275113	5/27/1999	9/25/2007	09/322114	US	DYNAMIC NETWORK ADDRESS CONFIGURATION SYSTEM AND METHOD
82270091	Granted	6146153	3/3/1999	11/14/2000	09/265000	US	Adapter Apparatus And Method For Transmitting Electronic Data

PATENT
REEL: 038498 FRAME: 0627

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0628

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82270157	Granted	6116924	5/25/1999	9/12/2000	09/318166	US	Electromagnetic Emissions Shielding Structure For Circuit Board Connector Assembly
82270904	Granted	6785286	8/6/1999	8/31/2004	09/369324	US	PORT MIRRORING ACROSS A TRUNKED STACK OF MULTI-PORT COMMUNICATION DEVICES
82271591	Granted	6763031	11/17/1999	7/13/2004	09/442238	US	Network Device Incorporating Selective Compression Of Stored Data Packets
82271840	Granted	6206267	12/30/1999	3/27/2001	09/475897	US	FULL COVERAGE THERMAL COUPLE
82272152	Granted	6807175	8/25/2000	10/19/2004	09/645569	US	Distributed Multicast Routing In Packet-based Communication Network Devices
82272215	Granted	6201836	1/20/1999	3/13/2001	09/234451	US	Method and Apparatus For Combining A Trellis Coding Scheme With A Pre-Coding Scheme For Data Signals
82272218	Granted	6760372	8/10/2000	7/6/2004	09/636290	US	ADAPTIVE SIGNAL PROCESSOR USING AN EYE-DIAGRAM METRIC
82272401	Granted	6574414	1/8/2001	37775	09/756088	US	Light Transmission Apparatus And Method
82272530	Granted	6772349	5/3/2000	38202	09/563548	US	Detection of an Attack Such as a Pre-Attack on a Computer Network
82272587	Granted	7673034	8/9/2000	40239	09/635275	US	SELF SERVICE DATA INTERFACE
82272650	Granted	6965577	10/24/2000	11/15/2005	09/694673	US	IDENTIFYING AN EDGE SWITCH AND PORT TO WHICH A NETWORK USER IS ATTACHED
82272716	Granted	7143159	12/8/2000	11/28/2006	09/732991	US	Method For Correlating And Presenting Network Management Data
82272779	Granted	6763018	11/30/2000	7/13/2004	09/728282	US	Distributed Protocol Processing and Packet Forwarding Using Tunneling Protocols
82272836	Granted	6763348	12/8/2000	38181	09/731855	US	Method and Apparatus for Searching Databases Employing a Trie Search Structure
82273151	Granted	7701941	3/28/2001	40288	09/818670	US	Network Switch With Mutually Coupled Look-up Engine And Network Processor
82273154	Granted	8194672	3/2/2010	6/5/2012	12/715720	US	Network Switch With Mutually Coupled Look-up Engine And Network Processor
82273337	Granted	7016955	7/2/2001	3/21/2006	09/897381	US	Network Management Apparatus and Method for Processing Events Associated with Device Reboot
82273709	Granted	7350076	12/6/2001	3/25/2008	10/016558	US	SCHEME FOR DEVICE AND USER AUTHENTICATION WITH KEY DISTRIBUTION IN A WIRELESS NETWORK
82273835	Granted	7143299	9/18/2001	11/28/2006	09/956376	US	Method For Power Management Of Intelligent Hardware
82274021	Granted	6662119	8/2/2002	12/9/2003	10/211754	US	Method And Apparatus For Monitoring Connector Degradation
82274273	Granted	7362750	6/17/2003	4/22/2008	10/464292	US	Switch Module Architecture
82274336	Granted	7403484	1/7/2004	7/22/2008	10/751930	US	Switching Fabrics And Control Protocols For Them
82274339	Granted	8175086	6/17/2008	41037	12/140326	US	Switching Fabrics And Control Protocols For Them

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0629

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82274399	Granted	7657926	3/19/2004	2/2/2010	10/804927	US	ENABLING NETWORK COMMUNICATION FROM ROLE BASED AUTHENTICATION
82274402	Granted	8176543	12/17/2009	5/8/2012	12/640195	US	ENABLING NETWORK COMMUNICATION FROM ROLE BASED AUTHENTICATION
82274525	Granted	7349335	1/11/2005	3/25/2008	11/032762	US	Packet Metering In High-speed Network Units
82274585	Granted	7746860	7/29/2005	6/29/2010	11/192772	US	Testing Applications or Devices in Large Networks
82274840	Granted	7860236	2/1/2007	40540	11/670316	US	Method And System For Echo Cancellation In A Network Switch
82274960	Granted	8085662	5/14/2008	12/27/2011	12/120377	US	Open Network Connection
82607889	Granted	8839013	9/30/2011	9/16/2014	13/249992	US	Method Of Reducing Power Consumption In A Network
82689177	Granted	8879571	11/1/2011	11/4/2014	13/286878	US	DELAYS BASED ON PACKET SIZES
82690050	Granted	8689049	11/3/2011	4/1/2014	13/288782	US	CORRECTIVE ACTIONS BASED ON PROBABILITIES
82749151	Allowed		7/28/2011		13/192618	US	FLOW CONTROL IN PACKET PROCESSING SYSTEMS
82757040	Granted	8902891	7/27/2011	12/12/2014	13/192081	US	Method of managing broadcasts and multicasts by a network device
82761700	Granted	8508941	6/30/2011	8/13/2013	13/172982	US	FAN ASSEMBLY WITH FLEX PRINTED CIRCUIT BOARD
82938863	Granted	8780908	10/28/2009	7/15/2014	13/386973	US	Method And Apparatus For Tracing A Multicast Flow
82962521	Granted	9075820	7/30/2012	7/7/2015	13/562050	US	Distributed File System at Network Switch
82964731	Granted	8886879	4/27/2012	11/11/2014	13/458345	US	TCAM ACTION UPDATES
82965375	Granted	9134774	4/27/2012	9/15/2015	13/458869	US	Sharing Power Between Network Devices
83037440	Published		5/6/2013		13/887620	US	SYSTEM AND METHOD FOR DATA COMMUNICATION USING A CLASSIFIED FLOW TABLE IN OPENFLOW NETWORKS
83101556	Published		10/30/2012		13/664211	US	VIRTUAL PRIVATE NETWORK ACCESS CONTROL
83128778	Granted	8665911	11/2/2012	3/4/2014	13/668001	US	Signature checking using deterministic finite state machines
83210484	Application		5/31/2013		29/456589	US	POWER CORD KEYING PLUG AND RECEPTACLE
83256515	Published		5/1/2013		13/875211	US	Method and system for selecting a data compression technique for data transfer through a data network
83425457	Granted	9031070	2/18/2011	5/12/2015	13/981936	US	METHODS FOR CONTROLLING ELECTIONS IN A MULTICAST NETWORK
83793411	Published		9/28/2011		14/239837	US	IMPLEMENTING A SWITCH FABRIC RESPONSIVE TO AN UNAVAILABLE PATH
83991444	Published		4/30/2012		14/372575	US	NETWORK ACCESS APPARATUS HAVING A CONTROL MODULE AND A NETWORK ACCESS MODULE
84149062	Published		7/31/2012		14/417066	US	FEATURE ENABLEMENT OR DISABLEMENT BASED ON DISCOVERY MESSAGE
84168578	Published		8/21/2012		14/422348	US	FLOW CONTROL IN A NETWORK
84202776	Application		4/1/2015		14/676261	US	Shared Resource Allocation Control
90051596	Application		3/8/2013		14/773187	US	ROUTING A DATA PACKET TO A SHARED SECURITY ENGINE

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82251296	Granted	8885539	1/26/2005	11/11/2014	10/905922	US	Configurable Quality Of Service Support Per Virtual Access Point (VAP) In A Wireless LAN (WLAN) Access Device
82265780	Granted	5990838	6/12/1996	11/23/1999	08/660964	US	Dual Orthogonal Monopole Antenna System
82267718	Granted	6075797	10/17/1997	6/13/2000	08/953757	US	METHOD AND SYSTEM FOR DETECTING MOBILITY OF A WIRELESS-CAPABLE MODEM TO MINIMIZE DATA TRANSFER RATE RENEGOTIATIONS
82272962	Granted	7002932	1/12/2001	2/21/2006	09/759848	US	METHOD AND SYSTEM FOR PROVIDING NETWORK CONNECTIVITY AND MOBILITY WHILE ROAMING
82273841	Granted	7085533	2/22/2002	8/1/2006	10/082489	US	NETWORK WIRELESS ACCESS INTELLIGENT CONCENTRATOR SYSTEM AND METHOD
82274210	Granted	6961596	4/21/2003	11/1/2005	10/419638	US	Modular RF Antenna and Filter System for Dual Radio WLAN Access Points
82676485	Published		6/1/2011		13/150903	US	INDICATION OF URL PREREQUISITE TO NETWORK COMMUNICATION
82749114	Granted	9148781	7/28/2011	9/29/2015	13/192681	US	WIRELESS TRANSMISSION OF DATA PACKETS BASED ON CLIENT ASSOCIATIONS
82941439	Published		1/29/2010		13/387467	US	Wireless Network System And Method Configured To Mitigate Co-channel Interference
83207842	Published		3/29/2013		13/853522	US	POWERING A NETWORK DEVICE WITH CONVERTED ELECTRICAL POWER
83863458	Published		1/6/2012		14/347286	US	WIRELESS ACCESS POINT ASSIGNMENT
83991418	Published		4/27/2012		14/372564	US	OVERLAPPING SUB-CHANNELS IN A NETWORK
84017521	Published		2/29/2012		14/377920	US	CONTROL OF FREQUENCY CHANNEL BETWEEN WIRELESS ACCESS POINTS ACCORDING TO SEQUENCE
84292465	Application		12/21/2012		14/654810	US	Forwarding of Service Requests by a Wireless Controller
82061885	Granted	7562248	2/18/2005	7/14/2009	11/061022	US	DATA STORAGE SYSTEM
82233320	Granted	8838541	10/25/2007	9/16/2014	12/671334	US	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82261355	Granted	8499131	4/13/2010	7/30/2013	12/759174	US	Capping A Number Of Locations Referred To By Chunk References
83701134	Published		10/14/2011		14/130955	US	PERFORMING A REPLICATION OPERATION IN RESPONSE TO MOVEMENT OF A VIRTUAL DATA CONTAINER
81969857	Granted	7079346	6/14/2001	7/18/2006	09/881778	US	Data Storage Methods And Apparatus
81972290	Granted	7506836	8/1/2006	3/24/2009	11/507725	US	Irregular Surfaced Tape Guide
81977036	Granted	6570740	8/21/2000	5/27/2003	09/643317	US	Tape Guide With Wear Resistant Coating
81978785	Granted	6648428	4/18/2001	11/18/2003	09/837601	US	Reconfigurable Data Cartridge Import/Export Drawer
81994577	Granted	7455375	8/23/2001	11/25/2008	09/938159	US	Removable Media Storage Method And Device For A Data Storage System

PATENT
REEL: 038498 FRAME: 0630

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82006880	Granted	7039796	6/4/2002	5/2/2006	10/161984	US	METHOD AND SYSTEM OF LOCATING A POSITION IN MEMORY AT WHICH TO STORE INCOMING FIRMWARE IMAGE
82015373	Granted	5746464	4/30/1996	5/5/1998	08/640415	US	Self-Locking Friction Based Robotic Gripper
82027670	Granted	6820273	6/16/2003	11/16/2004	10/463485	US	Imaging Device And Method For Use In An Autochanger
82030040	Granted	6229669	11/24/1999	5/8/2001	09/449010	US	IMPROVED SERVO HEAD DESIGN AND METHOD OF USING THE SAME
82030043	Granted	6647613	2/22/2001	11/18/2003	09/791903	US	METHOD OF MAKING A MAGNETIC WRITE HEAD AND IN-PROCESS HEAD STRUCTURES
82033160	Granted	6101575	10/20/1998	8/8/2000	09/175806	US	Tape Drive Data Buffering
82037345	Granted	7451461	8/9/1999	11/11/2008	09/371708	US	Laterally Expandable Modular Data Storage System
82040219	Granted	5979813	9/30/1998	11/9/1999	09/164185	US	Tape Threading Apparatus
82043027	Granted	6499684	5/26/1999	12/31/2002	09/320238	US	Tape Leader Pin Asembly And Method For Making The Same
82255547	Granted	7657898	4/4/2003	2/2/2010	10/407812	US	System And Method For Customizing Infrastructure Services For Use In Network Services
82255604	Granted	8560364	2/14/2003	10/15/2013	10/368285	US	Rationalizing A Resource Allocation
82257230	Published		7/7/2006		11/482594	US	System And Method For Service Oriented Design Process
84304270	Application		5/28/2013		14/759956	US	MOBILE AUGMENTED REALITY FOR MANAGING ENCLOSED AREAS
82197611	Granted	7677460	3/20/2006	3/16/2010	11/378305	US	SMARTCARD METHOD AND COMPUTER SYSTEM
82200977	Granted	7636944	10/28/2005	12/22/2009	11/262436	US	Method And Apparatus For Detecting And Responding To Email Based Propagation Of Malicious Software In A Trusted Network
82254797	Granted	7219236	2/26/2003	5/15/2007	10/373189	US	Administering a Security System
82256420	Granted	8756682	12/20/2004	6/17/2014	11/019958	US	METHOD AND SYSTEM FOR NETWORK INTRUSION PREVENTION
82256609	Granted	7966375	6/28/2004	6/21/2011	10/878980	US	SYSTEM AND METHOD FOR RESTRICTING ACCESS TO EMAIL AND ATTACHMENTS
82256672	Granted	8434152	3/19/2009	4/30/2013	12/407305	US	SYSTEM AND METHOD FOR RESTRICTING ACCESS TO AN ENTERPRISE NETWORK
82256984	Granted	7930735	3/31/2006	4/19/2011	11/394905	US	Service Management Framework
82257539	Published		8/1/2008		12/184732	US	VERIFYING AN ELECTRONIC DOCUMENT
82259726	Granted	8443427	1/27/2010	5/14/2013	12/694570	US	METHOD AND APPARATUS FOR CONTROLLING ACCESS TO A NETWORK RESOURCE
82615045	Published		2/24/2011		13/034364	US	METHOD AND APPARATUS FOR VERIFYING STORED DATA
82739204	Granted	8516064	6/21/2011	8/20/2013	13/165477	US	SYSTEM AND METHOD FOR RESTRICTING ACCESS TO EMAIL AND ATTACHMENTS
84049732	Published		9/29/2014		14/500228	US	Non-invasive Method And System For Automated Administration Of Diverse Security Constrained Servers

PATENT
REEL: 038498 FRAME: 0631

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81999509	Granted	6813162	11/16/2001	11/2/2004	09/992864	US	Method And Apparatus For Supporting Circuit Component Having Solder Column Array Interconnects Using Interposed Support Shims
82238066	Published		3/6/2008		12/919153	US	Prediction Of Systems Location Inside A Data Center By Using Correlation Coefficients
82249298	Granted	7969727	4/29/2009	6/28/2011	12/432199	US	COOLING
82900884	Published		7/31/2009		13/375297	US	COMMISSIONING OF SENSORS
83119186	Published		5/20/2010		13/641214	US	DATA CENTER COOLING
84141259	Published		12/20/2012		14/431019	US	MEMORY INSERTION TOOL
82003256	Granted	7308463	6/26/2002	12/11/2007	10/180284	US	PROVIDING REQUESTED FILE MAPPING INFORMATION FOR A FILE ON A STORAGE DEVICE
82169573	Granted	8010757	10/10/2003	8/30/2011	10/684013	US	Media Vaulting
82215530	Granted	8190742	4/25/2006	5/29/2012	11/411386	US	Distributed Differential Store With Non-distributed Objects And Compression-enhancing Data-object Routing
82264973	Granted	8538920	8/8/2011	9/17/2013	13/205022	US	SYSTEM AND METHOD FOR STORAGE SERVICE
82275959	Published		6/16/2011		13/162234	US	PERFORMANCE ANALYZER FOR SELF-TUNING SYSTEM CONTROLLER
82915511	Published		7/19/2012		13/553657	US	INFORMATION MANAGEMENT POLICY BASED ON RELATIVE IMPORTANCE OF A FILE
83778108	Published		8/10/2011		14/131031	US	PROVIDING ACCESS TO A CLOUD STORAGE SERVICE ACCORDING TO AN AWARDED CREDIT
83815051	Published		10/18/2011		14/349132	US	IMAGE ACQUISITION
83816837	Published		11/2/2011		14/342734	US	METHOD OF SEARCHING AND GENERATING A RELEVANT SEARCH STRING
83996350	Application		4/26/2012		14/375526	US	INCREASING A DATA TRANSFER RATE
84005387	Application		8/18/2014		14/461717	US	BACKUP AND NON-STAGED RECOVERY OF VIRTUAL ENVIRONMENTS
82069934	Granted	8171026	4/16/2009	5/1/2012	12/424801	US	Method And Vector Analysis For A Document
82110764	Granted	6553392	10/14/1999	37733	09/418425	US	SYSTEM AND METHOD FOR PURGING DATABASE UPDATE IMAGE FILES AFTER COMPLETION OF ASSOCIATED TRANSACTIONS
82116761	Granted	6021405	12/11/1996	36557	08/763407	US	SYSTEM AND METHOD FOR OPTIMIZING DATABASE QUERIES WITH IMPROVED PERFORMANCE ENHANCEMENTS
82200668	Granted	8892564	10/28/2005	41961	11/261752	US	INDEXING FOR DATA HAVING INDEXABLE AND NON-INDEXABLE PARENT NODES
82222079	Granted	8572041	9/12/2003	41576	10/662964	US	Representing Records
82241747	Granted	8140961	11/21/2007	40988	11/986593	US	AUTOMATED RE-ORDERING OF COLUMNS FOR ALIGNMENT TRAP REDUCTION
82250672	Granted	8224806	7/31/2009	41107	12/533365	US	SELECTIVITY-BASED OPTIMIZED-QUERY-PLAN CACHING

PATENT
REEL: 038498 FRAME: 0632

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82262102	Granted	8229943	8/26/2010	7/24/2012	12/868895	US	SYSTEM AND METHOD FOR MODIFYING AN EXECUTING QUERY
82263101	Granted	8352620	7/27/2010	1/8/2013	12/843946	US	DISPLAYING A NETWORK TOPOLOGY MAP WITH A REDUCED NUMBER OF OBJECTS
82275839	Granted	8930344	2/4/2011	1/6/2015	13/021051	US	SYSTEMS AND METHODS FOR HOLDING A QUERY
83210544	Published		10/25/2010		13/821213	US	PROVIDING INFORMATION MANAGEMENT
83487907	Published		3/17/2011		13/981724	US	DATA SOURCE ANALYTICS
84030751	Application		10/28/2014		14/526359	US	QUERY HOTNESS AND SYSTEM HOTNESS METRICS
82038029	Granted	6043816	5/29/1998	36613	09/087583	US	USER INTERFACE MECHANISM FOR MAINTAINING QUICK ACCESS TO IMPORTANT INFORMATION IN A WINDOWS-BASED COMPUTER ENVIRONMENT
82051583	Granted	6526504	11/18/1999	2/25/2003	09/442654	US	SYSTEM AND METHOD FOR SIZING COMPUTER SYSTEMS WITH VARIABLE RAMP-UP PERIOUS BY CALCULATING A THROUGHPUT FOR TARGET CONFIGURATION BASED ON DATA OBTAINED FROM A COMPUTER SUBSYSTEM
82208036	Granted	8024303	7/29/2005	40806	11/193815	US	Software Release Validation
82227701	Granted	7836175	4/15/2008	40498	12/103319	US	Apparatus And Method For Processing Management Information
82236254	Granted	8352407	10/30/2008	41282	12/261871	US	Systems And Methods For Modeling Consequences Of Events
82964565	Granted	9122383	4/16/2012	42248	13/447788	US	OBJECT VISUALIZATION
83097872	Published		10/25/2012		13/660643	US	DATA SYNCHRONIZATION
83193793	Allowed		9/1/2010		13/818677	US	PERFORMING WHAT-IF ANALYSIS
83584509	Published		3/9/2011		14/001782	US	PERFORMING A CHANGE PROCESS BASED ON A POLICY
83954381	Application		9/12/2014		14/485339	US	Portfolio Generation Based on a Dynamic Allocation of Resources
84072895	Published		7/16/2012		14/391692	US	WORKFLOW COMPILATION
84072998	Published		7/31/2012		14/396131	US	Supporting Multi-Tenancy in a Federated Data Management System
84122962	Published		2/5/2015		14/614461	US	MARKING PROGRAM FILES AS BELONGING TO AN APPLICATION
84269657	Application		7/31/2015		14/815,307	US	INFORMATION TECHNOLOGY SERVICE MANAGEMENT RECORDS IN A SERVICE LEVEL TARGET DATABASE TABLE
84312946	Application		2/28/2013		14/765099	US	PROVIDING CODE CHANGE JOB SETS OF DIFFERENT SIZES TO VALIDATORS
81956495	Granted	6189038	11/18/1999	36935	09/442787	US	Generic Notifications Framework System And Method For Enhancing Operation Of A Management Station On A Network

PATENT
REEL: 038498 FRAME: 0633

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81957122	Granted	6151031	9/9/1996	11/21/2000	08/712229	US	Map Builder System And Method For Enabling Generic Interfacing Of An Application With A Display Map Generation Process In A Management System
81967925	Granted	6778990	7/27/2001	8/17/2004	09/916545	US	Dynamic Component Activation Method Using A Relational Database As The Repository For Registration Information
81982904	Granted	7302478	3/2/2001	11/27/2007	09/796704	US	System For Self-monitoring Of SNMP Data Collection Process
82028858	Granted	6185600	12/8/1997	2/6/2001	08/986601	US	Universal Viewer/Browser For Network And System Events Using A Universal User Interface Generator, A Generic Product Specification Language, And Product Specific Interfaces
82070000	Granted	6907551	10/2/2001	6/14/2005	09/969898	US	Fault Notification Method And Related Provider Facility
82079738	Granted	7975043	2/25/2003	7/5/2011	10/372440	US	Method And Apparatus For Monitoring A Network
82089101	Granted	8463940	1/31/2003	6/11/2013	10/355002	US	Method Of Indicating A Path In A Computer Network
82182503	Granted	7733800	12/10/2004	6/8/2010	11/008280	US	Method And Mechanism For Identifying An Unmanaged Switch In A Network
82186181	Granted	7508773	4/6/2005	3/24/2009	11/099708	US	METHOD OF ANALYZING THE CAPACITY OF A COMPUTER SYSTEM
82196048	Granted	7353378	2/18/2005	4/1/2008	11/061392	US	Optimizing Computer System
82203041	Granted	7512841	10/22/2004	3/31/2009	10/972045	US	Method And System For Network Fault Analysis
82216778	Granted	7836026	4/19/2007	11/16/2010	11/785711	US	METHOD, APPARATUS AND SOFTWARE FOR VERIFYING A PARAMETER VALUE AGAINST A PREDETERMINED THRESHOLD FUNCTION
82223264	Granted	6046988	2/10/1999	4/4/2000	09/248010	US	Method Of Determining The Topology Of A Network Of Objects
82244183	Granted	7925666	10/6/2006	4/12/2011	11/544251	US	System And Method For Managing The Application Of Access Control Lists On Network Devices
82245740	Published		6/17/2009		12/486326	US	MODELING A COMPUTING ENTITY
82247744	Granted	7944857	2/24/2009	5/17/2011	12/391271	US	Method And System For Deriving Tunnel Path Information In MPLS Networks
82264226	Published		10/18/2010		12/906460	US	TRANSACTION CLASSIFICATION RULE GENERATION
82264283	Published		10/29/2010		12/916356	US	SYSTEM AND METHOD FOR DETERMINING TOPOLOGY OF MONITORED ENTITIES
82264412	Published		2/28/2011		13/036466	US	ESTIMATING BUSINESS SERVICE RESPONSIVENESS
82393855	Granted	8892505	12/29/2010	11/18/2014	12/980348	US	METHOD FOR SCHEDULING A TASK IN A DATA WAREHOUSE
82580985	Published		2/15/2011		13/027288	US	DETECTING NETWORK-APPLICATION SERVICE FAILURES
82581543	Granted	8713088	3/27/2011	4/29/2014	13/072724	US	IDENTYING USERS OF REMOTE SESSIONS
82852394	Granted	8468161	7/14/2009	6/18/2013	13/259020	US	Determining A Seasonal Effect In Temporal Data
82911223	Allowed		4/30/2012		13/459265	US	BACKUP JOBS SCHEDULING OPTIMIZATION

PATENT
REEL: 038498 FRAME: 0634

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82963520	Granted	8930773	4/16/2012	1/6/2015	13/447711	US	DETERMINING ROOT CAUSE
82963692	Published		4/20/2012		13/452577	US	Managing Overlapping Address Domains
83037480	Published		7/30/2012		13/561592	US	CAUSATION ISOLATION USING A CONFIGURATION ITEM METRIC IDENTIFIED BASED ON EVENT CLASSIFICATION
83136083	Published		6/1/2010		13/698431	US	Methods, Apparatus, And Articles Of Manufacture To Deploy Software Applications
83199532	Granted	9054954	3/13/2013	6/9/2015	13/800436	US	DETERMINING FALSE ALARMS IN AN IT APPLICATION (as amended)
83691270	Application		4/4/2011		14/008940	US	CREATING A CORRELATION RULE DEFINING A RELATIONSHIP BETWEEN EVENT TYPES
83783398	Published		7/27/2011		14/235134	US	MAINTAINING AND UTILIZING A REPORT KNOWLEDGEBASE
84164233	Application		3/18/2013		14/430809	US	VISUALIZING CONDITIONS OF INFORMATION TECHNOLOGY ENVIRONMENTS
84312797	Application		7/9/2015		14/795335	US	DATASET CHART SCALING
84312840	Application		7/31/2015		14/815,701	US	ISOLATION OF PROBLEMS IN A VIRTUAL ENVIRONMENT
81982907	Granted	7581167	5/17/2001	40050	09/858634	US	METHOD AND SYSTEM FOR AUTOMATED SIMULATION OF DYNAMIC URL-BASED WEB APPLICATION
82216277	Granted	8762514	10/5/2005	41814	12/047512	US	Load-testing Device And Load-testing Method
82233254	Granted	6792460	1/20/2003	9/14/2004	10/348203	US	SYSTEM AND METHODS FOR MONITORING APPLICATION SERVER PERFORMANCE
82233257	Granted	7401143	3/3/2004	7/15/2008	10/792145	US	SYSTEM AND METHODS FOR MONITORING APPLICATION SERVER PERFORMANCE
82233260	Granted	7822844	3/3/2004	10/26/2010	10/792150	US	SYSTEM AND METHODS FOR MONITORING APPLICATION SERVER PERFORMANCE
82233569	Granted	6138157	10/12/1998	10/24/2000	09/170130	US	METHOD AND APPARATUS FOR TESTING WEB SITES
82233572	Granted	6631408	8/30/2000	37901	09/651833	US	TESTING WEB SITES
82244429	Allowed		5/29/2008		12/937350	US	Method And System Of Testing Software Using Real Time Replication
82259414	Granted	9104450	10/26/2009	42227	12/605418	US	GRAPHICAL USER INTERFACE COMPONENT CLASSIFICATION
82259417	Granted	8762873	10/26/2009	41814	12/605426	US	GRAPHICAL USER INTERFACE COMPONENT IDENTIFICATION
82260599	Published		4/10/2010		12/757993	US	DETECTING USER INTERFACE DEFECTS IN A SOFTWARE APPLICATION
82264349	Granted	8572095	10/19/2010	41576	12/907154	US	ADAPTIVE OBJECT IDENTIFICATION
82580919	Granted	8893074	3/11/2011	41961	13/045766	US	SOFTWARE DEVELOPMENT REQUIREMENTS RECORDING
82581005	Published		3/14/2011		13/047574	US	SCRIPT EXECUTION WITH FALLBACK
82663349	Granted	8862945	10/10/2011	10/14/2014	13/269749	US	SYSTEM AND METHOD FOR MEASURING THE EFFECT OF INTERRUPTIONS ON SOFTWARE APPLICATION USABILITY

PATENT
REEL: 038498 FRAME: 0635

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0636

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82844173	Granted	8977904	2/17/2012	3/10/2015	13/398888	US	GENERATING A REPLAYABLE TESTING SCRIPT FOR ITERATIVE USE IN AUTOMATED TESTING UTILITY
82848441	Granted	8683323	1/9/2012	3/25/2014	13/346390	US	EVALUATION OF DIFFERENCES BETWEEN XML SCHEMAS
82963732	Granted	9043762	5/31/2012	5/26/2015	13/485364	US	SIMULATED NETWORK
82976942	Published		6/28/2012		13/535913	US	Metadata-based Test Data Generation
83098499	Published		9/28/2012		13/629885	US	RESPONDING TO NATURAL LANGUAGE QUERIES
83098628	Published		2/28/2013		13/781221	US	TRANSPORT SCRIPT GENERATION BASED ON A USER INTERFACE SCRIPT
83821005	Application		7/31/2014		14/448729	US	FUTURE CLOUD RESOURCE USAGE COST MANAGEMENT
83991607	Published		1/26/2012		14/373815	US	IMAGE-BASED APPLICATION AUTOMATION
84290656	Application		7/1/2015		14/789455	US	INJECTION OF DATA INTO A SOFTWARE APPLICATION
90031121	To Be Filed		4/11/2013			US	AUTOMATED CONTEXTUAL-BASED SOFTWARE LOCALIZATION
90037879	To Be Filed					US	TEST SESSION SIMILARITY DETERMINATION
82058324	Granted	6738950	3/16/2000	5/18/2004	09/527387	US	Method And System For Dynamic Generation Of Web Site Content For Specific User Communities From A Single Content Base
82900177	Granted	8966635	2/24/2012	2/24/2015	13/404572	US	SOFTWARE MODULE OBJECT ANALYSIS
83721337	Allowed		5/31/2011		14/115648	US	AUTOMATED SECURITY TESTING
84079513	Published		7/25/2012		14/398037	US	DETERMINING APPLICATION VULNERABILITIES
84312777	Application		1/29/2013		14/762939	US	ANALYZING STRUCTURE OF WEB APPLICATION
82174070	Granted	7870188	7/30/2004	1/11/2011	10/903277	US	Systems And Methods For Exposing Web Services
82182002	Granted	7552433	11/12/2003	39987	10/704592	US	Non-platform-specific Unique Identifier Generation
82244243	Granted	8250570	2/17/2004	41142	10/778325	US	Automated Provisioning Framework For Internet Site Servers
82247432	Granted	8275853	3/13/2009	41177	12/403387	US	Method And System For A Service Intermediary Selection In A Web Service Management System
82258982	Granted	8498959	11/28/2009	41485	12/626882	US	Policy Enforcement
82263227	Published		10/20/2010		12/908685	US	AUTOMATED SERVICE VERSION UPGRADING
82580853	Granted	7529827	12/10/2007	39938	11/953563	US	STANDARD OPERATING PROCEDURE AUTOMATION IN DATABASE ADMINISTRATION
82580859	Granted	8738753	3/16/2009	41786	12/405109	US	STANDARD OPERATING PROCEDURE AUTOMATION IN DATABASE ADMINISTRATION
82663575	Granted	8935676	8/7/2011	42017	13/204691	US	AUTOMATED TEST FAILURE TROUBLESHOOTER
82850253	Granted	8739172	1/16/2012	41786	13/350984	US	GENERATING A VIRTUAL MACHINE PLACEMENT PLAN FOR AN IDENTIFIED SEASONALITY OF SEGMENTS OF AN AGGREGATED RESOURCE USAGE (as amended)
82964622	Published		5/23/2012		13/478723	US	Managing Virtual Machines In A Cloud Computing System
83037526	Published		7/30/2012		13/561857	US	DATABASE ADAPTER

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83141934	Published		6/30/2010		13/703148	US	SYSTEM AND METHOD FOR SERVICE RECOMMENDATION SERVICE
84071982	Published		6/8/2012		14/391571	US	VERSION MANAGEMENT FOR APPLICATIONS
84113828	Acknowledged					US	EVOLVING OPENSTACK SERVICE MODEL AND POLICY-BASED FULFILLMENT FOR CLOUD BRIDGE
82021175	Granted	6021492	10/9/1996	2/1/2000	08/728008	US	Software Metering Management Of Remote Computing Devices
82062506	Granted	8024270	5/8/2001	9/20/2011	10/275871	US	Operating A Communications Infrastructure On A Pre-payment Basis
82062758	Granted	7000019	10/16/2001	2/14/2006	09/977495	US	Establishment Of A Deferred Network Communication Session
82071059	Granted	7085960	10/29/2002	8/1/2006	10/284050	US	Communication System And Method
82110329	Granted	6097939	7/11/1997	8/1/2000	08/891556	US	METHOD AND APPARATUS FOR EVENT DATA MAINTENANCE PER MIN/ESN PAIR IN A MOBILE TELEPHONE SYSTEM
82170326	Granted	8442058	4/30/2003	5/14/2013	10/426350	US	Locating Stations Between Protocols
82170329	Granted	7599379	4/30/2003	10/6/2009	10/426673	US	Registering Stations Between Protocols
82174073	Granted	7657624	6/22/2005	2/2/2010	11/158784	US	Network Usage Management System And Method
82186745	Granted	8045466	7/29/2004	10/25/2011	10/901138	US	Communnication Method And Apparatus
82187993	Granted	8073120	7/1/2005	12/6/2011	11/632806	US	Telephone Communications
82202165	Granted	8391908	11/28/2005	41338	11/791315	US	Improvements In Or Relating To Communication Systems
82202231	Granted	8291077	1/13/2006	10/16/2012	11/331858	US	PROVISION OF SERVICES OVER A COMMON DELIVERY PLATFORM SUCH AS A MOBILE TELEPHONY NETWORK
82210280	Granted	7949332	7/24/2006	40687	11/491842	US	Feature Sharing
82212842	Granted	8271691	5/17/2007	41170	11/798853	US	Method For Coupling A Telephone Switched Circuit Network To An Internet Protocol Network
82217708	Granted	9049029	4/28/2006	42157	11/413550	US	Providing Different Network Services To A Network Agent
82219961	Granted	7957511	5/18/2006	6/7/2011	11/436363	US	Providing Network Services To A Network Agent
82229696	Granted	8326654	4/18/2008	41247	12/105417	US	Providing A Service To A Service Requester
82239434	Published		3/20/2008		12/921419	US	Systems And Methods For Scheduling And Delivering Messages Based On Recipient's Time Zone
82241186	Granted	8817787	1/28/2009	8/26/2014	12/361204	US	Data Processing Method And System
82253732	Granted	9154607	8/15/2008	42283	12/192920	US	SYSTEM AND METHOD FOR CONTROLLING HANDLING OF TERMINATING A COMMUNICATION
82281452	Granted	7548754	4/11/2003	6/16/2009	10/412024	US	Authentication And Non-interfering Sms-messaging In GSM Telephone Communication
82903423	Published		3/26/2012		13/430161	US	ROUTING REQUESTS OVER A NETWORK
82942979	Granted	8644855	8/31/2012	41674	13/602098	US	FEMTOCELL NETWORK FOR DETERMINING LOCATION OF A MOBILE DEVICE
83213710	Published		5/10/2013		13/891689	US	FILTER REGULAR EXPRESSION

PATENT
REEL: 038498 FRAME: 0637

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83877424	Published		8/16/2012		14/349119	US	SYSTEMS AND METHODS FOR MONITORING COMPLIANCE STATUS BASED ON TIME-ORDERED REFERENCE PERIODS
83996413	Published		11/5/2014		14/533624	US	FILTERING DATA FROM A DATABASE
84094535	Published		8/29/2012		14/401061	US	CIRCUIT-SWITCHED CALL DELIVERY
81971792	Granted	7376953	10/29/2001	39588	10/020355	US	Apparatus And Method For Routing A Transaction To A Server
82065815	Granted	7770199	3/18/2003	40393	10/390161	US	Media Playing
82081922	Granted	6813691	10/31/2001	38293	10/001584	US	Computer Performance Improvement By Adjusting A Count Used For Preemptive Eviction Of Cache Entries
82089542	Granted	7185086	6/26/2002	2/27/2007	10/184684	US	METHOD FOR ELECTRONIC TRACKING OF AN ELECTRONIC DEVICE
82176068	Granted	8230001	5/28/2004	7/24/2012	10/856330	US	Providing Information About A System Using Scripts
82182059	Granted	7340565	1/13/2004	3/4/2008	10/755919	US	Source Request Arbitration
82183502	Granted	7240246	12/15/2003	7/3/2007	10/737449	US	Avoiding Name Collision For The ACPI Control Methods
82197857	Granted	7305518	10/20/2004	12/4/2007	10/969662	US	Method And System For Dynamically Adjusting DRAM Refresh Rate
81971789	Granted	7523454	3/6/2001	4/21/2009	09/799662	US	Apparatus And Method For Routing A Transaction To A Partitioned Server
81971795	Granted	7249179	11/9/2000	7/24/2007	09/709705	US	SYSTEM FOR AUTOMATICALLY ACTIVATING RESERVE HARDWARE COMPONENT BASED ON HIERARCHICAL RESOURCE DEPLOYMENT SCHEME OR RATE OF RESOURCE CONSUMPTION
81971852	Granted	6880156	7/27/2000	38454	09/626627	US	Demand Responsive Method And Apparatus To Automatically Activate Spare Servers
81972728	Granted	6832181	11/3/2000	12/14/2004	09/706095	US	Method To Distinguish Between Physical Hardware And Simulated Hardware
81983471	Granted	6907603	9/29/2003	6/14/2005	10/673842	US	Software Update Management System With Update Chronology Generator
82001261	Granted	7877607	8/30/2002	40568	10/231043	US	Tamper-evident Data Management
82022111	Granted	5838962	4/9/1997	11/17/1998	08/840080	US	INTERRUPT DRIVEN DYNAMIC ADJUSTMENT OF BRANCH PREDICTIONS
82022609	Granted	6101326	5/29/1997	8/8/2000	08/865565	US	Method And Apparatus For Frame Elimination For Simple Procedures With Tail Calls
82023611	Granted	6898787	3/22/2001	38496	09/814511	US	Method And Apparatus For Ordered Predicate Phi In Static Single Assignment Form
82031975	Granted	6112280	1/6/1998	8/29/2000	09/003568	US	METHOD AND APPARATUS FOR GENERATIONAL CODE CACHE MANAGER FOR A DYNAMIC OPTIMIZATION FRAMEWORK
82035350	Granted	6405238	7/31/1998	6/11/2002	09/127655	US	Quick Navigation Upon Demand To Main Areas Of Web Site
82055261	Granted	7318102	5/23/2000	1/8/2008	09/578155	US	Reliable Datagram

PATENT
REEL: 038498 FRAME: 0638

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82055267	Granted	7904576	1/7/2008	3/8/2011	11/970306	US	Reliable Datagram Via Independent Source Destination Resources
82057886	Granted	6832335	5/7/2003	38335	10/430395	US	Transparent Software Emulation As An Alternative To Hardware Bus Lock
82083293	Granted	7159184	7/31/2002	39084	10/207874	US	Method And Graphical User Interface For Creating A Configuration File Used To Allocate Computer System Resources Among Workloads
82092599	Granted	7310741	8/17/2004	39434	10/920835	US	PHASE ADJUSTED DELAY LOOP EXECUTED BY DETERMINING A NUMBER OF NOPS BASED ON A MODULUS VALUE
82098344	Granted	7581224	7/10/2003	40050	10/616883	US	Systems And Methods For Monitoring Resource Utilization And Application Performance
82099655	Granted	7447751	2/6/2003	39756	10/360880	US	METHOD FOR DEPLOYING A VIRTUAL PRIVATE NETWORK
82103714	Granted	7353328	3/29/2004	39539	10/812149	US	Memory Testing
82106273	Granted	8065368	7/31/2003	40869	10/632446	US	Configuring Secure Templates For An Application And Network Management System
82110389	Granted	6092213	35703	36725	08/941478	US	A FAULT TOLERANT METHOD OF MAINTAINING AND DISTRIBUTING CONFIGURATION INFORMATION IN A DISTRIBUTED PROCESSING SYSTEM
82110512	Granted	6330552	9/28/1998	12/11/2001	09/162638	US	DATABASE QUERY COST MODEL OPTIMIZER
82115201	Granted	5834958	7/2/1993	11/10/1998	08/086955	US	POWER ON SYSTEM
82116131	Granted	5978914	1/23/1995	11/2/1999	08/377385	US	METHOD AND APPARATUS FOR PREVENTING INADVERTENT CHANGES TO SYSTEM-CRITICAL FILES IN A COMPUTING SYSTEM
82116512	Granted	5754752	3/28/1996	35934	08/625532	US	END-TO-END SESSION RECOVERY
82116638	Granted	5852719	12/20/1995	36151	08/578410	US	SYSTEM FOR TRANSFERRING DATA OVER A NETWORK IN WHICH A DATA SOURCE SENDS ONLY A DESCRIPTOR WHICH A DATA SINK USES TO RETRIEVE DATA
82116698	Granted	6785690	3/17/1997	38230	08/819536	US	Method And System For Storage, Retrieval, And Query Of Objects In A Schemeless Database
82116758	Granted	5682528	12/22/1995	10/28/1997	08/578889	US	SPOON-FEED INITIALIZATION IN A MULTIPROCESSOR SYSTEM
82125815	Granted	5706514	3/4/1996	1/6/1998	08/610027	US	DISTRIBUTED EXECUTION OF MODE MISMATCHED COMMANDS IN MULTIPROCESSOR COMPUTER SYSTEMS
82131116	Granted	6219041	9/24/1999	4/17/2001	08/940322	US	UNIVERSAL USER INTERFACE FOR A SYSTEM UTILIZING MULTIPLE PROCESSES
82132802	Granted	6253318	7/29/1998	6/26/2001	09/126025	US	METHOD OF DEVELOPING PHYSICAL REQUIREMENTS FOR COMPUTER CONFIGURATION

PATENT
REEL: 038498 FRAME: 0639

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82132805	Granted	6192470	7/29/1998	2/20/2001	09/126024	US	CONFIGURATION SIZER FOR SELECTING SYSTEM OF COMPUTER COMPONENTS BASED ON PRICE/PERFORMANCE NORMALIZATION
82136615	Granted	6212493	12/1/1998	36984	09/203119	US	PROFILE DIRECTED SIMULATION USED TO TARGET TIME-CRITICAL CROSSPRODUCTS DURING RANDOM VECTOR TESTING
82163648	Granted	5826254	4/18/1995	10/20/1998	08/423429	US	SYSTEM FOR SELECTIVELY BROWSING A LARGE, DISTRIBUTED DIRECTORY TREE USING AUTHENTICATION LINKS
82164710	Granted	5831558	12/10/1997	11/3/1998	08/664656	US	METHOD OF DATA IN A COMPUTER SYSTEM BY ENCODING DATA USING A DATA DICTIONARY
82171451	Granted	7650040	7/21/2005	1/19/2010	11/185811	US	Method, Apparatus And System For Data Block Rearrangement For LZ Data Compression
82174631	Allowed		9/16/2005		11/228657	US	Globally Fair Polling For Packet Switched Routers Using Dynamically Biased Arbitration
82178195	Granted	7502333	3/23/2004	39882	10/806628	US	Pre-configured Topology With Connection Management
82178750	Granted	7401330	12/11/2003	39644	10/734551	US	Cloning Programming Code
82181999	Granted	8060610	10/28/2005	40862	11/261298	US	Multiple Server Workload Management Using Instant Capacity Processors
82185188	Granted	7839765	10/5/2004	40505	10/957707	US	Advertising Port State Changes In A Network
82187678	Granted	7518614	38587	39917	11/210082	US	Method And Apparatus For Capturing And Transmitting Screen Images
82189055	Granted	7530057	10/21/2004	5/5/2009	10/971267	US	Program Code Coverage
82191929	Granted	7516297	11/10/2005	4/7/2009	11/272155	US	Memory Management
82195361	Granted	7496722	4/26/2005	2/24/2009	11/114532	US	Memory Mapped Page Priorities
82196045	Granted	8046760	7/9/2004	10/25/2011	10/887621	US	Lock Contention Pinpointing
82197737	Granted	7434206	3/10/2005	10/7/2008	11/077826	US	Identifying Memory Leaks In Computer Systems
82199915	Granted	7730486	2/28/2005	6/1/2010	11/067838	US	System And Method For Migrating Virtual Machines On Cluster Systems
82200353	Granted	7962789	6/28/2006	6/14/2011	11/476259	US	Method And Apparatus For Automated Testing Of A Utility Computing System
82201106	Granted	7467327	1/25/2005	12/16/2008	11/042504	US	Method And System Of Aligning Execution Point Of Duplicate Copies Of A User Program By Exchanging Information About Instructions Executed
82203038	Granted	7426614	2/3/2006	9/16/2008	11/347642	US	METHOD AND SYSTEM OF EXECUTING DUPLICATE COPIES OF A PROGRAM IN LOCK STEP
82203668	Granted	7590868	2/9/2005	9/15/2009	11/055245	US	Method And Apparatus For Managing Encrypted Data On A Computer Readable Medium

PATENT
REEL: 038498 FRAME: 0640

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82204667	Granted	7631269	10/27/2005	12/8/2009	11/261136	US	Utility, Method And Device Providing Vector Images That May Be Updated To Reflect The Physical States Of Configurable Components Of A Device
82208780	Granted	7451249	3/16/2006	11/11/2008	11/378852	US	METHOD AND APPARATUS FOR DIRECT INPUT AND OUTPUT IN A VIRTUAL MACHINE ENVIRONMENT CONTAINING A GUEST OPERATING SYSTEM
82209035	Granted	7694123	3/28/2006	4/6/2010	11/391593	US	Storing Files For Operating System Restoration
82209596	Granted	7412611	6/13/2005	8/12/2008	11/150919	US	Power Management With Low Power Processes
82209782	Granted	7702931	6/27/2006	4/20/2010	11/475418	US	Adjusting Power Budgets Of Multiple Servers
82212653	Granted	7613847	5/16/2006	11/3/2009	11/435831	US	Partially Virtualizing An I/o Device For Use By Virtual Machines
82216337	Allowed		10/31/2006		11/590165	US	Pre-computing Computer Software Patch Solutions
82216460	Granted	7870543	12/8/2006	40554	11/608629	US	Dynamic Tuning Of User-space Process
82216901	Granted	7586842	2/27/2007	9/8/2009	11/711944	US	Failover Of Multicast Traffic Flows Using NIC Teaming
82216964	Granted	8402172	12/10/2007	3/19/2013	12/000142	US	Processing An Input/output Request On A Multiprocessor System
82218524	Granted	8214834	4/30/2007	7/3/2012	11/742555	US	ASYNCHRONOUS WAKEUP MECHANISM
82218650	Granted	7953996	12/18/2006	40694	11/640572	US	ACPI To Firmware Interface
82218773	Granted	8171469	8/15/2006	5/1/2012	11/504480	US	Package Compatibility
82219271	Granted	7861042	10/23/2006	40540	11/552103	US	Processor Acquisition Of Ownership Of Access Coordinator For Shared Resource
82219337	Granted	8910289	1/31/2007	41982	11/669208	US	AUTOMATIC HARDENING OF AN UNCOMPROMISED COMPUTER NODE
82220021	Granted	7436303	3/27/2006	39735	11/389784	US	Rack Sensor Controller For Asset Tracking
82220522	Granted	8020166	1/25/2007	40799	11/657962	US	DYNAMICALLY CONTROLLING THE NUMBER OF BUSY WAITERS IN A SYNCHRONIZATION OBJECT
82221707	Granted	8056084	1/25/2007	11/8/2011	11/626957	US	METHOD AND SYSTEM FOR RESOURCE ALLOCATION
82224077	Granted	7610429	1/30/2007	10/27/2009	11/668493	US	Method And System For Determining Device Criticality In A Computer Configuration
82226387	Granted	7856488	3/30/2007	12/21/2010	11/694223	US	Electronic Device Profile Migration
82227950	Granted	8046766	4/26/2007	10/25/2011	11/740850	US	Process Assignment To Physical Processors Using Minimum And Maximum Processor Shares
82228010	Granted	8966474	4/30/2007	2/24/2015	11/742536	US	Managing Virtual Machines Using Shared Image
82228076	Granted	8386391	5/1/2007	2/26/2013	11/742656	US	RESOURCE-TYPE WEIGHTING OF USE RIGHTS
82229636	Granted	8768978	7/30/2007	7/1/2014	11/830541	US	SINGLE-OPERATION ON-LINE SCHEMA EVOLUTION
82231193	Granted	7765242	5/10/2007	7/27/2010	11/801970	US	METHODS AND APPARATUS FOR STRUCTURE LAYOUT OPTIMIZATION FOR MULTI-THREADED PROGRAMS
82231262	Granted	8584138	7/30/2007	11/12/2013	11/888232	US	DIRECT SWITCHING OF SOFTWARE THREADS BY SELECTIVELY BYPASSING RUN QUEUE BASED ON SELECTION CRITERIA

PATENT
REEL: 038498 FRAME: 0641

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82231568	Granted	7765238	4/30/2007	7/27/2010	11/799429	US	MAPPING AN ACTIVE ENTRY WITHIN A HASHED PAGE TABLE
82235132	Published		9/13/2007		11/855121	US	Virtual Machine Schedular With Memory Access Control
82235564	Granted	8176498	9/11/2007	5/8/2012	11/853134	US	Power Setting Adjustments By Mission Operating System In Response To Requests From Platform Manager
82235567	Granted	8356306	7/31/2007	1/15/2013	11/831852	US	Workload Management Controller Using Dynamic Statistical Control
82237940	Granted	8281303	10/31/2007	10/2/2012	11/932440	US	Dynamic Allocation Of Virtual Machine Devices
82238624	Granted	8495662	9/23/2008	7/23/2013	12/235625	US	System And Method For Improving Run-time Performance Of Applications With Multithreaded And Single Threaded Routines
82238810	Published		12/15/2008		12/334552	US	System And Method For Flexible Device Driver Resource Allocation
82241432	Granted	8626976	2/26/2008	1/7/2014	12/919050	US	Method And Apparatus For Performing A Host Enumeration Process
82244309	Granted	9152200	8/13/2009	10/6/2015	12/540908	US	Resource And Power Management Using Nested Heterogeneous Hypervisors
82246739	Granted	8868622	10/23/2009	10/21/2014	12/604719	US	Method And Apparatus For Allocating Resources In A Computer System
82247552	Application		12/23/2008		12/342487	US	Dynamic Rule-Based Privilege Elevation
82247738	Granted	8489753	9/7/2009	7/16/2013	12/554934	US	APPARATUS AND COMPUTER-IMPLEMENTED METHOD FOR CONTROLLING MIGRATION OF A VIRTUAL MACHINE
82247804	Application		10/30/2008		12/262129	US	DRAG-AND-DROP LICENSING
82247930	Application		1/28/2009		12/361414	US	AUTHENTICATION METHOD SELECTION BASED ON CLIENT-SPECIFIC INFORMATION
82248242	Granted	8898085	1/30/2009	11/25/2014	12/362723	US	LICENSE MANAGEMENT SOLUTION FOR CENTRAL-MANAGEMENT PRODUCTS
82249178	Published		3/11/2009		12/401619	US	Method And System For Optimizing Network Input/output Performance
82258418	Granted	8832235	3/17/2009	9/9/2014	12/406060	US	DEPLOYING AND RELEASING LOGICAL SERVERS
82258727	Granted	8713139	10/29/2009	4/29/2014	12/588844	US	AUTOMATIC FIXUP OF NETWORK CONFIGURATION ON SYSTEM IMAGE MOVE
82262789	Granted	8489893	4/9/2010	7/16/2013	12/757855	US	ENCRYPTION KEY ROTATION MESSAGES WRITTEN AND OBSERVED BY STORAGE CONTROLLERS VIA STORAGE MEDIA
83097437	Published		12/21/2012		13/724193	US	BOOT FROM MODIFIED IMAGE
83264003	Granted	9037925	11/30/2010	5/19/2015	13/885687	US	CHANGE MESSAGE BROADCAST ERROR DETECTION
84197944	Published		4/16/2015		14/688582	US	CHANGE MESSAGE BROADCAST ERROR DETECTION
81968606	Granted	7441066	12/29/2003	10/21/2008	10/750606	US	MANAGING A COMPUTER SYSTEM HAVING A PLURALITY OF PARTITIONS USING A SERVICE PROCESSOR

PATENT
REEL: 038498 FRAME: 0642

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81976850	Granted	6654252	7/18/2001	11/25/2003	09/908375	US	Server System With Removable Server Cartridges
81976853	Granted	6895532	5/3/2001	5/17/2005	09/848574	US	Wireless Server Diagnostic System And Method
81991208	Granted	7348495	2/5/2004	3/25/2008	10/773723	US	Uniform Force Hydrostatic Bolster Plate
82019681	Granted	6055610	8/25/1997	4/25/2000	08/918209	US	DISTRIBUTED MEMORY MULTIPROCESSOR COMPUTER SYSTEM WITH DIRECTORY BASED CACHE COHERENCY WITH AMBIGUOUS MAPPING OF CACHED DATA TO MAIN-MEMORY LOCATIONS
82085042	Granted	6767220	9/25/2003	7/27/2004	10/671647	US	Systems And Methods For Interconnecting Electronic Components
82090853	Granted	7360295	3/15/2005	4/22/2008	11/080908	US	System And Method For Securely Positioning Apparatus Within A Housing
82093034	Granted	6895489	8/7/2002	5/17/2005	10/212740	US	System And Method For Operating In Endian Independent Mode
82095659	Granted	7583497	8/26/2003	9/1/2009	10/647915	US	Drive Loading System
82097468	Granted	7307862	9/4/2003	12/11/2007	10/655927	US	Circuit And System For Accessing Memory Modules
82098650	Published		1/7/2009		12/349703	US	Integrated Margin Testing
82101962	Granted	7453701	8/17/2005	11/18/2008	11/205715	US	Computer System With Movable Card Guide
82103525	Granted	7398345	6/12/2003	7/8/2008	10/461183	US	INTER-INTEGRATED CIRCUIT BUS ROUTER FOR PROVIDING INCREASED SECURITY
82107584	Granted	D494975	7/26/2002	38223	29/164569	US	Handle For A Chassis Mounted Server Computer (as Amended)
82118069	Granted	6976184	8/27/2003	12/13/2005	10/649523	US	Clock Forward Initialization And Reset Signaling Technique
82118507	Granted	7103694	9/7/2001	9/5/2006	09/948872	US	METHOD AND APPARATUS IMPLEMENTING A TUNED STUB SCSI TOPOLOGY
82121813	Granted	6858792	12/19/2002	2/22/2005	10/324693	US	Tool-Less Coupling Assembly
82127186	Granted	5726866	2/14/1996	3/10/1998	08/601193	US	SLIDE OUT READILY ACCESSIBLE CHASSIS Having A Trough For Protecting Cables And A Hinge That Includes A Conduit
82127813	Granted	5822196	6/5/1996	10/13/1998	08/658385	US	SECURING A CARD IN AN ELECTRONIC DEVICE
82128995	Granted	5754406	6/4/1996	5/19/1998	08/659004	US	PRINTED CIRCUIT BOARD CARD GUIDE HAVING ISOLATION ARMS AND MEANS FOR SECURING PCB
82128998	Granted	6229709	1/28/1998	5/8/2001	09/014301	US	PRINTED CIRCUIT BOARD CARD GUIDE
82132178	Granted	6819555	8/26/2002	11/16/2004	10/227740	US	HOT-PLUGGABLE DISK DRIVE CARRIER HAVING ENHANCED ROTATIONAL DRIVE VIBRATION CONTROL CAPABILITY
82132739	Granted	6294908	7/16/1998	9/25/2001	09/116774	US	TOP AND BOTTOM ACCESS FUNCTIONAL TEST FIXTURE
82133114	Granted	6052281	2/12/1999	4/18/2000	09/249031	US	COMPUTER CHASSIS WITH AIRFLOW CONTROL MECHANISMS
82133117	Granted	6129429	2/12/1999	10/10/2000	09/249374	US	RACK SERVICEABLE COMPUTER CHASSIS ASSEMBLY
82133678	Granted	6354164	4/4/2000	3/12/2002	09/542308	US	LEVER SYSTEM UTILIZING RACK AND PINION GEAR
82133681	Granted	6912124	3/11/2002	6/28/2005	10/094779	US	Lever System For Moving A Component Within A Chassis
82134926	Granted	5941621	2/28/1997	8/24/1999	08/807935	US	CABINET SLIDE MOUNTING BRACKET

PATENT
REEL: 038498 FRAME: 0643

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82134929	Granted	5978212	2/28/1997	11/2/1999	08/808596	US	DISK DRIVE LOCKING MEMBER WITH HANDLE
82134986	Granted	6094686	10/24/1997	7/25/2000	09/220161	US	A MULTI-PROCESSOR SYSTEM FOR TRANSFERRING DATA WITHOUT INCURRING DEADLOCK USING HIERARCHICAL VIRTUAL CHANNELS
81999698	Granted	7310708	8/26/2003	12/18/2007	10/649917	US	Cache System With Groups Of Lines And With Coherency For Both Single Lines And Groups Of Lines
82007003	Granted	6912616	11/12/2002	6/28/2005	10/292144	US	Mapping Addresses To Memory Banks Based On At Least One Mathematical Relationship
82030856	Granted	6874077	8/27/2003	3/29/2005	10/648405	US	Parallel Distributed Function Translation Lookaside Buffer
82044836	Granted	6393544	10/31/1999	5/21/2002	09/430793	US	METHOD AND APPARATUS FOR CALCULATING A PAGE TABLE INDEX FROM A VIRTUAL ADDRESS
82105958	Granted	7516205	8/16/2004	4/7/2009	10/919153	US	System And Method For Concurrently Decoding And Transmitting A Memory Request
82106393	Granted	7533293	2/17/2006	39945	11/356564	US	Systems And Methods For CPU Repair
82117382	Granted	6981095	8/5/2003	12/27/2005	10/634576	US	HOT REPLACE POWER CONTROL SEQUENCE LOGIC
82117634	Granted	6633960	8/31/2000	10/14/2003	09/652703	US	SCALABLE DIRECTORY BASED CACHE COHERENCE PROTOCOL
82120382	Granted	6684292	9/28/2001	1/27/2004	09/966892	US	MEMORY MODULE RESYNC
82121876	Granted	7051162	4/7/2003	5/23/2006	10/408801	US	Methods And Apparatus Used To Retrieve Data From Memory Before Such Data Is Requested
82127687	Granted	6035362	4/7/1998	3/7/2000	08/658728	US	STORING DATA ASSOCIATED WITH ONE REQUEST WHILE CONTINUING TO STORE DATA ASSOCIATED WITH A PREVIOUS REQUEST FROM THE SAME DEVICE
82127933	Granted	5841795	2/12/1996	11/24/1998	08/599757	US	ERROR CORRECTION CODES
82129436	Granted	6038680	12/11/1996	3/14/2000	08/763411	US	FAILOVER MEMORY FOR A COMPUTER SYSTEM
82132058	Granted	6898646	5/3/2000	5/24/2005	09/564341	US	Highly Concurrent DMA Controller With Programmable DMA Channels
82132619	Granted	6463510	12/29/2000	10/8/2002	09/751505	US	APPARATUS FOR IDENTIFYING MEMORY REQUESTS ORIGINATING ON REMOTE I/O DEVICES AS NONCACHEABLE
82134992	Granted	6101581	10/24/1997	8/8/2000	08/957217	US	SEPARATE VICTIM BUFFER READ AND RELEASE CONTROL
82163396	Granted	6226703	11/9/1998	5/1/2001	09/188847	US	METHOD AND APPARATUS FOR REDUCING THE APPARENT READ LATENCY WHEN CONNECTING BUSSES WITH FIXED READ REPLAY TIMEOUTS TO CPUS WITH WRITE-BACK CACHES
82174508	Granted	7404190	9/18/2003	7/22/2008	10/664707	US	METHOD AND APPARATUS FOR PROVIDING NOTIFICATION VIA MULTIPLE COMPLETION QUEUE HANDLERS
82180379	Granted	7757232	8/14/2003	7/13/2010	10/641129	US	Method And Apparatus For Implementing Work Request Lists

PATENT
REEL: 038498 FRAME: 0644

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82184501	Granted	7774562	9/17/2004	8/10/2010	10/944524	US	Timeout Acceleration For Globally Shared Memory Transaction Tracking Table
82197230	Granted	7873895	4/4/2009	1/18/2011	12/418581	US	Memory Subsystems With Fault Isolation
82206971	Granted	7430145	9/16/2005	9/30/2008	11/229084	US	System And Method For Avoiding Attempts To Access A Defective Portion Of Memory
82212404	Granted	8612797	3/31/2006	12/17/2013	11/394585	US	Systems And Methods Of Selectively Managing Errors In Memory Modules
82225892	Granted	8661208	4/11/2007	2/25/2014	11/733857	US	NON-INCLUSIVE CACHE SYSTEMS AND METHODS
82227449	Granted	7996710	4/25/2007	8/9/2011	11/740052	US	Defect Management For A Semiconductor Memory System
82250489	Granted	8103837	12/17/2008	1/24/2012	12/337008	US	Servicing Memory Read Requests
82265099	Granted	8488326	11/16/2010	41471	12/947473	US	MEMORY SUPPORT STRUCTURE
82672028	Granted	8760312	10/29/2008	6/24/2014	13/126133	US	Component Installation Guidance
82849085	Granted	8866023	4/17/2009	10/21/2014	13/265323	US	Method And System For Reducing Trace Length And Capacitance In A Large Memory Footprint Background
83153026	Published		5/31/2013		13/906375	US	DELAYING BUS ACTIVITY TO ACCOMODATE MEMORY DEVICE PROCESSING TIME
83981746	Published		3/27/2012		14/368573	US	NONVOLATILE MEMORY BANK GROUPS
84210934	Published		1/30/2013		14/435167	US	RUNTIME BACKUP OF DATA IN A MEMORY MODULE
82202606	Published		1/31/2005		11/047227	US	A Method And Apparatus For Product Management
82251800	Granted	7113923	2/3/1999	9/26/2006	09/244550	US	System and Method of Managing an Office of Programs
82252607	Granted	5878416	6/14/1996	3/2/1999	08/664332	US	Automated System And Method For Matching An Item Of Business Property To A Recipient
82253051	Granted	5752242	4/18/1996	35927	08/634640	US	System And Method For Automated Retrieval Of Information
82255361	Granted	8321247	4/29/2003	11/27/2012	10/426071	US	BUSINESS LEVEL METRIC FOR INFORMATION TECHNOLOGY
82256417	Granted	8738759	9/23/2004	41786	10/947858	US	System And Method For Service Response Monitoring
82256543	Application		9/14/2004		10/941033	US	System, Method, And Computer Program Product For Client-service Provider And Service Provider-vendor Agreement Translation, Configuration, And Monitoring
82256981	Granted	7574421	6/23/2006	8/11/2009	11/473427	US	EXPLICIT KEY PAGING
82257734	Granted	8549064	8/12/2008	41548	12/190484	US	SYSTEM AND METHOD FOR DATA MANAGEMENT
82263350	Published		5/27/2010		12/789240	US	Flexible Extended Product Warranties
82578695	Granted	8478620	2/15/2011	7/2/2013	13/027942	US	PROFIT COMPARISON OF EXTENDED WARRANTIES
82656090	Published		10/28/2008		13/125725	US	WORKFORCE PLANNING
82929142	Published		3/8/2010		13/581603	US	METHODS AND SYSTEMS FOR IDENTIFYING CUSTOMER STATUS FOR DEVELOPING CUSTOMER RETENTION AND LOYALITY STRATEGIES
83108386	Published		10/25/2012		13/660286	US	ESTIMATING SEMI-PARAMETRIC PRODUCT DEMAND MODELS

PATENT
REEL: 038498 FRAME: 0645

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83139083	Published		1/30/2013		13/753669	US	PARTITIONING JOB REQUIREMENTS FOR RESOURCE PLANNING
82077176	Granted	6594647	7/30/1998	7/15/2003	09/463518	US	Real Time Bank-Centric Universal Payment System (Bits)
82077305	Granted	5815657	4/26/1996	9/29/1998	08/638355	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR NETWORK ELECTRONIC AUTHORIZATION UTILIZING AN AUTHORIZATION INSTRUMENT
82077491	Granted	5812668	6/17/1996	9/22/1998	08/668118	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR VERIFYING THE OPERATION OF A REMOTE TRANSACTION CLEARANCE SYSTEM UTILIZING A MULTICHANNEL, EXTENSIBLE, FLEXIBLE ARCHITECTURE
82077548	Granted	6304915	5/17/1999	10/16/2001	09/313122	US	System, Method And Article Of Manufacture For A Gateway System Architecture With System Administration Information Accessible From A Browser
82077554	Granted	5996076	2/19/1997	11/30/1999	08/801026	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR SECURE DIGITAL CERTIFICATION OF ELECTRONIC COMMERCE
82101836	Granted	7761375	3/16/2004	7/20/2010	10/802163	US	TRANSACTION SWITCH AND A METHOD OF USE THEREOF
82175006	Granted	7427020	1/23/2007	9/23/2008	11/656666	US	AUTHENTICATION METHOD AND SYSTEM
82251860	Granted	6059185	3/28/1996	5/9/2000	08/623480	US	Automated System and Method for Improved Check Processing
82252361	Granted	5832452	1/31/1996	11/3/1998	08/594460	US	Hotel Database Inquiry System
82252364	Granted	5842176	11/13/1995	11/24/1998	08/555464	US	Method And Apparatus For Interacting With A Computer Reservation System
82255610	Granted	8600879	8/5/2003	41611	10/634635	US	Method And System For Effecting Payment By Checks Through The Use Of Image Replacement Documents
82257419	Granted	8213585	2/7/2008	7/3/2012	12/027481	US	AUTOMATED DISTRIBUTION AND INDEXING OF PREPAID CALLING CARD INFORMATION
82257545	Published		3/11/2008		12/075421	US	SYSTEM AND METHOD FOR CUSTOMER FEEDBACK
82257731	Granted	9082090	7/24/2008	7/14/2015	12/179343	US	SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR RESOURCE COLLABORATION OPTIMIZATION
83805582	Published		9/13/2011		14/237223	US	PUBLISHER COMPENSATION SYSTEM
84306368	Application		1/25/2013		14/759863	US	BARCODE DEVICE
81970046	Granted	7376965	5/14/2001	5/20/2008	09/861986	US	System And Method For Implementing A Bubble Policy To Achieve Host And Network Security
81983531	Granted	7096491	7/20/2001	8/22/2006	09/908592	US	Mobile Code Security Architecture In An Application Service Provider Environment
82230698	Published		4/25/2007		11/739839	US	Systems And Methods For Providing Remediation Recommendations
82252049	Granted	6006278	7/18/1997	12/21/1999	08/896724	US	Method And System For Importing Remote Functions To A Network Computer

PATENT
REEL: 038498 FRAME: 0646

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82252052	Granted	6032153	1/30/1998	2/29/2000	09/016077	US	Method And System For Maintaining Persistence In A Shared Object System
82252550	Granted	5875333	6/7/1996	2/23/1999	08/660353	US	Automatically Generating Source Code for Relating a Dialog Interface with a Business Object in a Computing Application
82252739	Granted	5978581	12/2/1997	11/2/1999	08/982331	US	Object-oriented Code Generation System And Method
82254917	Granted	7412430	12/9/2002	8/12/2008	10/314420	US	Determining the Quality of Computer Software
82254923	Granted	7565688	12/23/2002	7/21/2009	10/326287	US	Network Demonstration Techniques
82256480	Granted	7853489	11/22/2005	12/14/2010	11/285320	US	SYSTEM AND METHOD FOR AGENT BASED DEVELOPER SELF SELECTION
82256732	Granted	8146072	7/30/2004	3/27/2012	10/903257	US	SYSTEM AND METHOD FOR UPDATING SOFTWARE ON A COMPUTER
82257170	Granted	6345281	3/1/1999	2/5/2002	09/260858	US	RECOVERY METHOD AND SYSTEM FOR A RESOURCE MANAGEMENT SYSTEM
82257293	Published		9/17/2007		11/856675	US	Asset Data Collection, Presentation, And Management
82257353	Granted	7783750	7/30/2007	8/24/2010	11/881870	US	SYSTEM AND METHOD FOR EXTERNALIZED REAL-TIME LOG CORRELATION AND PERFORMANCE MONITORING OF SERVICE-ORIENTED APPLICATIONS
82257602	Published		5/6/2008		12/115943	US	APPARATUS, AND ASSOCIATED METHOD, FOR FACILITATING DATA-CENTER MANAGEMENT
82257665	Allowed		8/14/2008		12/191838	US	HETEROGENEOUS INFORMATION TECHNOLOGY (IT) INFRASTRUCTURE MANAGEMENT ORCHESTRATION
82037849	Granted	6275546	6/30/1998	8/14/2001	09/107118	US	Glitchless Clock Switch Circuit
82040963	Granted	6647491	10/1/2001	11/11/2003	09/968283	US	HARDWARE/SOFTWARE SYSTEM FOR PROFILING INSTRUCTIONS AND SELECTING A TRACE USING BRANCH HISTORY INFORMATION FOR BRANCH PREDICTIONS
82042400	Granted	6734045	1/3/2001	5/11/2004	09/753703	US	Lossy RF Shield For Integrated Circuits
82043339	Granted	6823392	11/29/2001	11/23/2004	09/995760	US	Hybrid And Predictive Admission Control Strategies For A Server
82043591	Granted	6295644	8/17/1999	9/25/2001	09/375624	US	Method And Apparatus For Patching Program Text To Improve Performance Of Applications
82043900	Granted	6707636	12/5/2002	3/16/2004	10/310433	US	CARTRIDGE PICKER ASSEMBLY
82046897	Granted	6308320	1/15/1999	10/23/2001	09/232398	US	Method And Apparatus For Incremental Selective Compilation Of Intermediate Code Files During Computer System Compilation And Linking
82048712	Granted	6314431	9/2/1999	11/6/2001	09/387392	US	METHOD, SYSTEM, AND APPARATUS TO IMPROVE INSTRUCTION PRE-FETCHING ON COMPUTER SYSTEMS
82049024	Granted	6625679	4/19/1999	9/23/2003	09/294927	US	Apparatus And Method For Converting Interrupt Transactions To Interrupt Signals To Distribute Interrupts To IA-32 Processors
82050704	Granted	6636916	2/14/2000	10/21/2003	09/503749	US	Assigning PCI Device Interrupts In A Computer System

PATENT
REEL: 038498 FRAME: 0647

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82050767	Granted	6789253	7/28/1999	9/7/2004	09/363067	US	Method, System, And Apparatus To Improve Performance Of Multi-Threaded Computer Programs
82051328	Granted	6647618	8/22/2001	11/18/2003	09/935605	US	A METHOD OF ASSEMBLING A CIRCUIT BOARD INTO A HOUSING
82053512	Granted	6687836	11/26/1999	2/3/2004	09/449794	US	Method And Apparatus Which Enable A Computer User To Verify Whether They Have Correctly Input Their Password Into A Computer
82055012	Granted	6724768	11/26/1999	4/20/2004	09/449840	US	Method And System For Enforcing Maximum Transit Delay In Network Multiplexers
82055015	Granted	6804767	11/26/1999	10/12/2004	09/449839	US	Method And System For Automatic Address Table Reshuffling In Network Multiplexers
82057385	Granted	6615377	5/8/2000	9/2/2003	09/566367	US	INTEGRATED CIRCUIT WITH SIGNAL-VECTOR QUEUE FOR NORMAL AND TEST MODES OF OPERATION
82059257	Granted	6697881	5/29/2001	2/24/2004	09/870312	US	Method And System For Efficient Format, Read, Write, And Initial Copy Processing Involving Sparse Logical Units
82069250	Granted	6892186	9/13/2000	5/10/2005	09/661463	US	Auction Method And Apparatus For Electronic Commerce
82069310	Granted	7383424	6/15/2000	6/3/2008	09/762981	US	COMPUTER ARCHITECTURE CONTAINING PROCESSOR AND DECOUPLED COPROCESSOR
82071557	Granted	5731998	7/1/1996	3/24/1998	08/674052	US	METHOD AND APPARATUS FOR COMPARING A SAMPLE WITH A REFERENCE USING A SPIDER DIAGRAM
82082363	Granted	7051238	7/30/2002	5/23/2006	10/209101	US	Method And System For Using Machine-architecture Support To Distinguish Function And Routine Return Values
82082858	Granted	6661673	2/12/2002	12/9/2003	10/074783	US	CARD GUIDE WITH CHANGEABLE END FACE PORTION
82083668	Granted	6626300	12/10/2001	9/30/2003	10/015074	US	Rack Assembly That Does Not Require Tools For Coupling Chassis To Slide
82086356	Granted	6685489	10/24/2002	2/3/2004	10/279524	US	Circuit Board Leverage Mechanism
82087103	Granted	6990507	5/21/2002	1/24/2006	10/151038	US	Parity Prediction For Arithmetic Increment Function
82088042	Granted	6817374	9/29/2003	11/16/2004	10/674473	US	Check Valve
82088162	Granted	7058838	12/17/2002	6/6/2006	10/322073	US	System And Method For Synchronizing A Plurality Of Processors In A Multiprocessor Computer Platform Employing A Global Clock Counter
82090847	Granted	6874223	10/30/2002	4/5/2005	10/283459	US	System And Method For Securely Positioning Apparatus Within A Housing
82093595	Granted	7237020	11/8/2002	39259	10/290643	US	Integer Programming Technique For Verifying And Reprovisioning An Interconnect Fabric Design
82093598	Granted	6796625	9/10/2002	38258	10/241793	US	One-motion Installation Slide Assembly
82094783	Granted	6856926	3/3/2003	38398	10/378238	US	Frequency Margin Testing Of Bladed Servers
82097219	Granted	7289988	7/8/2003	39385	10/614060	US	Method And System For Managing Events
82097840	Granted	6786056	12/4/2002	9/7/2004	10/309188	US	Cooling System With Evaporators Distributed In Parallel

PATENT
REEL: 038498 FRAME: 0648

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82099406	Granted	7562229	1/23/2003	7/14/2009	10/351064	US	Codeword-based Auditing Of Computer Systems And Methods Therefor
82100339	Granted	7373619	6/3/2003	5/13/2008	10/453103	US	Post-silicon Test Coverage Verification
82100588	Granted	6927605	11/7/2003	8/9/2005	10/704252	US	System And Method For Dynamically Varying A Clock Signal
82101590	Granted	7331003	8/6/2003	2/12/2008	10/635373	US	Match Circuit For Performance Counter
82102025	Granted	6857897	4/29/2003	38405	10/425409	US	Remote Cable Assist
82103462	Granted	7373363	7/3/2003	5/13/2008	10/613816	US	Method Of Managing Modification Of Configuration States Of Resources In A Dynamic Data Center
82104581	Granted	7299467	12/23/2002	11/20/2007	10/328440	US	Method And System For Minimizing Memory Access Latency In A Computer System
82104836	Granted	7313210	2/28/2003	39441	10/376835	US	System And Method For Establishing A Known Timing Relationship Between Two Clock Signals
82105274	Granted	7424653	5/9/2003	9/9/2008	10/434925	US	System And Method For Error Capture And Logging In Computer Systems
82110452	Granted	6622261	8/1/2002	37880	10/210904	US	PROCESS PAIR PROTECTION FOR COMPLEX APPLICATIONS
82110518	Granted	6704764	7/14/1998	38055	09/115402	US	METHOD AND APPARATUS FOR A SERVLET SERVER CLASS
82110704	Granted	6646984	3/15/1999	37936	09/268918	US	NETWORK TOPOLOGY WITH ASYMMETRIC FABRICS
82116446	Granted	5892895	1/28/1997	36256	08/790268	US	METHOD AN APPARATUS FOR TOLERANCE OF LOST TIMER TICKS DURING RECOVERY OF A MULTI-PROCESSOR SYSTEM
82116821	Granted	5742135	6/28/1996	4/21/1998	08/693000	US	SYSTEM FOR MAINTAINING POLARITY SYNCHRONIZATION DURING AMI DATA TRANSFER
82117880	Granted	6920512	2/17/2004	7/19/2005	10/780395	US	Computer Architecture And System For Efficient Management Of Bi-Directional Bus
82117943	Granted	6668335	8/31/2000	12/23/2003	09/653643	US	SYSTEM FOR RECOVERING DATA IN A MULITPROCESSOR SYSTEM COMPRISING A CONDUCTION PATH FOR EACH BIT BETWEEN PROCESSORS WHERE THE PATHS ARE GROUPLED INTO SEPARATE BUNDLES ANDROUTED ALONG DIFFERENT PATHS
82118192	Granted	6920052	9/26/2003	7/19/2005	10/672676	US	DYNAMIC ISOLATING MOUNT FOR PROCESSOR PACKAGES
82118633	Granted	6819322	1/4/2002	11/16/2004	10/038009	US	Method And Apparatus For Detecting Potential Lock-up Conditions In A Video Graphics Controller
82119695	Granted	8370468	11/8/2006	2/5/2013	11/594633	US	METHOD AND APPARATUS FOR CREATING A SECURE EMBEDDED I/O PROCESSOR FOR A REMOTE SERVER MANAGEMENT CONTROLLER
82120070	Granted	6618264	11/28/2001	9/9/2003	09/995472	US	Tool-less Coupling System For Electronic Modules
82120190	Granted	6738868	1/7/2002	5/18/2004	10/042035	US	SYSTEM FOR MINIMIZING DIRECTORY INFORMATION IN SCALABLE MULTIPROCESSOR SYSTEMS WITH LOGICALLY INDEPENDENT INPUT/OUTPUT NODES

PATENT
REEL: 038498 FRAME: 0649

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82120193	Granted	6640287	1/7/2002	10/28/2003	10/042009	US	SCALABLE MULTIPROCESSOR SYSTEM AND CACHE COHERENCE METHOD INCORPORATING INVALID-TO-DIRTY REQUESTS
82120196	Granted	6748498	1/7/2002	6/8/2004	10/042053	US	SCALABLE MULTIPROCESSOR SYSTEM AND CACHE COHERENCE METHOD IMPLEMENTING STORE-CONDITIONAL MEMORY TRANSACTIONS WHILE AN ASSOCIATED DIRECTORY ENTRY IS ENCODED AS A COARSE BIT VECTOR
82120259	Granted	6731507	9/26/2001	5/4/2004	09/964306	US	MODULAR AC INPUT SECTION FOR A POWER SUPPLY UNIT
82120319	Granted	6801811	12/27/2001	10/5/2004	10/033738	US	SOFTWARE-DIRECTED, ENERGY-AWARE CONTROL OF DISPLAY
82120502	Granted	6654239	12/18/2001	11/25/2003	10/029739	US	DOUBLE-ACTION CD DRIVE EJECT MECHANISM
82120565	Granted	6915397	10/22/2001	38538	10/080961	US	SYSTEM AND METHOD FOR GENERATING POINT IN TIME STORAGE COPY
82120568	Granted	7290102	3/15/2005	10/30/2007	11/081061	US	Point In Time Storage Copy
82120631	Granted	6954528	12/28/2001	38636	10/034898	US	Message Path Bypass For Intelligent Network Elements
82122005	Granted	7430662	4/10/2007	39721	11/786007	US	Techniques For Initializing A Device On An Expansion Card
82127183	Granted	6636921	2/18/2000	10/21/2003	09/507278	US	SCSI REPEATER CIRCUIT WITH SCSI ADDRESS TRANSLATION AND ENABLE
82127993	Granted	5999997	7/26/1996	12/7/1999	08/686813	US	TWO COMPUTERS COOPERATING VIA INTERCONNECTED BUSSES
82128188	Granted	5903906	6/5/1996	36291	08/659150	US	RECEIVING A WRITE REQUEST THAT ALLOWS LESS THAN ONE CACHE LINE OF DATA TO BE WRITTEN AND ISSUING A SUBSEQUENT WRITE REQUEST THAT REQUIRES AT LEAST ONE CACHE LINE OF DATA TO BE WRITTEN
82128311	Granted	5999295	3/29/1996	12/7/1999	08/626202	US	STACKABLE NETWORK MODULES USING INFRARED COMMUNICATIONS
82128374	Granted	5987260	3/1/1996	11/16/1999	08/609423	US	SYSTEM FOR COUPLING COMMUNICATION LINK TO PORT CONNECTOR INCLUDING PREDEFINED GROUND PIN WHEN PERIPHERAL IS CONNECTED TO PORT CONNECTOR AND NOT MOUNTED IN COMPARTMENT
82128623	Granted	5796566	8/16/1996	8/18/1998	08/695829	US	PRINTED CIRCUIT BOARD HAVING CONDUCTORS WHICH CAN BE DECOUPLED FOR ISOLATING INACTIVE INTEGRATED CIRCUITS CONNECTED THERETO
82128872	Granted	5892926	12/30/1996	4/6/1999	08/777565	US	DIRECT MEDIA INDEPENDENT INTERFACE CONNECTION SYSTEM FOR NETWORK DEVICES
82129184	Granted	6003139	1/27/1998	12/14/1999	09/013876	US	COMPUTER SYSTEM INCLUDING POWER SUPPLY CIRCUIT WITH CONTROLLED OUTPUT POWER

PATENT
REEL: 038498 FRAME: 0650

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82129619	Granted	5954796	2/11/1997	9/21/1999	08/798962	US	SYSTEM AND METHOD FOR AUTOMATICALLY AND DYNAMICALLY CHANGING AN ADDRESS ASSOCIATED WITH A DEVICE DISPOSED IN A FIBRE CHANNEL ENVIRONMENT
82129682	Granted	5999198	9/9/1997	12/7/1999	08/925772	US	GRAPHICS ADDRESS REMAPPING TABLE ENTRY FEATURE FLAGS FOR CUSTOMIZING THE OPERATION OF MEMORY PAGES ASSOCIATED WITH AN ACCELERATED GRAPHICS PORT DEVICE
82129685	Granted	5949436	9/30/1997	9/7/1999	08/941861	US	ACCELERATED GRAPHICS PORT MULTIPLE ENTRY GART CACHE ALLOCATION SYSTEM AND METHOD
82131554	Granted	6272651	8/17/1998	8/7/2001	09/135274	US	SYSTEM AND METHOD FOR IMPROVING PROCESSOR READ LATENCY IN A SYSTEM EMPLOYING ERROR CHECKING AND CORRECTION
82131617	Granted	6625710	3/15/2002	9/23/2003	10/098398	US	SYSTEM, METHOD, AND APPARATUS FOR PROVIDING LINEARLY SCALABLE DYNAMIC MEMORY MANAGEMENT IN A MULTIPROCESSING SYSTEM
82132115	Granted	6615359	11/26/2001	9/2/2003	09/994174	US	MODIFIED LICENSE KEY ENTRY FOR PRE-INSTALLATION OF SOFTWARE
82132118	Granted	7529945	8/18/2003	39938	10/642900	US	Installing Software In A System
82132370	Granted	7552211	12/10/2002	6/23/2009	10/315749	US	AUTOMATIC NOTIFICATION RULE DEFINITION FOR A NETWORK MANAGEMENT SYSTEM
82132553	Granted	7379960	12/29/2003	39595	10/748346	US	SYSTEM AND METHOD FOR MANAGING DATA FLOW AND MEASURING SERVICE IN A STORAGE NETWORK
82132616	Granted	6470429	12/29/2000	37551	09/752128	US	SYSTEM FOR IDENTIFYING MEMORY REQUESTS AS NONCACHEABLE OR REDUCE CACHE COHERENCE DIRECTORY LOOKUPS AND BUS SNOOPS
82133306	Granted	6631437	4/6/2000	10/7/2003	09/543817	US	METHOD AND APPARATUS FOR PROMOTING MEMORY READ COMMANDS
82133366	Granted	6871286	7/29/1999	3/22/2005	09/363508	US	METHOD AND APPARATUS FOR RESETTING PASSWORDS IN A COMPUTER SYSTEM
82133426	Granted	6807590	4/4/2000	10/19/2004	09/542157	US	DISCONNECTING A DEVICE ON A CACHE LINE BOUNDARY IN RESPONSE TO A WRITE COMMAND
82134800	Granted	6096637	7/28/1998	8/1/2000	09/124198	US	ELECTROMIGRATION-RESISTANT VIA STRUCTURE
82135049	Granted	6883020	6/26/1997	4/19/2005	08/883241	US	APPARATUS AND METHOD FOR FILTERING DOWNLOADED NETWORK SITES
82135364	Granted	6079021	6/2/1997	6/20/2000	08/866673	US	METHOD AND APPARATUS FOR STRENGTHENING PASSWORDS FOR PROTECTION OF COMPUTER SYSTEMS
82135736	Granted	6189083	2/26/1998	2/13/2001	09/030797	US	METHOD AND APPARATUS FOR ACCESSING A CACHE MEMORY UTILIZATION DISTINGUSHING BIT RAMS
82136054	Granted	6104251	8/31/1998	8/15/2000	09/143945	US	METHOD AND APPARATUS FOR PROVIDING TRANSIENT SUPPRESSION IN A CENTRAL

PATENT
REEL: 038498 FRAME: 0651

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82136303	Granted	6028452	2/27/1998	2/22/2000	09/031943	US	METHOD AND APPARATUS FOR A FAST VARIABLE PRECEDENCE PRIORITY ENCODER WITH OPTIMIZED ROUND ROBIN PRECEDENCE UPDATE SCHEME
82136678	Granted	6738896	1/31/2000	5/18/2004	09/495190	US	METHOD AND APPARATUS FOR DETERMINING AVAILABILITY OF A QUEUE WHICH ALLOWS RANDOM INSERTION
82136984	Granted	6084455	8/13/1998	7/4/2000	09/133235	US	HIGH-SPEED CMOS LATCH
82136987	Granted	6324689	9/30/1998	11/27/2001	09/164255	US	MECHANISM FOR RE-WRITING AN EXECUTABLE HAVING MIXED CODE AND DATA
82164146	Granted	5783771	10/6/1995	7/21/1998	08/550787	US	EMI CHASSIS SEAM
82164578	Granted	5901308	3/18/1996	5/4/1999	08/617014	US	SOFTWARE MECHANISM FOR REDUCING EXCEPTIONS GENERATED BY SPECULATIVELY SCHEDULED INSTRUCTIONS
82165328	Granted	6128711	11/12/1996	10/3/2000	08/745553	US	PERFORMANCE OPTIMIZATION AND SYSTEM BUS DUTY CYCLE REDUCTION BY I/O BRIDGE PARTIAL CACHE LINE WRITES
82165952	Granted	6075700	2/2/1999	6/13/2000	09/241351	US	METHOD AND SYSTEM FOR CONTROLLING RADIO FREQUENCY RADIATION IN MICROELECTRONIC PACKAGES USING HEAT DISSIPATION STRUCTURES
82166018	Granted	6781606	1/15/2002	8/24/2004	10/053034	US	SYSTEM AND METHOD FOR DISPLAYING IMAGES USING FOVEAL VIDEO
82166267	Granted	6694510	11/3/2000	2/17/2004	09/706050	US	COLLECTION DRIVER FOR COLLECTING SYSTEM DATA USING RECORD BASED REQUESTS WITH TAG LISTS AND PAUSING ALL BUT ONE THREAD OF A COMPUTER SYSTEM
82166327	Granted	7353353	6/3/2005	4/1/2008	11/144108	US	FILE SECURITY MANAGEMENT
82167830	Granted	7426189	7/15/2003	9/16/2008	10/620208	US	Network Controller
82174319	Granted	6922340	7/13/2004	7/26/2005	10/890938	US	Stack Up Assembly
82174322	Granted	6900987	7/13/2004	5/31/2005	10/890941	US	Stack Up Assembly
82174325	Granted	6947286	1/6/2005	9/20/2005	11/030774	US	Stack Up Assembly
82178690	Granted	7996825	10/31/2003	8/9/2011	10/699144	US	Cross-file Inlining By Using Summaries And Golbal Worklist
82178879	Granted	8161461	3/24/2005	4/17/2012	11/089109	US	Systems And Methods For Evaluating Code Usage
82179314	Granted	7406091	1/12/2004	7/29/2008	10/756668	US	Distribution Of Communications Between Paths
82181873	Granted	7330943	3/11/2005	2/12/2008	11/079548	US	Storage Device Flow Control
82182311	Granted	7328310	2/2/2005	2/5/2008	11/049454	US	Method And System For Cache Utilization By Limiting Number Of Pending Cache Line Requests
82183937	Granted	7265760	3/25/2004	9/4/2007	10/809261	US	Method And System For Defining Border Tile Attributes For Polygons
82185371	Granted	7290176	7/31/2004	10/30/2007	10/909801	US	METHOD AND SYSTEM FOR GENERATING STACKED REGISTER DUMPS FROM BACKING-STORE MEMORY

PATENT
REEL: 038498 FRAME: 0652

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82188428	Granted	8315865	5/4/2004	11/20/2012	10/838561	US	Method And Apparatus For Adaptive Conversation Detection Employing Minimal Computation
82189058	Granted	7280360	1/28/2005	10/9/2007	11/046452	US	Socket Adapted For Compressive Loading
82189430	Granted	7228518	1/31/2005	6/5/2007	11/047858	US	Method For Reducing The Size And Nanowire Length Used In Nanowire Crossbars Without Reducing The Number Of Nanowire Junctions
82189433	Granted	7257016	5/24/2005	8/14/2007	11/136950	US	Enhanced Nanowire-crossbar Latch Array
82189805	Granted	7516151	11/1/2004	4/7/2009	10/979413	US	Parallel Traversal Of A Dynamic List
82190114	Granted	7363444	1/10/2005	4/22/2008	11/033343	US	Method For Taking Snapshots Of Data
82191737	Granted	7376799	7/21/2005	5/20/2008	11/186333	US	System For Reducing The Latency Of Exclusive Read Requests In A Symmetric Multi-processing System
82193051	Granted	8117215	9/24/2010	2/14/2012	12/889740	US	Distributing Content Indicies
82203605	Granted	7822857	9/7/2005	10/26/2010	11/221004	US	Methods And Systems For Sharing Remote Access
82207601	Granted	7391221	6/24/2005	6/24/2008	11/166825	US	On-die Impedance Calibration
82220399	Granted	8027905	9/8/2006	9/27/2011	11/517705	US	Generating Adjusted Bids Of Entities According To A New External Bid
82223084	Granted	6240068	1/28/1998	5/29/2001	09/014686	US	Method For Automatically Aggregating Objects
82227953	Granted	8032585	3/9/2007	10/4/2011	11/684563	US	Regression-based System And Method For Determining Resource Costs For Composite Transactions
82239752	Granted	8020053	10/29/2008	9/13/2011	12/260917	US	On-line Memory Testing
82251176	Granted	8327721	10/26/2009	12/11/2012	12/605565	US	Sensor Fabric For Shape Perception
82254608	Granted	7243145	9/30/2002	7/10/2007	10/259786	US	Generation Of Computer Resource Utilization Data Per Computer Application
82266905	Granted	6089894	8/17/1998	7/18/2000	09/135251	US	Test Connector
82268285	Granted	6059583	5/28/1998	5/9/2000	09/086143	US	INTERCONNECTION BETWEEN MEDIA CONNECTORS OF UNKNOWN INTERFACE STANDARDS AND A COMPUTER COMMUNICATIONS CARD
82269656	Granted	6628623	5/24/1999	9/30/2003	09/317692	US	Methods And Systems For Determining Switch Connection Topology On Ethernet Lans
82269842	Granted	6109934	11/30/1998	8/29/2000	09/201647	US	CONNECTOR FOR CONNECTING AN ELECTRIC DEVICE TO A COMMUNICATIONS CARD
82270406	Granted	6925076	4/13/1999	8/2/2005	09/290941	US	METHOD AND APPARATUS FOR PROVIDING A VIRTUAL DISTRIBUTED GATEKEEPER IN AN H 323 SYSTEM
82270463	Granted	6721394	12/9/1999	4/13/2004	09/458568	US	Method for Reducing Noise from an Asymmetric Digital Subscriber Line Modem
82270526	Granted	6189066	2/26/1999	2/13/2001	09/258500	US	System And Method For Dynamically Selecting Interrupt Time Interval Threshold Parameters
82270595	Granted	6804230	11/3/1999	10/12/2004	09/432591	US	Communication Device With Forwarding Database Having A Trie Search Facility
82270718	Granted	6801605	9/13/2000	10/5/2004	09/660825	US	Telephone Network Signal Conversion System

PATENT
REEL: 038498 FRAME: 0653

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82271216	Granted	6731630	2/29/2000	5/4/2004	09/515797	US	Flexible Dial Plan for a Data Network Telephony System
82271342	Granted	6614350	11/8/2000	9/2/2003	09/709166	US	METHOD AND SYSTEM FOR EFFECTING A SECURITY SYSTEM UPON MULTIPLE PORTABLE INFORMATION DEVICES
82271780	Granted	6826174	3/2/2000	11/30/2004	09/516857	US	VOICE-OVER-IP INTERFACE FOR STANDARD HOUSEHOLD TELEPHONE
82271903	Granted	6826279	5/25/2000	11/30/2004	09/578545	US	Base Band Echo Cancellation Using Laguerre Echo Estimation
82272086	Granted	6795869	2/27/2001	9/21/2004	09/794841	US	Video Signal Processing Method and Apparatus for Internet Appliances or Embedded Systems
82272404	Granted	6816500	7/10/2000	11/9/2004	09/613070	US	Apparatus, Method and System For Multimedia ACcess Network Channel Management
82272710	Granted	6807193	6/20/2000	10/19/2004	09/597841	US	CABLE MODEM WITH DRIBBLE GRANT ACCESS SYSTEM AND METHOD
82272776	Granted	6742187	9/15/2000	5/25/2004	09/663756	US	Upstream Bandwidth allocation map (MAP)-Initiated channel change method for data-over-cable systems
82272899	Granted	6577500	2/28/2001	6/10/2003	09/795506	US	WIRELESS PC CARD
82273091	Granted	6842797	10/10/2000	1/11/2005	09/685287	US	USB Adapter for Burst Mode Communications
82273400	Granted	6804804	7/23/2001	10/12/2004	09/909756	US	Calculation and Transmission of Error Check Codes
82274084	Granted	6839239	7/17/2002	1/4/2005	10/198218	US	ELECTRONIC DEVICE PACKAGING
82948292	Granted	6567103	8/2/2000	5/20/2003	09/630449	US	GRAPHICAL SEARCH RESULTS SYSTEM AND METHOD
82948306	Granted	6728704	8/27/2001	4/27/2004	09/940600	US	METHOD AND APPARATUS FOR MERGING RESULT LISTS FROM MULTIPLE SEARCH ENGINES
82948641	Granted	6615111	11/9/2001	9/2/2003	10/014936	US	Methods for automatically focusing the attention of a virtual robot interacting with users
83138539	Granted	8810780	1/31/2013	8/19/2014	13/755801	US	PLASMON RESONANCE BASED STRAIN GAUGE
82068812	Granted	6776343	2/25/2000	8/17/2004	09/937021	US	Intelligent Media Reader And Label Printer
82255424	Granted	6925375	3/20/2003	8/2/2005	10/392551	US	SYSTEM AND METHOD FOR DETERMINING A PARAMETER SET FOR AN ENGINE CONTROLLER MODULE
81983090	Granted	7325237	12/29/2001	1/29/2008	10/037107	US	SYSTEM HAVING CUSTOMIZATION MODULES TO PROVIDE CUSTOMIZATIONS
81986528	Granted	8473922	9/19/2001	6/25/2013	09/955764	US	Run-time Monitoring In Component-based Systems
82006568	Granted	8120618	6/11/2002	2/21/2012	10/170062	US	System And Method For Visualization Of Objects Using Energy Minimization Of Customized Potential Functions
82035287	Granted	6230282	7/3/1998	5/8/2001	09/111250	US	Checkpoint Computer System Utilizing A FIFO Buffer To Re-Synchronize The Memory Systems On The Detection Of An Error
82037846	Granted	6154778	5/19/1998	11/28/2000	09/081265	US	Utility-based Multi-category Quality-of-service Negotiation In Distributed Systems

PATENT
REEL: 038498 FRAME: 0654

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82040531	Granted	6304906	8/6/1998	10/16/2001	09/130636	US	METHOD AND SYSTEMS FOR ALLOWING DATA SERVICE SYSTEM TO PROVIDE CLASS-BASED SERVICES TO ITS USERS
82106081	Granted	8799901	5/20/2004	8/5/2014	10/850131	US	ESTABLISHING NEW SERVICE AS CONVERSATION BY REPLACING V ARIABLES IN GENERIC SERVICE IN AN ORDER WITH V ARIABLES FROM A DECOUPLED METHOD OF LEGACY SERVICE (amended)
82135865	Granted	5987252	9/19/1997	11/16/1999	08/932575	US	METHOD AND APPARATUS FOR STATICALLY ANALYZING A COMPUTER PROGRAM FOR DATA DEPENDENCIES
82172201	Granted	7644410	11/23/2004	1/5/2010	10/997360	US	Resource Management For Shared Computing Environment
82179755	Granted	7831499	10/10/2003	11/9/2010	10/683985	US	Method And System For Controlling Feedback For An Online Auction
82180754	Granted	7827557	3/24/2004	11/2/2010	10/808073	US	METHOD AND APPARATUS FOR ALLOCATING RESOURCES TO APPLICATIONS USING A LINEARIZED OBJECTIVE FUNCTION
82181315	Application		12/16/2004		11/012266	US	Method For Increasing Automation In Systems Through An Object-oriented Data Model
82183934	Granted	7945569	3/31/2004	5/17/2011	10/814579	US	METHOD AND APPARATUS FOR QUERYING SPATIAL DATA
82192115	Granted	7756871	10/13/2004	7/13/2010	10/964094	US	ARTICLE EXTRACTION
82193741	Granted	7406452	3/17/2005	7/29/2008	11/083320	US	Machine Learning
82202666	Granted	8738387	10/29/2004	5/27/2014	10/976558	US	System And Method For Determining An Element Value In Private Datasets
82208906	Published		4/29/2005		11/118178	US	Providing Training Information For Training A Categorizer
82212089	Granted	8447587	1/31/2007	5/21/2013	11/700465	US	Providing A Position Based Dictionary
82212719	Granted	7594016	6/16/2005	9/22/2009	11/153925	US	Calculating Numbers Of Servers For Tiers Of A Multi-tiered System
82214030	Application		2/6/2006		11/349395	US	Periodic Pattern Identification
82220393	Granted	8539349	10/31/2006	9/17/2013	11/555274	US	Methods And Systems For Splitting A Chinese Character Sequence Into Word Segments
82220396	Granted	7822675	10/24/2006	10/26/2010	11/552510	US	GENERATION OF COST OR PRICE QUOTATIONS
82220711	Granted	8086520	10/11/2006	12/27/2011	11/546042	US	Constraint Satisfaction For Solutions To An Auction Winner-determination Problem
82229138	Granted	7788064	4/30/2007	8/31/2010	11/796814	US	FOCUS-BASED VISUAL ANALYTIC TECHNIQUES FOR EXPLORING DATA RELATIONSHIPS
82234196	Granted	9043267	7/30/2007	5/26/2015	11/830791	US	METHODS AND SYSTEMS FOR MANAGING A DATA MINING MODEL
82242932	Granted	8275762	10/21/2008	9/25/2012	12/255613	US	Reverse Mapping Of Feature Space To Predict Execution In A Database
82243058	Granted	8627325	10/24/2008	1/7/2014	12/258226	US	Scheduling Memory Usage Of A Workload
82244873	Granted	8103480	10/31/2008	1/24/2012	12/262632	US	Evaluating Service Level Agreement Violations

PATENT
REEL: 038498 FRAME: 0655

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82246745	Published		10/31/2008		12/263176	US	Learning User Purchase Intent From User-centric Data
82248056	Granted	8099453	1/22/2009	1/17/2012	12/357668	US	System And Method For Data Clustering
82248239	Granted	8046373	1/25/2009	10/25/2011	12/359324	US	Structured Parallel Data Intensive Computing
82248491	Published		11/13/2009		12/618569	US	Communication System With Nestable Delimited Streams
82248551	Allowed		2/2/2009		12/364063	US	Evaluation Of Database Query Plan Robustness Landmarks Using Operator Maps Or Query Maps
82250426	Granted	8412755	6/23/2009	4/2/2013	12/490091	US	PERMUTING RECORDS IN A DATABASE FOR LEAK DETECTION AND TRACING
82250801	Granted	8402016	5/27/2009	3/19/2013	12/473065	US	Fetching Optimization In Multi-way Pipelined Database Joins
82258103	Published		6/18/2009		12/487254	US	Recommendation Based On Low-Rank Approximation
82258106	Published		7/31/2009		12/533717	US	Method And System For Characterizing Web Content
82258541	Granted	8719769	8/18/2009	5/6/2014	12/543357	US	Quality Driven ETL Design Optimzation
82263224	Published		8/6/2010		12/852208	US	MANAGING BUSINESS RELATIONSHIPS USING A THIRD-PARTY SERVICE
82263596	Published		10/18/2010		12/906739	US	Acquiring Customer Insight In A Retail Environment
82263602	Published		9/23/2010		12/888800	US	IDENTIFYING CORRELATED OPERATION MANAGEMENT EVENTS
82263662	Published		10/29/2010		12/916014	US	DETERMINING MULTI-PROGRAMMING LEVELS
82264844	Granted	8898146	9/22/2010	11/25/2014	12/887895	US	SYSTEM AND METHOD FOR COMPARING DATABASE QUERY PLANS
82264847	Granted	8620609	10/7/2010	12/31/2013	12/900307	US	METHOD AND APPARATUS FOR IDENTIFYING ANOMALIES OF A SIGNAL
82275710	Granted	8626690	2/23/2011	1/7/2014	13/033443	US	Pattern Recognition
82617315	Granted	8868611	7/28/2011	10/21/2014	13/192602	US	Data Management Sytems for Efficient Storage and retrieval of Multi-Level/Multi-Dimensional Data
82617318	Published		8/26/2011		13/218898	US	Dynamic Reordering of Operations in A Query Plan
82711710	Published		4/25/2011		13/093063	US	DATA PREDICTION FOR BUSINESS PROCESS METRICS
82748985	Published		10/27/2011		13/282632	US	System for Providing Goods or Services Utilizing Petri Net Synthesis Algorithms (amended)
82775148	Published		10/10/2011		13/269627	US	A Query to Streaming Data
82775168	Published		10/21/2011		13/278572	US	Computing Predicted Data According to Weighted Peak Preservation and Time Distance Biasing
82775188	Published		10/31/2011		13/285785	US	Determining an Execution Ordering
82818912	Granted	9009024	10/24/2011	4/14/2015	13/280040	US	Performing Sentiment Analysis
82853038	Published		7/2/2009		13/260244	US	METHOD AND APPARATUS FOR SUPPORTING A COMPUTER-BASED PRODUCT
82859659	Published		10/31/2011		13/286024	US	CONSTRUCTING AN ANALYSIS OF A DOCUMENT
82900197	Granted	8943048	7/31/2012	1/27/2015	13/562752	US	VISUALIZING TIME-DENSE EPISODES

PATENT
REEL: 038498 FRAME: 0656

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82900652	Granted	8972579	9/6/2012	3/3/2015	13/605651	US	Resource Sharing in Computer Clusters According to Objectives
82929162	Granted	9037518	7/30/2012	4/19/2015	13/562058	US	Classifying Unclassified Samples
82961625	Published		4/26/2012		13/457093	US	NESTING LEVEL
82963045	Published		4/30/2012		13/460072	US	Adaptive Probabilistic Indexing with Skip Lists
83013407	Published		7/31/2012		13/563108	US	ORGANIZING CONTENT WITHIN A CORPUS USING A CONCEPT GRAPH (as amended)
83013819	Granted	8971665	7/31/2012	2/3/2015	13/562598	US	Hierarchical cluster determination based on subgraph density
83019149	Published		10/8/2012		13/646945	US	ADJUSTMENT OF MAP REDUCE EXECUTION
83037403	Published		7/31/2012		13/562800	US	POPULATING PRODUCT RECOMMENDATION LIST
83108887	Granted	8983933	12/21/2012	3/17/2015	13/723895	US	COSTS OF OPERATIONS ACROSS COMPUTING SYSTEMS
83139100	Published		1/23/2013		13/748198	US	METRIC BASED ON ESTIMATE VALUE
83139243	Published		1/29/2013		13/752932	US	TASK MANAGEMENT
83204699	Published		6/17/2013		13/919294	US	READING OBJECT QUERIES
83209130	Allowed		4/30/2013		13/874342	US	MANAGING A CATALOG OF SCRIPTS
83209668	Published		4/5/2013		13/857716	US	RECOVERING A FAILURE IN A DATA PROCESSING SYSTEM
83209731	Published		4/24/2013		13/869675	US	Visual Analytics of Multivariate Data Using a Cell Based Calendar Matrix having a Visual Folding Mechanism
83209797	Published		4/9/2013		13/859564	US	OPTIMIZING ANALYTIC FLOWS
83225944	Allowed		10/14/2010		13/878473	US	CONTINUOUS QUERYING OF A DATA STREAM
83566673	Published		8/25/2011		14/237439	US	Model-based stereoscopic and multiview cross-talk reduction
83696783	Published		10/30/2013		14/067328	US	MULTI-ATTRIBUTE VISUALIZATION INCLUDING MULTIPLE COORDINATED VIEWS OF NON-OVERLAPPED CELLS
84080924	Published		7/30/2012		14/397737	US	SEARCH METHOD
84081222	Published		7/31/2012		14/397640	US	Concept Categorization
84116410	Published		6/1/2012		14/404915	US	SHARING INFORMATION ABOUT RESOURCES IN A COLLABORATIVE ENVIRONMENT
84140177	Published		10/25/2012		14/418307	US	EVENT CORRELATION
84210227	Application		10/18/2012		14/435685	US	COMMUNICATING TUPLES IN A MESSAGE
84223019	Application		10/19/2012		14/435809	US	Performing A Search Based On Entity-Related Criteria
84304307	Application		2/27/2013		14/759966	US	Generating a social circle for a user
90048639	Acknowledged					US	MANAGING A CATALOG OF SCRIPTS
90068098	Application		3/29/2013		14/780641	US	BATCHING TUPLES
82065191	Granted	7263361	10/26/2001	8/28/2007	09/983817	US	Provision Of Services Via An Information Technology Network
82099094	Granted	8806222	1/20/2006	8/12/2014	11/335824	US	Method And System For Contained Cryptographic Separation

PATENT
REEL: 038498 FRAME: 0657

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82105835	Granted	7574596	4/22/2004	8/11/2009	10/831549	US	Cryptographic Method And Apparatus
82169201	Granted	7373665	10/31/2003	5/13/2008	10/697645	US	PROPAGATION OF VIRUSES THROUGH AN INFORMATION TECHNOLOGY NETWORK
82188806	Granted	8984291	3/23/2006	3/17/2015	11/389336	US	Access To A Computing Environment By Computing Devices
82191986	Granted	7949753	3/16/2005	5/24/2011	11/081248	US	Provision Of Resource Allocation Information
82219397	Allowed		6/16/2006		11/455231	US	Method And Device Using One-time Pad Data
82237817	Published		12/20/2007		12/808233	US	MODELLING COMPUTER BASED BUSINESS PROCESS AND SIMULATING OPERATION
82243181	Granted	8224624	10/14/2008	41107	12/250748	US	Using Application Performance Signatures For Characterizing Application Updates
82263722	Published		8/25/2011		13/217892	US	SYSTEM AND METHOD TO INDICATE CODE BLOCK EXECUTION
82276151	Granted	8397302	10/29/2010	3/12/2013	12/916265	US	SYSTEM AND METHOD FOR ANALYZING A PROCESS
82276457	Granted	7516321	3/8/2004	4/7/2009	10/797715	US	Method, System And Device For Enabling Delegation Of Authority And Access Control Methods Based On Delegated Authority
82863217	Granted	9053577	10/27/2011	6/9/2015	13/282564	US	REFLECTING VALUES FOR A METRIC IN A DISPLAY
82890041	Published		1/10/2012		13/347098	US	SECURITY MODEL ANALYSIS
82900698	Granted	9064240	4/27/2012	6/23/2015	13/457614	US	APPLICATION BASED ON NODE TYPES ASSOCIATED WITH IMPLICIT BACKTRACKING
83012923	Published		7/31/2012		13/562696	US	DATA BLOCK ACCESS CONTROL
83766395	Allowed		7/11/2011		14/125685	US	POLICY-BASED DATA MANAGEMENT
84037080	Published		3/8/2012		14/381453	US	MODIFYING VIRTUAL MACHINE COMMUNICATIONS
84266474	Application		5/29/2015		14/725080	US	Propagation Of Viruses Through An Information Technology Network
82186622	Granted	7644146	6/2/2004	1/5/2010	10/859578	US	SYSTEM AND METHOD FOR DISCOVERING COMMUNITIES IN NETWORKS
82263473	Granted	8428621	7/30/2010	4/23/2013	12/847058	US	LOCATION-BASED AUDIO SERVICE
83011240	Published		1/15/2013		13/742093	US	Creating User Skill Profiles Through Use Of An Enterprise Social Network
83011263	Granted	8589292	8/29/2012	11/19/2013	13/597516	US	CREATING A MARKET FOR UNBIASED PRIVATE INDIVIDUAL DATA
82068686	Granted	6747979	10/27/1999	6/8/2004	09/427705	US	METHOD AND APPARATUS FOR BRIDGING BETWEEN NETWORKS
82068689	Granted	7359394	8/15/2003	4/15/2008	10/641039	US	METHOD AND APPARATUS FOR BRIDGING BETWEEN NETWORKS
82106519	Granted	8560629	4/25/2003	41562	10/423540	US	Method Of Delivering Content In A Network

PATENT
REEL: 038498 FRAME: 0658

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82195733	Granted	8205003	11/5/2004	6/19/2012	10/982136	US	Methods And Systems For Controlling The Admission Of Media Content Into A Network
82089791	Granted	6854092	8/12/2002	2/8/2005	10/216987	US	Reducing Variation In Randomized Nanoscale Circuit Connections
82096217	Granted	7307571	4/27/2005	39427	11/116539	US	Binary Signal Converters For Distinguishing Direct Signals Carried By Nanowires
82168640	Granted	8384136	10/19/2006	41331	11/584028	US	Demultiplexed Nanowire Sensor Array For Detection Of Chemical And Biological Species
82185995	Granted	7307345	11/1/2005	12/11/2007	11/264464	US	CROSSBAR-ARRAY DESIGNS AND WIRE ADDRESSING METHODS THAT TOLERATE MISALIGNMENT OF ELECTRICAL COMPONENTS AT WIRE OVERLAP POINTS
82189427	Granted	7307448	5/24/2005	12/11/2007	11/136935	US	Interconnectable Nanoscale Computational Stages
82195859	Granted	8112700	1/23/2008	40946	12/011175	US	Nanoscale Interconnection Interface
82209347	Granted	7381658	7/5/2005	39602	11/174896	US	Encapsulation Of Nano-dimensional Structures By Oxidation
82223516	Granted	7958071	4/19/2007	6/7/2011	11/788447	US	Computational Nodes And Computational-node Networks That Include Dynamical-nanodevice Connections
82257980	Granted	8050078	10/27/2009	40848	12/606871	US	NANOWIRE-BASED MEMRISTOR DEVICES
82260287	Published		5/17/2010		12/781441	US	MEMRISTOR ADJUSTMENT USING STORED CHARGE
82260293	Granted	8451644	6/29/2010	41422	12/825607	US	NON-VOLATILE SAMPLER
82261847	Granted	8415652	6/21/2010	41373	12/819763	US	MEMRISTORS WITH A SWITCHING LAYER COMPRISING A COMPOSITE OF MULTIPLE PHASES
82263347	Granted	8274813	7/16/2010	9/25/2012	12/837903	US	MEMRISTIVE NEGATIVE DIFFERENTIAL RESISTANCE DEVICE
82264598	Granted	8253443	10/26/2010	8/28/2012	12/912647	US	Interconnection Architectures For Multilayer Crossbar Circuits
82264601	Granted	8619457	9/13/2010	12/31/2013	12/880871	US	THREE-DEVICE NON-VOLATILE MEMORY CELL
82264664	Granted	8264868	10/25/2010	9/11/2012	12/911283	US	MEMORY ARRAY WITH METAL-INSULATOR TRANSITION SWITCHING DEVICES
82690133	Granted	8803212	8/15/2011	41863	13/209606	US	THREE-DIMENSIONAL CROSSBAR ARRAY
82747671	Granted	8810074	1/30/2009	41870	13/130797	US	Multi-way Electrical Switch
82747717	Granted	8471234	1/20/2009	41450	13/130815	US	Multilayer Memristive Devices
82756396	Granted	8837196	8/25/2011	41898	13/217887	US	A SINGLE LAYER COMPLEMENTARY MEMORY CELL
82835640	Granted	8854860	1/31/2012	41919	13/362538	US	METAL-INSULATOR TRANSITION LATCH
82853084	Granted	8519372	7/30/2009	41513	13/259173	US	ELECTROFORMING-FREE NANOSCALE SWITCHING DEVICE
82854037	Published		1/29/2010		13/260019	US	THREE DIMENSIONAL MULTILAYER CIRCUIT
82925126	Granted	8809158	3/12/2010	41870	13/384000	US	DEVICE HAVING MEMRISTIVE MEMORY
82929182	Granted	8767438	3/19/2012	41821	13/424034	US	MEMELECTRONIC DEVICE
82940735	Granted	8570138	3/3/2010	10/29/2013	13/387680	US	RESISTIVE SWITCHES

PATENT
REEL: 038498 FRAME: 0659

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82963463	Granted	8525553	4/30/2012	9/3/2013	13/459877	US	NEGATIVE DIFFERENTIAL RESISTANCE COMPARATOR CIRCUITS
82978190	Granted	9036395	6/26/2012	5/19/2015	13/533699	US	PROGRAMMED-STATE DETECTION IN MEMRISTOR STACKS
83211254	Granted	8872153	9/27/2010	41940	13/822227	US	DEVICE STRUCTURE FOR LONG ENDURANCE MEMRISTORS
83786501	Allowed		7/20/2011		14/233075	US	MEMRISTOR STRUCTURE WITH A DOPANT SOURCE
83858257	Granted	9082533	10/21/2011	42199	14/345293	US	MEMRISTIVE ELEMENT BASED ON HETERO-JUNCTION OXIDE
83960017	Published		2/29/2012		14/371492	US	Memristor with Channel Region in Thermal Equilibrium with Containing Region
84242398	Published		5/14/2015		14/712554	US	MEMORY CONTROLLER USING CRISSCROSS ERROR-CORRECTING CODES
90050926	Application		9/4/2015		14/845636	US	MEMRISTIVE DEVICES WITH LAYERED JUNCTIONS AND METHODS FOR FABRICATING THE SAME
90050932	Application		9/4/2015		14/845735	US	HIGH-RELIABILITY HIGH-SPEED MEMRISTOR
90065994	Instructed					US	MEMRISTOR STRUCTURE WITH A DOPANT SOURCE
81989396	Granted	7831731	6/12/2001	40491	09/880631	US	METHOD AND SYSTEM FOR A MODULAR TRANSMISSION CONTROL PROTOCOL (TCP) RARE-HANDOFF DESIGN IN A STREAMS BASED TRANSMISSION CONTROL PROTOCOL/INTERNET PROTOCOL (TCP/IP) IMPLEMENTATION
81994646	Granted	7349392	9/14/2001	39532	09/953541	US	Assigning IP Addresses In An Internet Data Center
81998198	Granted	7594032	11/7/2002	40078	10/289282	US	Method And System For Communicating Information Between A Switch And A Plurality Of Servers In A Computer Network
81998201	Granted	8095686	7/21/2009	40918	12/506496	US	Method And System For Communicating Information Between A Switch And A Plurality Of Servers In A Computer Network
82004693	Granted	7398388	2/28/2002	39637	10/084436	US	Increasing Peer Privacy
82080047	Granted	7218917	1/15/2002	39217	10/051857	US	METHOD FOR SEARCHING NODES FOR INFORMATION
82136489	Granted	6243761	3/26/1998	37047	09/048652	US	A METHOD FOR DYNAMICALLY ADJUSTING MULTIMEDIA CONTENT OF A WEB PAGE BY A SERVER IN ACCORDING TO NETWORK PATH CHARACTERISTICS BETWEEN CLIENT AND SERVER
82199105	Granted	7644167	10/8/2004	40183	10/960605	US	Identifying A Service Node In A Network
82224575	Granted	8660018	7/31/2006	41695	11/496409	US	Machine Learning Approach For Estimating A Network Path Property
82245617	Granted	8514776	4/30/2009	41506	12/433717	US	Determining A Metric Region In A Wireless Network
82250240	Granted	8493947	4/30/2009	41478	12/433644	US	SELECTING AN ACCESS POINT IN A WIRELESS NETWORK USING A DATA FLOW METRIC (as amended)
82258169	Granted	8175107	8/18/2009	41037	12/543118	US	Network Routing Based On MAC Address Subnetting

PATENT
REEL: 038498 FRAME: 0660

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82259477	Granted	8391222	12/1/2009	41338	12/628830	US	Channel Assignment For A Wireless Network
82261040	Granted	8359376	4/20/2010	41296	12/763647	US	Proactive Sending Of An Ip-to-mac Address Binding For A High Fan-in Node
82911309	Granted	8943499	4/30/2012	42031	13/460836	US	PROVIDING A VIRTUAL NETWORK TOPOLOGY IN A DATA CENTER
82916241	Published		4/27/2012		13/458137	US	UPDATING VIRTUAL NETWORK MAPS
82916424	Granted	8774195	41029	41828	13/460535	US	USING PROBABILISTIC VALUES FOR ROUTING DATA PACKETS ON A DATA CENTER NETWORK
82990991	Published		10/15/2012		13/652096	US	CONVERTING ADDRESSES FOR NODES OF A DATA CENTER NETWORK INTO COMPACT IDENTIFIERS FOR DETERMINING FLOW KEYS FOR RECEIVED DATA PACKETS
83501163	Granted	9160761	7/31/2013	10/13/2015	13/955552	US	SELECTION OF A COUNTERMEASURE
83814341	Granted	9143218	9/23/2011	9/22/2015	14/240533	US	Extrapolating Channel State Information ("CSI") Estimates From Multiple Packets Sent Over Different Frequency Channels to Generate a Combined CSI Estimate for a MIMO-OFDM System
84049818	Allowed		3/14/2012		14/384986	US	REPLACEABLE MODULAR OPTICAL CONNECTION ASSEMBLY
84049835	Published		3/14/2012		14/384996	US	Allocating Bandwidth in a Network
84077618	Published		7/31/2012		14/391838	US	MANAGEMENT OF MODULATION AND CODING SCHEME IMPLEMENTATION
84084219	Published		4/30/2012		14/395625	US	Globally managed rate-limit assignment for multi-tenant segregation using distributed rate limiters
84103214	Published		7/31/2012		14/400367	US	WIRELESS ACCESS POINT CELL ID INSERTION IN FRAME HEADER
84312631	Application		1/14/2013		14/760693	US	WIRELESSLY TRANSMITTING MULTI-CAST SIGNAL USING RATELESS CODES
84312671	Application		1/18/2013		14/762192	US	PREVENTING AN INPUT/OUTPUT BLOCKING ATTACK TO A WIRELESS ACCESS POINT
90017112	Application		1/31/2013		14/765265	US	INCREMENTAL UPDATE OF A SHAPE GRAPH
90056963	Application		3/15/2013		14/777451	US	CLOUD-BASED CONNECTIVITY
90068284	Application		3/28/2013		14/780775	US	MAKING A FRAME RECEIVE DECISION IN A RECEIVER PHY LAYER
82096283	Granted	7560726	2/11/2003	7/14/2009	10/364987	US	Quantum Information Processing Using Electromagnetically Induced Transparency
82100279	Granted	7483142	5/3/2006	39840	11/417614	US	Security Systems And Monitoring Methods Using Quantum States
82174133	Granted	7449672	4/30/2004	11/11/2008	10/837129	US	CONVERSION OF QUANTUM INFORMATION FROM ONE PHOTONIC REPRESENTATION TO ANOTHER PHOTONIC REPRESENTATION

PATENT
REEL: 038498 FRAME: 0661

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82178438	Granted	7623783	8/10/2004	40141	10/915052	US	System And Method Of Self-configuring Optical Communication Channels Between Arrays Of Emitters And Detectors
82178441	Granted	7229218	9/20/2004	39245	10/945007	US	Apparatus And Method Of Providing An Optical Connection Between PC Boards For Optical Communication
82178444	Granted	7623793	8/10/2004	40141	10/915612	US	System And Method Of Configuring Fiber Optic Communication Channels Between Arrays Of Emitters And Detectors
82181504	Granted	7228016	5/11/2005	39238	11/127869	US	Evanescent Nanosensor Using An Optical Resonator
82185809	Granted	7315663	6/10/2005	1/1/2008	11/150332	US	Electronically Controlled Photonic Crystal Optical Switch
82198856	Granted	7554080	7/13/2005	6/30/2009	11/632596	US	ENTANGLEMENT PROCESSES AND SYSTEM
82201979	Granted	7236138	9/24/2004	39259	10/949158	US	Externally Powered Negatively Refracting Photonic Bandgap Medium
82208288	Granted	7515330	1/30/2007	4/7/2009	11/699500	US	METAMATERIAL STRUCTURES FOR LIGHT PROCESSING AND METHOD OF PROCESSING LIGHT
82208345	Granted	7570849	6/21/2005	8/4/2009	11/158666	US	Integrated Circuit Device Having Optically Coupled Layers
82210094	Granted	8017239	3/31/2006	9/13/2011	11/395698	US	Metamaterials And Methods Of Making The Same
82213592	Granted	7593170	10/20/2006	9/22/2009	11/584320	US	Random Negative Index Material Structures In A Three-dimensional Volume
82218644	Granted	7805031	6/2/2009	9/28/2010	12/476723	US	METHODS FOR FABRICATING COLOR-CENTER-BASED QUANTUM COMPUTER ARCHITECTURES
82219082	Granted	7609432	10/13/2006	10/27/2009	11/549283	US	Nanowire-based Device And Method Of Making Same
82219085	Granted	8154127	7/30/2007	4/10/2012	11/829995	US	OPTICAL DEVICE AND METHOD OF MAKING THE SAME
82223579	Granted	7427525	10/13/2006	9/23/2008	11/580344	US	Methods For Coupling Diamond Structures To Photonic Devices
82223582	Granted	8039845	8/8/2008	10/18/2011	12/228039	US	METHODS FOR COUPLING DIAMOND STRUCTURES TO PHOTONIC DEVICE
82224767	Granted	7964925	1/17/2007	6/21/2011	11/654046	US	Photodiode Module And Apparatus Including Multiple Photodiode Modules
82224770	Granted	7965381	10/13/2006	6/21/2011	11/580646	US	SELF-ALIGNED, SUB-WAVELENGTH OPTICAL LITHOGRAPHY
82226948	Granted	7763973	4/5/2007	7/27/2010	11/784463	US	Integrated Heat Sink For A Microchip
82226951	Granted	7720326	1/29/2007	5/18/2010	11/699291	US	Nanowire-based Photodetectors
82234628	Granted	8009991	10/24/2007	8/30/2011	11/977501	US	Dynamic Optical Signal Tracking On A Detector Array In A Free Space Optical Communication System
82234940	Granted	7972882	6/5/2009	40729	12/479604	US	Microresonator Systems And Methods Of Fabricating The Same
82239809	Granted	8179935	10/31/2008	5/15/2012	12/263405	US	TUNABLE OPTICAL RESONATOR
82239815	Granted	8275266	10/31/2008	9/25/2012	12/263360	US	Free Space Optical Interconnect With Asymmetric Light Pipes
82242683	Granted	8009363	4/2/2008	8/30/2011	12/922103	US	PRISM BEAMSPLITTERS

PATENT
REEL: 038498 FRAME: 0662

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82245494	Granted	8171051	10/15/2008	5/1/2012	12/288113	US	Quantum-based Oblivious Transfer And Private Data Sampling Protocols And Systems For Performing The Same
82249988	Granted	8345349	5/27/2009	1/1/2013	12/472600	US	COMPACT OPTICAL RESONATORS
82258667	Granted	8203137	7/13/2009	6/19/2012	12/501844	US	PHOTONIC STRUCTURE
82260479	Granted	8766092	10/14/2009	7/1/2014	12/579407	US	ENERGY COLLECTION SYSTEMS AND METHODS
82261787	Granted	8300996	7/30/2010	10/30/2012	12/847854	US	OPTICAL BUS FOR OPTICAL SIGNAL BROADCASTING
82395249	Granted	8891577	5/6/2008	11/18/2014	12/990940	US	SYSTEM AND METHOD FOR MICRO RING LASER
82405551	Granted	8571366	5/9/2008	10/29/2013	12/991644	US	PROXIMITY FREE SPACE OPTICAL INTERCONNECT
82634152	Granted	8446661	8/26/2008	5/21/2013	13/058495	US	TUNABLE NANOWIRE RESONANT CAVITY FOR OPTICAL MODULATION
82634175	Granted	8492700	8/27/2008	7/23/2013	13/058502	US	Dynamic Impedance Receiver Circuit For Ultrafast Low-power Photodetector
82651155	Granted	8138013	2/14/2011	40988	13/026761	US	METHOD AND APPARATUS FOR FORMING A PHOTODIODE
82716705	Allowed		10/31/2008		13/126837	US	OPTICAL CONNECTOR INTERCONNECTION SYSTEM AND METHOD
82755895	Granted	8699831	10/28/2011	4/15/2014	13/284164	US	PROCESS POLING FOR MATERIAL CONFIGURATION
82755915	Published		10/25/2011		13/280831	US	PLANAR REFLECTIVE DEVICES
82790104	Granted	8611707	1/9/2009	12/17/2013	13/143899	US	SYSTEM AND METHODS FOR ROUTING OPTICAL SIGNALS
82852248	Granted	8389388	4/30/2009	3/5/2013	13/258404	US	PHOTONIC DEVICE AND METHOD OF MAKING THE SAME
82902023	Granted	8761217	4/6/2012	6/24/2014	13/441102	US	MODAL FILTERS FOR MODULATABLE SOURCES
82931452	Granted	9014526	3/31/2010	42115	13/387036	US	WAVEGUIDE SYSTEM AND METHODS
82963105	Published		4/26/2012		13/456767	US	OPTICAL SWITCH
83235828	Allowed		10/27/2010		13/881004	US	RECEIVERS AND TRANSCEIVERS FOR OPTICAL MULTIBUS SYSTEMS
83791138	Granted	9052475	7/29/2011	42164	14/234975	US	FIBER OPTICS CONNECTORS
83821171	Granted	9093428	8/31/2011	42213	14/342174	US	Thermal Shunt
83835858	Published		9/15/2011		14/342762	US	VERTICAL-CAVITY SURFACE-EMITTING LASERS
83930213	Published		40886		14/357776	US	Control of Light Wavefronts
83948865	Published		1/18/2012		14/364725	US	INTEGRATED SUB-WAVELENGTH GRATING ELEMENT
84235803	Application		7/16/2013		14/439442	US	Window of Optical Waveguide
82631613	Granted	8930885	10/30/2008	1/6/2015	13/123657	US	RECONFIGURING A MODEL
84113327	Application		1/28/2015		14/607244	US	DISTRIBUTED MULTI-SITE CLOUD DEPLOYMENT
84256799	Application		6/3/2015		14/729453	US	INPUT/OUTPUT OPERATIONS AT A VIRTUAL BLOCK DEVICE OF A STORAGE SERVER
82268282	Granted	5989042	4/3/1998	11/23/1999	09/054652	US	ELECTRICAL CONNECTOR FOR USE BETWEEN SHIELDED MEDIA CONNECTORS AND COMPUTER COMMUNICATIONS CARDS
82274771	Granted	7180895	12/31/2001	2/20/2007	10/036638	US	System and Method for Classifying Network Packets with Packet Content

PATENT
REEL: 038498 FRAME: 0663

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82274774	Granted	7239639	12/27/2001	7/3/2007	10/034435	US	System and Method for Dynamically Constructing Packet Classification Rules
82274900	Granted	8000244	7/31/2008	8/16/2011	12/183458	US	Shared Rate Limiters Using Floating Buckets
82678062	Published		2/18/2011		13/030360	US	Securing the virtualized environment while minimizing virtual host performance impact
82919364	Granted	8510803	1/17/2012	8/13/2013	13/352054	US	Dynamic Network Access Control Method and Apparatus
84264682	Application		8/7/2015		14/821433	US	GENERATING NEGATIVE CLASSIFIER DATA BASED ON POSITIVE CLASSIFIER DATA
82579213	Granted	8176527	12/2/2002	5/8/2012	10/308767	US	Correlation Engine With Support For Time-Based Rules
82579233	Granted	7607169	12/2/2002	10/20/2009	10/308418	US	User Interface For Network Security Console
82579313	Granted	7424742	10/27/2004	9/9/2008	10/976075	US	Dynamic Security Events And Event Channels In A Network Security System
83699846	Allowed		10/31/2011		14/116128	US	NETWORK ASSET INFORMATION MANAGEMENT
83787666	Published		8/1/2012		14/233178	US	ASSET MODEL IMPORT CONNECTOR
83806246	Application		9/7/2012		14/239915	US	VISUAL COMPONENT AND DRILL DOWN MAPPING
84141296	Application		7/31/2012		14/418910	US	Pattern Consolidation To Identify Malicious Activity
90032827	Application		9/4/2015		14/846555	US	GENERATING ROW-BASED AND COLUMN-BASED CHUNKS
90068705	To Be Filed		4/16/2013			US	DISTRIBUTED EVENT CORRELATION SYSTEM
81998510	Granted	8060680	9/16/2002	40862	10/245229	US	Method of Allocating Memory
82098404	Granted	7725892	7/1/2003	40323	10/610657	US	FIELD-REPLACEABLE UNIT REVISION COMPATIBILITY
82129493	Granted	5859911	4/16/1997	36172	08/840795	US	METHOD FOR THE SECURE REMOTE FLASHING OF THE BIOS OF A COMPUTER
82130621	Granted	6418469	9/30/1997	37446	08/941410	US	MANAGING CONDITIONS IN A NETWORK
82135298	Granted	6085328	1/20/1998	36711	09/009788	US	WAKE UP OF A SLEEPING COMPUTE R USING I/O SNOOPING AND IMPERFECT PACKET FILTERING
82136549	Granted	6260068	6/10/1998	37082	09/095265	US	METHOD AND APPARATUS FOR ADAPTIVELY MIGRATING RESOURCES BETWEEN THE PARTITIONS OF MULTI PROCESSOR COMPUTER SYSTEM
82179692	Granted	7437651	6/29/2004	39735	10/879262	US	System And Method For Controlling Application Of An Error Correction Code (ECC) Algorithm In A Memory Subsystem
82191368	Granted	7574593	12/3/2004	40036	11/004355	US	Persistent Memory Manipulation Using EFI
82196111	Granted	7921345	5/19/2005	40638	11/132569	US	Automated Test System
82196174	Granted	7302547	9/30/2004	11/27/2007	10/955802	US	Method And System For Supporting Virtual Mappings For Shared Firmware
82225643	Granted	7930440	1/31/2007	4/19/2011	11/669912	US	Determining Electrical Compatibility And/or Configuration Of Devices In A Pre-boot Environment
82226390	Granted	7793089	1/31/2007	9/7/2010	11/669839	US	Configurable Backplane Connectivity For An Electrical Device
82904422	Published		2/10/2012		13/370551	US	PROXY INFRASTRUCTURE TO ACCESS FIRMWARE-BASED FEATURES

PATENT
REEL: 038498 FRAME: 0664

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83720613	Granted	9026627	1/6/2014	5/5/2015	14/148376	US	Method And System For Switching Between Remote Console Sessions
83874547	Published		10/28/2011		14/348202	US	Management of A Computer
84079556	Published		5/31/2012		14/397316	US	ESTABLISHING TRUST BETWEEN PROCESSOR AND SERVER
84126500	Published		7/17/2012		14/414448	US	SYSTEM AND METHOD FOR OPERATING SYSTEM AGNOSTIC HARDWARE VALIDATION
84291340	Application		1/29/2013		14/763501	US	ASSIGNING PROCESSORS TO MEMORY MAPPED CONFIGURATION
90068662	Application		3/29/2013		14/781301	US	UPDATE OF PROGRAMMABLE FOR COMPUTING NODES
82850147	Published		5/11/2012		13/469625	US	CONSTRUCTING A PROJECTION FOR STORING DATA
82850170	Granted	8782364	12/13/2011	7/15/2014	13/324830	US	DETERMINING AVAILABILITY OF DATA ELEMENTS IN A STORAGE SYSTEM
82865444	Published		11/8/2011		13/291711	US	QUERY ANALYSIS IN A DATABASE
82940503	Granted	9143562	4/27/2012	9/22/2015	13/458885	US	MANAGING TRANSFER OF DATA FROM A SOURCE TO A DESTINATION MACHINE CLUSTER
83781692	Granted	9141654	4/3/2014	9/22/2015	14/244649	US	EXECUTING USER-DEFINED FUNCTION ON A PLURALITY OF DATABASE TUPLES
83996293	Application		4/30/2012		14/375594	US	OBJECT DEPENDENCY MANAGEMENT
84123151	Application		1/6/2015		14/590570	US	DATA TRANSFER REQUESTS WITH DATA TRANSFER POLICIES
82210904	Granted	7587492	7/29/2005	9/8/2009	11/193079	US	Dynamic Performance Management For Virtual Servers
82256546	Application		9/14/2004		10/941038	US	System, Method, And Computer Program Product For Brokering Data Processing Services
82256855	Granted	8473376	3/23/2005	6/25/2013	11/087536	US	System, Method, And Computer Program Product For Byte-based Utility Computing Pricing
84241568	Application		12/7/2012		14/440994	US	NETWORK RESOURCE MANAGEMENT
82947625	Granted	7822812	1/3/2007	10/26/2010	11/619497	US	TECHNIQUES FOR SHARING CONTENT INFORMATION WITH MEMBERS OF A VIRTUAL USER GROUP IN A NETWORK ENVIRONMENT WITHOUT COMPROMISING USER PRIVACY
82947642	Granted	8862670	1/26/2007	10/14/2014	11/627890	US	SYSTEMS AND METHODS FOR INTERACTIVELY ANALYZING COMMUNICATION CHAINS BASED ON MESSAGES
82947645	Granted	8224641	11/19/2008	7/17/2012	12/274182	US	LANGUAGE IDENTIFICATION FOR DOCUMENTS CONTAINING MULTIPLE LANGUAGES
82948126	Application		3/15/2005		11/081210	US	INTEGRATED DATA AND REAL-TIME METADATA CAPTURE SYSTEM AND METHOD
82948140	Granted	7962948	4/6/2001	6/14/2011	09/828618	US	VIDEO-ENABLED COMMUNITY BUILDING
82948312	Granted	6269370	9/15/1998	7/31/2001	09/153519	US	WEB SCAN PROCESS

PATENT
REEL: 038498 FRAME: 0665

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82948581	Granted	8161318	8/7/2006	4/17/2012	11/500809	US	ENTERPRISE SERVICE AVAILABILITY THROUGH IDENTITY PRESERVATION
82948598	Granted	7870416	8/7/2006	1/11/2011	11/500864	US	ENTERPRISE SERVICE AVAILABILITY THROUGH IDENTITY PRESERVATION
82948601	Granted	7657780	8/7/2006	2/2/2010	11/500805	US	ENTERPRISE SERVICE AVAILABILITY THROUGH IDENTITY PRESERVATION
82948664	Granted	8576342	1/30/2012	11/5/2013	13/361903	US	SYSTEM AND METHOD FOR DETECTING SCENE CHANGES IN A DIGITAL VIDEO STREAM
82962710	Published		4/26/2012		13/457112	US	DOCUMENT-TYPE AND CAPTURE METHOD AGNOSTIC VERSIONING OF AN ARCHIVED DOCUMENT
82118198	Granted	7016494	3/26/2001	3/21/2006	09/818074	US	MULTIPLE CRYPTOGRAPHIC KEY PRECOMPUTE AND STORE
83100806	Granted	8918893	10/29/2012	12/23/2014	13/662678	US	Managing A Fault Condition By A Security Module
84210513	Application		10/2/2012		14/432910	US	SECURITY SHIELD ASSEMBLY
81955619	Granted	5881280	7/25/1997	3/9/1999	08/900274	US	METHOD AND SYSTEM FOR SELECTING INSTRUCTIONS FOR RE-EXECUTION FOR IN-LINE EXCEPTION RECOVERY IN A A SPECULATIVE EXECUTION PROCESSOR
81977162	Granted	6782453	2/12/2002	8/24/2004	10/072925	US	Storing Data In Memory
81979844	Granted	6772372	3/6/2001	8/3/2004	09/800283	US	System And Method For Monitoring Unaligned Memory Accesses
81981653	Granted	7761449	8/9/2001	40379	09/927163	US	Self-disentangling Data Storage Technique
81996452	Granted	6874014	5/29/2001	3/29/2005	09/865605	US	Chip Multiprocessor With Multiple Operating Systems
81997328	Granted	6856570	10/30/2003	38398	10/697677	US	APPARATUS FOR WRITING DATA BITS TO A MEMORY ARRAY
81998204	Granted	7363347	11/7/2002	4/22/2008	10/289311	US	Method And System For Reestablishing Connection Information On A Switch Connected To Plural Servers In A Computer Network
82011686	Granted	5720025	1/18/1996	2/17/1998	08/588140	US	Frequently-Redundant Array Of Independent Disks
82013993	Granted	5650757	3/27/1996	7/22/1997	08/624015	US	Impedance Stepping For Increasing The Operating Speed Of Computer Backplane Busses
82037660	Granted	6374331	12/30/1998	4/16/2002	09/223469	US	Distributed Directory Cache Coherence Multi-Processor Computer Architecture
82039472	Granted	6205519	5/27/1998	36970	09/085644	US	Cache Management For A Multi-Threaded Processor
82041842	Granted	6269410	2/12/1999	37103	09/249399	US	Method And Apparatus For Using System Traces To Characterize Workloads In A Data Storage System
82043150	Granted	6874065	2/26/1999	3/29/2005	09/258549	US	CACHE-FLUSHING ENGINE FOR DISTRIBUTED SHARED MEMORY MULTI-PROCESSOR COMPUTER SYSTEMS
82043153	Granted	6360231	2/26/1999	3/19/2002	09/258608	US	Transactional Memory For Distributed Shared Memory Multi-Processor Computer Systems
82045028	Granted	6769017	3/13/2000	38195	09/524175	US	Apparatus For And Method Of Memory-affinity Process Scheduling In Cc-numa Systems

PATENT
REEL: 038498 FRAME: 0666

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82091852	Granted	6895460	7/19/2002	38489	10/198839	US	Synchronization Of Asynchronous Emulated Interrupts
82092221	Granted	6862179	11/26/2002	38412	10/303761	US	PARTITION FOR VARYING THE SUPPLY OF COOLING FLUID
82095032	Granted	7082778	9/4/2003	38930	10/656588	US	Self-contained Spray Cooling Module
82099340	Granted	7310737	6/30/2003	12/18/2007	10/608151	US	Cooling System For Computer Systems
82099343	Granted	7269751	7/29/2003	39336	10/628291	US	Supplying Power To At Least One Electrical Device Based On An Efficient Operating Point Of A Power Supply
82117817	Granted	6912624	2/2/2004	38531	10/769824	US	METHOD AND SYSTEM FOR EXCLUSIVE TWO-LEVEL CACHING IN A CHIP-MULTIPROCESSOR
82134677	Granted	5950228	2/3/1997	9/7/1999	08/794172	US	VARIABLE-GRAINED MEMORY SHARING FOR CLUSTERS OF SYMMETRIC MULTI-PROCESSORS USING PRIVATE AND SHARED STATE TABLES
82135055	Granted	6061686	6/26/1997	5/9/2000	08/882883	US	UPDATINGS AND METHOD FOR UPDATING A COPY OF A REMOTE DOCUMENT STORED IN A LOCAL COMPUTER SYSTEM
82136234	Granted	6163840	11/26/1997	12/19/2000	08/980168	US	APPARATUS FOR SAMPLING MULTIPLE POTENTIALLY CONCURRENT INSTRUCTIONS IN A PROCESSOR PIPELINE
82176503	Granted	7031802	8/13/2003	4/18/2006	10/639428	US	Semi-Autonomous Operation Of A Robotic Device
82180187	Granted	7925738	12/18/2003	40645	10/740276	US	Analytical Cache Performance Model For A Media Server
82184372	Granted	7284088	10/23/2003	10/16/2007	10/693573	US	Methods Of Reading And Writing Data
82185374	Granted	7676662	7/31/2004	40246	10/903613	US	Virtualization Of A Non-privileged Instruction That Behaves Differently When Executed By Privileged Code Than By Non-privileged Code
82185494	Granted	7203822	7/31/2004	4/10/2007	10/909802	US	Unprivileged Context Management
82189802	Granted	8627068	4/29/2005	1/7/2014	11/118158	US	Selecting Access Authorities
82190930	Granted	7725926	8/23/2004	5/25/2010	10/924295	US	Authentication
82196798	Granted	8392900	3/17/2005	41338	11/082321	US	Methods And Systems For Barrier Reduction In Parallel Processing Systems
82197356	Granted	6848063	11/20/2001	38377	09/989357	US	System And Method For Scrubbing Errors In Very Large Memories
82197731	Granted	8219890	10/6/2008	41100	12/246355	US	DENOISING AND ERROR CORRECTION FOR FINITE INPUT, GENERAL OUTPUT CHANNEL
82197797	Granted	7725655	2/16/2006	40323	11/357815	US	METHOD OF OPERATING DISTRIBUTED STORAGE SYSTEM IN WHICH DATA IS READ FROM REPLICATED CACHES AND STORED AS ERASURE-CODED DATA
82198172	Granted	8726129	7/23/2004	41772	10/898139	US	Methods Of Writing And Recovering Erasure Coded Data

PATENT
REEL: 038498 FRAME: 0667

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82202105	Granted	8281313	9/29/2005	10/2/2012	11/241720	US	SCHEDULING COMPUTER PROCESSING JOBS THAT HAVE STAGES AND PRECEDENCE CONSTRAINTS AMONG THE STAGES
82204661	Granted	8335760	2/7/2005	12/18/2012	11/053703	US	Grid Computing System To Manage Utility Service Content
82209281	Granted	7975271	3/30/2005	7/5/2011	11/093827	US	System And Method For Dynamically Determining A Portion Of A Resource For Which A Thread Is To Obtain A Lock
82211345	Granted	8793587	6/29/2005	7/29/2014	11/171586	US	Interactive Display Of Data Center Assets
82214837	Granted	8185893	10/27/2006	5/22/2012	11/588635	US	Starting Up At Least One Virtual Machine In A Physical Machine By A Load Balancer
82214840	Granted	8732699	10/27/2006	5/20/2014	11/588607	US	Migrating Virtual Machines Between Physical Machines In A Defined Group
82215467	Granted	7720955	10/10/2006	5/18/2010	11/545754	US	DETERMINING PERFORMANCE OF AN APPLICATION BASED ON TRANSACTIONS
82218962	Granted	8255910	7/18/2006	8/28/2012	11/488399	US	Fair Weighted Proportional-share Virtual Time Scheduler
82219022	Granted	8782671	7/26/2006	7/15/2014	11/493179	US	Systems And Methods For Flexibly Controlling Resource Usage By A Driver Domain On Behalf Of A Virtual Machine
82219769	Granted	8732307	7/25/2006	5/20/2014	11/492354	US	Predictive Control For Resource Entitlement
82219772	Granted	7676578	7/25/2006	3/9/2010	11/492307	US	RESOURCE ENTITLEMENT CONTROL SYSTEM CONTROLLING RESOURCE ENTITLEMENT BASED ON AUTOMATIC DETERMINATION OF A TARGET UTILIZATION AND CONTROLLER GAIN
82222142	Granted	7426616	8/22/2006	9/16/2008	11/508102	US	Method For Determining A Recovery Schedule
82225391	Granted	8909872	10/31/2006	41982	11/555215	US	Computer System With Coherent Interconnection
82225394	Granted	7555419	7/23/2006	6/30/2009	11/492169	US	Simulation Of System Execution Of Instructions
82228949	Granted	8255686	7/27/2007	41149	11/829673	US	Securing Sensed Data Communication Over A Network
82229195	Granted	8105882	9/9/2010	40939	12/878215	US	Method Of Forming A Packaged Chip Multiprocessor (amended)
82230137	Granted	7757023	8/1/2007	40372	11/888348	US	Storage-centric Manageability In A System
82231574	Granted	7912690	4/25/2007	40624	11/740269	US	DYNAMIC SAMPLING OF FUNCTIONAL SIMULATION TO DETERMINE WHETHER TO PERFORM BOTH FUNCTIONAL AND TIMING SIMULATION
82232318	Granted	8392708	9/29/2008	41338	12/240742	US	Auditing Data Integrity
82238192	Granted	8491702	12/21/2007	7/23/2013	12/744902	US	Moisture Content Control System
82238690	Granted	8131515	10/20/2008	40974	12/254664	US	Data Center Synthesis
82239560	Published		11/8/2007		12/680903	US	URL AND ANCHOR TEXT ANALYSIS FOR FOCUSED CRAWLING

PATENT
REEL: 038498 FRAME: 0668

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82239623	Granted	7925923	10/29/2008	4/12/2011	12/260787	US	Migrating A Virtual Machine In Response To Failure Of An Instruction To Execute
82240061	Application		10/15/2008		12/252011	US	Simulation Of Execution Of Nodes Having Processors
82240190	Granted	7941698	10/15/2008	40673	12/252144	US	SELECTIVE AVAILABILITY IN PROCESSOR SYSTEMS
82244621	Granted	8260603	9/30/2008	9/4/2012	12/241948	US	Scaling A Prediction Model Of Resoure Usage Of An Application In A Virtual Environment
82246928	Granted	8639643	10/31/2008	41667	13/119936	US	Classification Of A Document According To A Weighted Search Tree Created By Genetic Algorithms
82248305	Published		10/31/2008		12/290617	US	Forensic Snapshot
82248800	Granted	8255709	2/6/2009	41149	12/366939	US	Power Budgeting For A Group Of Computer Systems
82249055	Granted	8321183	1/13/2009	11/27/2012	12/353104	US	Multi-variable Control-based Optimization To Achieve Target Goal
82249925	Granted	8882572	6/8/2009	11/11/2014	12/480429	US	Vent Tile With An Integrated Thermal Imaging Sensor And Controller
82250612	Granted	8108620	3/10/2009	1/31/2012	12/400991	US	Cooperative Caching Technique
82258544	Granted	8630967	12/7/2009	41653	12/632682	US	Determining Operational Settings For Fluid Moving Devices
82259600	Granted	8402461	11/15/2009	3/19/2013	12/618746	US	Switching Between Direct Mode And Indirect Mode For Virtual Machine I/O Requests
82260353	Granted	8248793	3/29/2010	8/21/2012	12/748835	US	Electronic Component Having A Movable Louver
82262597	Granted	8499116	6/11/2010	7/30/2013	12/813772	US	Managing Wear On Independent Storage Devices
82262909	Granted	8498841	4/21/2010	7/30/2013	12/764286	US	MAPPED THERMAL ELECTRIC COOLING
82263161	Granted	9141359	12/13/2010	9/22/2015	12/966867	US	Procedural Concurrency Graph Generator
82263164	Granted	8813054	12/13/2010	8/19/2014	12/966824	US	Sequential-Code Optimization of Parallel Code Based on Identifying Siloed Program References
82264724	Granted	8331131	1/31/2011	41254	13/018040	US	Changing a Memristor State
82264784	Published		6/24/2010		12/823041	US	Compaction And De-allocation Of Partial Objects Through Scheduling A Transaction
82275773	Granted	8516271	3/11/2011	8/20/2013	13/046381	US	Securing Non-Volatile Memory Regions
82576594	Published		7/1/2008		12/999260	US	Remote Computing Services
82663123	Published		7/29/2011		13/194798	US	Statistically-Based Anomaly Detection in Utility Clouds
82670302	Granted	8812427	4/27/2011	8/19/2014	13/095518	US	SYSTEM AND METHOD FOR DISAGGREGATING POWER LOAD
82737744	Granted	8832012	10/26/2011	9/9/2014	13/282388	US	SYSTEM AND METHOD FOR TREE DISCOVERY
82775039	Granted	8589360	12/12/2011	11/19/2013	13/323577	US	Verifying Consistency Levels
82828129	Granted	8938575	4/3/2012	1/20/2015	13/438438	US	Minimized Half-Select Current in Multi-State Memories
82832520	Published		11/4/2011		13/289930	US	PROVIDING ELASTIC INSIGHT TO INFORMATION TECHNOLOGY PERFORMANCE DATA
82846984	Published		2/2/2012		13/364723	US	Ownership Acquire Policy Selection
82850190	Granted	8832050	3/9/2012	9/9/2014	13/416603	US	VALIDATION OF DISTRIBUTED BALANCED TREES

PATENT
REEL: 038498 FRAME: 0669

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0670

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82852314	Granted	8667015	11/25/2009	3/4/2014	13/258480	US	Data Extraction Method, Computer Program Product And System
82853264	Granted	8713280	10/30/2009	4/29/2014	13/259210	US	HARD DISK DRIVES HAVING DIFFERENT ROTATIONAL SPEEDS
82911243	Granted	9063750	2/1/2012	6/23/2015	13/363722	US	MAPPING HIGH-PERFORMANCE COMPUTING APPLICATIONS TO PLATFORMS
82916261	Published		4/30/2012		13/459994	US	Storing Cache Metadata Separately From Integrated Circuit Containing Cache Controller
82916304	Published		4/27/2012		13/458477	US	DATA CACHING USING LOCAL AND REMOTE MEMORY
82929726	Published		1/27/2011		13/387714	US	Memory Access Methods And Apparatus
82963483	Published		4/27/2012		13/458462	US	Estimating Occupancy Of Buildings
82963500	Published		4/30/2012		13/460808	US	Dynamic Partitioning of a Data Structure
82963566	Granted	8918510	4/27/2012	12/23/2014	13/458790	US	Evaluation of Cloud Computing Services
82963623	Granted	9141430	4/30/2012	9/22/2015	13/460687	US	Scheduling MapReduce Job Sets
82976012	Granted	8745265	4/10/2012	6/3/2014	13/443356	US	Interconnection Fabric Connection
83013427	Allowed		8/28/2012		13/596331	US	ACCESSING REMOTE MEMORY ON A MEMORY BLADE
83038797	Published		7/30/2012		13/561213	US	PROVISIONING RESOURCES IN A FEDERATED CLOUD ENVIRONMENT
83051486	Granted	9015721	7/30/2012	4/21/2015	13/562248	US	MANAGING ARRAY COMPUTATIONS DURING PROGRAMMATIC RUN-TIME IN A DISTRIBUTED COMPUTING ENVIRONMENT
83099558	Published		11/9/2012		13/673702	US	Load-Balanced Sparse Array Processing
83134915	Published		6/30/2010		13/805212	US	Determining Similarity Between Elements Of An Electronic Document
83156558	Published		3/20/2013		13/847717	US	ALLOCATING AND SHARING A DATA OBJECT AMONG PROGRAM INSTANCES
83209754	Published		7/2/2013		13/933215	US	PRODUCING A BENCHMARK DESCRIBING CHARACTERISTICS OF MAP AND REDUCE TASKS
83700281	Published		5/8/2011		14/110484	US	INDICATING DOCUMENTS IN A THREAD REACHING A THRESHOLD
83769083	Published		7/27/2011		14/233230	US	Method and System for Reducing Write-Buffer Capacities within Memristor-Based Data-Storage Devices
83853777	Published		10/15/2011		14/349156	US	QUANTIFYING POWER USAGE FOR A SERVICE
83862791	Published		11/11/2011		14/350376	US	MANAGING AIRFLOW PROVISIONING
83952984	Application		6/30/2014		14/318871	US	DATASET AUGMENTATION BASED ON OCCLUSION AND INPAINTING
84115703	Published		6/8/2012		14/405899	US	AUGMENTING MEMORY CAPACITY FOR KEY VALUE CACHE
84115726	Application		6/8/2012		14/405904	US	ACCESSING MEMORY
84137077	Published		7/31/2012		14/417227	US	Determining Installation Locations for Meters

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84223005	Application		4/22/2015		14/437677	US	MANAGING AIRFLOW DISTRIBUTION THROUGH ADAPTIVE VENT TILES
84304390	Application		1/15/2013		14/759692	US	Vertically-Tiered Client-Server Architecture
83137769	Application		1/31/2013		13/755349	US	ASSET RATING USING ATTRIBUTE CORRELATION
83011160	Granted	8855118	9/25/2012	10/7/2014	13/626571	US	SOURCE DISCOVERY FOR NON-FLOODING MULTICAST USING OPENFLOW
82121690	Granted	7015682	1/30/2003	3/21/2006	10/354745	US	CONTROL OF A POWER FACTOR CORRECTED SWITCHING POWER SUPPLY
82129181	Granted	5801522	9/26/1996	9/1/1998	08/720211	US	POWER LIMIT CIRCUIT FOR COMPUTER SYSTEM
82169516	Granted	7447043	12/22/2003	11/4/2008	10/743611	US	Power Cabling Assembly
82174817	Granted	7646109	7/12/2005	1/12/2010	11/179920	US	System For Distributing AC Power Within An Equipment Rack
82178816	Granted	7719809	9/12/2006	5/18/2010	11/519635	US	Method And Apparatus For Distributing Electrical Power
82179626	Granted	7280365	2/18/2005	10/9/2007	11/061156	US	Multi-processor Module With Redundant Power
82179629	Granted	7791889	2/16/2005	9/7/2010	11/059189	US	Redundant Power Beneath Circuit Board
82179812	Granted	7502699	7/29/2005	3/10/2009	11/193689	US	System And Method For Monitoring Power In A Front End Rectifier Power System
82182686	Granted	7360104	1/31/2005	4/15/2008	11/047304	US	REDUNDANT VOLTAGE DISTRIBUTION SYSTEM AND METHOD FOR A MEMORY MODULE HAVING MULTIPLE EXTERNAL VOLTAGES
82184933	Granted	7512825	9/27/2004	3/31/2009	10/951179	US	Responding To DC Power Degradation
82217522	Granted	7793115	9/13/2006	9/7/2010	11/531534	US	Method And Apparatus For Operating A Power Feed In A Computer System
82220954	Granted	7649404	10/13/2006	1/19/2010	11/580756	US	Independent Thresholds For Power Supply Control Circuitry
82238123	Granted	8024586	5/21/2008	9/20/2011	12/124950	US	Method And System Of Determining Computing Module's Power Requirements
82241000	Granted	8564266	4/4/2008	10/22/2013	12/994101	US	DC-TO-DC CONVERTER WITH INDEPENDENT COMPENSATION LOGIC
82262099	Published		3/16/2010		12/725051	US	FAN CONTROL SYSTEM AND METHOD
82265033	Published		11/1/2010		12/916800	US	ADAPTIVE RATING FOR BACKUP POWER SUPPLY
82675523	Granted	8933680	7/8/2011	1/13/2015	13/178829	US	OUTPUT INDUCTOR VOLTAGE REGULATION
82853058	Published		4/27/2009		13/259542	US	SWITCHING POWER SUPPLY FOR A LOAD IN STANDBY MODE
82901711	Published		1/29/2010		13/386375	US	Managing Electric Energy Distribution To Multiple Loads Using Selective Capping
82083230	Granted	6659168	7/9/2002	37964	10/192124	US	Heatsink With Multiple Fin Types
82085792	Granted	6879487	9/30/2003	4/12/2005	10/677151	US	Fan-Securing Device For Use With A Heat Transfer Device
82120439	Granted	6985358	11/19/2003	38727	10/716763	US	COMPUTER CHASSIS WITH FAN TRAY ASSEMBLY
82132181	Granted	6373696	6/15/1998	4/16/2002	09/094885	US	HARD DRIVE COOLING USING FINNED HEAT SINK AND THERMALLY CONDUCTIVE INTERFACE PAD

PATENT
REEL: 038498 FRAME: 0671

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0672

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82179566	Granted	7336490	11/24/2004	2/26/2008	10/996721	US	MULTI-CHIP MODULE WITH POWER SYSTEM
82179569	Granted	7499281	1/2/2008	3/3/2009	11/968520	US	MULTI-CHIP MODULE WITH POWER SYSTEM
82181438	Granted	7327570	12/22/2004	39483	11/022728	US	Fluid Cooled Integrated Circuit Module
82182434	Granted	7558063	4/26/2007	7/7/2009	11/740624	US	SERVER WITH A FLEXIBLE COOLING SCHEME
82185245	Granted	7426110	10/26/2005	9/16/2008	11/260105	US	Centrifugal Fan Clutch For An Electronics Cooling Fan
82186433	Granted	6981915	3/15/2004	1/3/2006	10/799730	US	Airflow Volume Control System
82187555	Granted	7907403	10/25/2005	3/15/2011	11/258626	US	Active Heat Sink With Multiple Fans
82187618	Granted	8647077	2/20/2004	2/11/2014	10/783162	US	Cooling Fan For Electronic Device
82197422	Granted	8051671	10/3/2005	11/8/2011	11/242436	US	System And Method For Cooling Computers
82204037	Granted	7218515	5/19/2005	5/15/2007	11/132570	US	Cooling Fan With External Circuit Board
82207283	Granted	7447019	10/31/2005	11/4/2008	11/263458	US	Computer Having An Axial Duct Fan
82207286	Granted	7558061	8/4/2006	7/7/2009	11/462502	US	Cooling Fan Module
82216148	Granted	7447026	8/31/2006	11/4/2008	11/468880	US	System For Hot Swapping Heat Exchangers
82224395	Granted	7870872	3/30/2007	1/18/2011	11/731539	US	Controlling Cooling Fluid Flow In A Cooling System With A Variable Inline Nozzle
82227761	Granted	7511959	4/25/2007	3/31/2009	11/789651	US	Scalable Computing Apparatus
82231823	Granted	7688578	7/19/2007	40267	11/880342	US	A Modular High-density Computer System
82235321	Granted	8270155	2/15/2008	9/18/2012	12/866858	US	Coolant Pulsing For Computer System
82237937	Granted	7800902	6/4/2008	40442	12/133161	US	Air Backflow Prevention In An Enclosure
82249052	Granted	7821785	4/20/2009	40477	12/426863	US	HEATSINKS AND A SPRING IN A BAFFLE SLOT BETWEEN ADJACENT COMPONENTS
82659081	Granted	8213176	3/14/2011	7/3/2012	13/047499	US	Systems And Methods For Providing Airflow
82828149	Published		11/30/2011		13/307132	US	DETERMINE INSTALLATION OF COMPONENTS BASED ON PERFORMANCE CHARACTERISTICS
82852334	Granted	8767403	10/30/2009	7/1/2014	13/260207	US	FRAME HAVING FRAME BLADES THAT PARTICIPATE IN COOLING MEMORY MODULES
82931993	Granted	9019704	8/27/2009	4/28/2015	13/386138	US	HEAT STORAGE BY PHASE-CHANGE MATERIAL
83058499	Granted	D689182	8/22/2012	41520	29/430233	US	FAN
90053637	To Be Filed		4/3/2013			US	ZONEABLE POWER REGULATION
82257296	Granted	8924497	11/16/2007	12/30/2014	11/941737	US	MANAGING DELIVERY OF ELECTRONIC MESSAGES
82027172	Granted	5999359	5/9/1997	12/7/1999	08/853243	US	Head Positioning System With Photosensor
82067315	Granted	6198588	9/23/1997	3/6/2001	08/936843	US	TAPE PLAYBACK UNIT AND METHOD HAVING ADAPTIVE FILTER
81966353	Granted	6857086	4/21/2003	2/15/2005	10/419558	US	Hierarchy Of Fault Isolation Timers
81967106	Granted	6718447	6/28/2001	38083	09/895474	US	Method And System For Providing Logically Consistent Logical Unit Backup Snapshots Within One Or More Data Storage Devices
81968600	Granted	6725317	4/29/2000	38097	09/562590	US	SYSTEM AND METHOD FOR MANAGING A COMPUTER SYSTEM HAVING A PLURALITY OF PARTITIONS

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81971219	Granted	7412923	9/3/2003	39679	10/654066	US	A Stencil Device For Accurately Applying Solder Paste To A Printed Circuit Board
81972032	Granted	6651124	4/28/2000	37943	09/560910	US	METHOD AND APPARATUS FOR PREVENTING DEADLOCK IN A DISTRIBUTED SHARED MEMORY SYSTEM
81972221	Granted	6625673	5/1/2000	37887	09/562474	US	Method For Assigning Addresses To Input/Output Devices
81973781	Granted	6657358	6/26/2001	12/2/2003	09/892251	US	Power Supply Including Pyroelectric Capacitor
81974159	Granted	6678799	10/18/2001	1/13/2004	10/002993	US	Aggregation Of Cache-updates In A Multi-processor, Shared-memory System
81976031	Granted	6684313	8/15/2001	1/27/2004	09/931081	US	Managing Storage Contention In Automated Storage Systems
81976343	Granted	6684381	9/29/2000	38013	09/675725	US	Hardware Description Language-Embedded Regular Expression Support For Module Iteration And Interconnection
81977594	Granted	7032086	2/28/2003	38825	10/375177	US	SYSTEM AND METHOD FOR ADJUSTING STORAGE DEVICE LAYOUT WITH AT LEAST ONE STATUS FOR THE ADJUSTING
81978836	Granted	6621654	2/22/2001	9/16/2003	09/791107	US	Apparatus And Method For Retaining Different Sizes Of Data Cartridges In A Storage Magazine
81982520	Granted	7236939	3/31/2001	39259	09/823581	US	A PEER-TO-PEER INTER-ENTERPRISE COLLABORATIVE PROCESS MANAGEMENT METHOD AND SYSTEM
81986705	Granted	6672381	4/30/2001	37992	09/843933	US	Multi-Load Thermal Regulating System With Multiple Serial Evaporators
81995942	Granted	6681308	11/16/2001	38006	09/987866	US	Method For Automatically Converting Block Size And Formatting Backend Fiber Channel Discs In An Auto Inclusive Storage Array Environment
81996071	Granted	8032828	3/4/2002	40820	10/091237	US	Method And System Of Document Transformation Between A Source Extensible Markup Language (XML) Schema And A Target XML Schema
81996629	Granted	6990568	3/30/2001	38741	09/823403	US	Retiring Early-Completion Instructions To Improve Computer Operation Throughput
81998627	Granted	7200665	10/17/2001	39175	09/981276	US	Allowing Requests Of A Session To Be Serviced By Different Servers In A Multi-server Data Service System
82000691	Granted	6931489	8/12/2002	38580	10/217068	US	Apparatus And Methods For Sharing Cache Among Processors
82001255	Granted	7287277	12/21/2001	39378	10/023811	US	METHOD AND APPARATUS FOR CONTROLLING EXECUTION OF A COMPUTER OPERATION
82001567	Granted	6705833	11/15/2001	38062	10/001003	US	Airflow Flapper Valve
82003934	Granted	6664813	3/19/2002	37971	10/100781	US	Pseudo-NMOS Logic Having A Feedback Controller
82004000	Granted	6687147	7/23/2002	38020	10/202174	US	CUBIC MEMORY ARRAY WITH DIAGONAL SELECT LINES
82004126	Granted	6674654	3/27/2002	37992	10/108940	US	DC-DC Voltage Converter
82005746	Granted	6661691	4/2/2002	37964	10/115763	US	Interconnection Structure And Methods

PATENT
REEL: 038498 FRAME: 0673

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82007369	Granted	7360207	12/13/2001	39553	10/016949	US	Method And System To Analyze Inlined Functions
82007804	Granted	6580422	4/27/1995	37789	08/430943	US	Remote Computer Display Using Graphics Primitives Sent Over A Wireless Link
82014116	Granted	5831990	6/19/1996	11/3/1998	08/667037	US	Test-Mode Control For Dynamic Logic Gates
82014923	Granted	5801895	5/28/1996	9/1/1998	08/653898	US	DISK DRIVE SERVO DEMODULATION SYSTEM WHICH SUPPRESSES NOISE ON THE POSITION ERROR SIGNAL
82014926	Granted	5856989	8/13/1996	1/5/1999	08/696220	US	Method And Apparatus For Parity Block Generation
82016045	Granted	5778232	7/3/1996	7/7/1998	08/675174	US	Automatic Compiler Restructuring Of COBOL Programs Into A Proc Per Paragraph Model
82016798	Granted	5752037	4/26/1996	5/12/1998	08/639134	US	Method Of Prefetching Data For References With Multiple Stride Directions
82017236	Granted	5878934	3/21/1997	3/9/1999	08/822316	US	Low-Profile Tape Drive With An External-Rotor Motor Directly Driving A Cartridge Capstan
82017671	Granted	5838978	10/9/1996	11/17/1998	08/731098	US	System And Method Of Using Annotations To Optimize Dynamically Translated Code In The Presence Of Signals
82017794	Granted	5920716	11/26/1996	7/6/1999	08/756423	US	Compiling A Predicated Code With Direct Analysis Of The Predicated Code
82018736	Granted	5903732	7/3/1996	5/11/1999	08/675132	US	Trusted Gateway Agent For Web Server Programs
82022663	Granted	6634021	4/16/2001	10/14/2003	09/836667	US	User Controlled Relaxation Of Optimization Constraints Related To Volatile Memory References
82024913	Granted	6075386	10/22/1997	6/13/2000	08/955729	US	Dynamic Logic Gate With Relaxed Timing Requirements And Output State Holding
82025285	Granted	6151297	7/8/1997	11/21/2000	08/889317	US	Method And System For Link Level Server/Switch Trunking
82030784	Granted	6618354	3/13/1998	9/9/2003	09/042202	US	CREDIT INITIALIZATION IN SYSTEMS WITH PROACTIVE FLOW CONTROL
82031216	Granted	6735687	6/15/2000	5/11/2004	09/595076	US	Multithreaded Microprocessor With Asymmetrical Central Processing Units
82031282	Granted	6542860	3/22/1999	4/1/2003	09/273783	US	System And Method For Detecting Nodes That Are Susceptible To Floating
82031972	Granted	6148437	5/4/1998	36844	09/073197	US	System And Method For Jump-Evaluated Trace Designation
82032719	Granted	5966538	10/31/1997	36445	08/960527	US	METHOD AND APPARATUS FOR AUTOMATICALLY DETERMINING WHICH COMPILER OPTIONS SHOULD BE USED WHEN COMPILING A COMPUTER PROGRAM
82046639	Granted	6272598	3/22/1999	8/7/2001	09/273849	US	WEB CACHE PERFORMANCE BY APPLYING DIFFERENT REPLACEMENT POLICIES TO THE WEB CACHE
82046891	Granted	6622300	4/21/1999	37880	09/295548	US	Dynamic Optimization Of Computer Programs Using Code-Rewriting Kernel Module
82047389	Granted	6470438	2/22/2000	37551	09/510253	US	METHOD AND APPARATUS FOR REDUCING FALSE HITS IN A NON-TAGGED, N-WAY CACHE

PATENT
REEL: 038498 FRAME: 0674

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0675

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82047392	Granted	6622209	9/30/2002	9/16/2003	10/262376	US	USE OF NON-COUNT DATA AND INDEX HASHING TO REDUCE FALSE HITS IN A NON-TAGGED, N-WAY CACHE
82068308	Granted	6526482	4/1/1998	2/25/2003	09/647507	US	Method And Apparatus For Tracking Appended Data On Storage Medium
82068494	Granted	6625676	8/17/2000	9/23/2003	09/640181	US	SMALL COMPUTER SYSTEM WITH INTERFACE CONTROL AND METHOD OF OPERATING SAME
82084472	Granted	7587530	8/20/2003	9/8/2009	10/645721	US	METHOD AND APPARATUS FOR MANAGING DEVICE RESERVATION
82094336	Granted	7127554	12/29/2003	10/24/2006	10/745936	US	WRITING DATA TO A DATA STORAGE ,EDOI, OM DATA SETS COMMENCING AT A SAME POSITION ALONG THE STORAGE MEDIUM
82097651	Granted	6945489	8/19/2003	9/20/2005	10/643793	US	SPLICING TAPE FOR ATTACHING A LEADER TAPE TO DATA TAPE
82177556	Granted	7979647	9/27/2004	7/12/2011	10/949191	US	Method Of Storing Data On A Secondary Storage Device
82187921	Granted	7283318	6/24/2004	10/16/2007	10/877641	US	Position Sensor
82197164	Granted	7420768	10/14/2005	9/2/2008	11/251510	US	Cartridge Loading Apparatus
82197347	Granted	7274535	11/24/2004	9/25/2007	10/996882	US	MEDIA CARTRIDGE HAVING MULTIPLE TAPE POSITION SENSOR WINDOWS
82210208	Granted	8528575	10/3/2005	9/10/2013	11/242203	US	Debris Collection Apparatus And Method For Collecting Debris From A Data Storage Library
82210898	Published		10/26/2005		11/259222	US	Efficient Error Reporting From An Operator Control Panel Of A Storage Apparatus
82210901	Granted	7577572	10/26/2005	8/18/2009	11/259221	US	Service Inventory Prompt And Actions
82215329	Application		7/26/2006		11/494293	US	DATA STORAGE ARRANGEMENT AND KEY DISTRIBUTION
82222136	Granted	7333291	9/28/2006	2/19/2008	11/529095	US	System And Method For Reducing Tracking Noise In A Tape Drive
82222883	Granted	9104324	8/19/2006	8/11/2015	11/506313	US	Managing Host Logins To Storage Systems
82225259	Granted	D627772	3/26/2007	11/23/2010	29/285274	US	AN OPERATOR CONTROL PANEL WITH DISPLAY AND MULTIPLE FUNCTION BUTTONS FOR A STORAGE LIBRARY
82225571	Published		1/31/2007		11/700604	US	STORAGE LIBRARY WITH REMOVABLE MEDIA
82242299	Granted	8489808	10/22/2008	7/16/2013	12/256353	US	Systems And Methods Of Presenting Virtual Tape Products To A Client
82244609	Granted	8284522	10/15/2008	10/9/2012	12/251797	US	Non-Radial Bearing Preload
82245983	Granted	8347111	1/6/2009	1/1/2013	12/349013	US	Data Processing Apparatus
82247924	Granted	8059361	1/12/2009	11/15/2011	12/352468	US	Position Signal Processor
82248107	Granted	8154811	3/30/2009	4/10/2012	12/414491	US	Measuring Reader/writer Offset In A Tape Drive Head
82260410	Granted	8943327	1/27/2010	1/27/2015	12/694780	US	APPARATUS AND METHOD TO ENABLE OPERATION BETWEEN A MAIN ASSEMBLY AND A SUB-ASSEMBLY THAT ARE CRYPTOGRAPHICALLY RELATED
82261967	Granted	8665552	7/12/2010	41702	12/834674	US	Controlling Positions Of Storage Media Heads

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0676

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82264466	Granted	8289644	7/16/2010	10/16/2012	12/838020	US	Varying Data Reader Response
82682115	Granted	8488265	5/25/2011	7/16/2013	13/115205	US	TAPE STORAGE PROCESSING
82689128	Published		6/29/2011		13/171888	US	ACCESS COMMANDS INCLUDING EXPECTED MEDIA POSITIONS
82846972	Granted	8654468	4/30/2012	41688	13/459762	US	MULTI-RATE OVERSAMPLING OF ANALOG SIGNALS IN STORAGE DEVICES
82853032	Granted	8724247	10/5/2009	5/13/2014	13/260189	US	Adjusting A Transducer Head For Transferring Data
82961808	Published		5/21/2012		13/476863	US	SYSTEM AND METHOD FOR DISPLAYING TAPE DRIVE UTILIZATION AND PERFORMANCE DATA
83014374	Granted	8819664	11/1/2012	8/26/2014	13/666607	US	UPGRADE FIRMWARE WITH UPGRADE INFORMATION FROM A TAPE CARTRIDGE IN A WIRELESS MANNER
83014500	Published		7/13/2012		13/548780	US	Method of Forming a Hardened Layer on a Drive Head
83015851	Granted	9058844	9/20/2012	6/16/2015	13/623609	US	Access to MIgrated Tapes
83222735	Granted	7038874	5/19/2003	5/2/2006	10/440694	US	TAMPER RESISTANT WRITE ONCE RECORDING OF A DATA STORAGE CARTRIDGE HAVING REWRITABLE MEDIA
82245545	Granted	8312242	10/30/2008	11/13/2012	12/261069	US	Tracking Memory Space In A Storage System
82245551	Allowed		10/30/2008		12/261068	US	Managing Counters In A Distributed File System
82259783	Granted	8311982	2/11/2010	11/13/2012	12/703858	US	STORING UPDATE DATA USING A PROCESSING PIPELINE
82261595	Granted	8296358	1/11/2010	10/23/2012	12/685237	US	METHOD AND SYSTEM FOR JOURNALING DATA UPDATES IN A DISTRIBUTED FILE SYSTEM
82265399	Published		2/25/2011		13/034900	US	Retention Management in a WORM Storage System
82265402	Published		1/14/2011		13/006790	US	Clock Monitoring in a Data-Retention Storage System
82604239	Granted	8689226	5/11/2011	4/1/2014	13/105294	US	ASSIGNING RESOURCES TO PROCESSING STAGES OF A PROCESSING SUBSYSTEM
84141227	Application		12/20/2012		14/433668	US	RAID STORAGE PROCESSING
81980090	Granted	6564170	12/29/2000	5/13/2003	09/751010	US	Customizable User Interfaces
82070867	Granted	7444412	6/7/2002	10/28/2008	10/165864	US	Data Processing System And Method
82070990	Granted	7062672	6/7/2002	6/13/2006	10/163878	US	Method Of And Computer Network Arrangement For Restoring An Impaired Software Image
82082912	Granted	7100159	11/4/2002	8/29/2006	10/287567	US	Method, Apparatus And Means For Silently Customizing Software Within A Multi-platform Environment
82087412	Granted	7051244	10/31/2002	5/23/2006	10/285076	US	Method And Apparatus For Managing Incident Reports
82087781	Granted	7051320	8/22/2002	5/23/2006	10/226515	US	Diagnostic Tool For A Plurality Of Networked Computers With Incident Escalator And Relocation Of Information To Another Computer
82090346	Granted	7188171	1/23/2003	3/6/2007	10/349773	US	Method And Apparatus For Software And Hardware Event Monitoring And Repair

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82092776	Granted	7277936	3/3/2003	10/2/2007	10/376305	US	A System Using Network Topology To Perform Fault Diagnosis To Locate Fault Between Monitoring And Monitored Devices Based On Reply From Device At Switching Layer
82170818	Granted	7634077	5/17/2004	12/15/2009	10/846630	US	System For Providing Support For An Electronic Device
82185617	Granted	7769720	6/16/2004	8/3/2010	10/869730	US	SYSTEMS AND METHODS FOR MIGRATING A SERVER FROM ONE PHYSICAL PLATFORM TO A DIFFERENT PHYSICAL PLATFORM
82224887	Granted	7974932	10/20/2006	7/5/2011	11/584711	US	Service Utility Pricing Model
82248296	Granted	8174829	1/29/2009	5/8/2012	12/361610	US	Cooling Electronic Devices Provided In Rows Of Racks
82257350	Published		8/14/2007		11/838795	US	APPARATUS, AND ASSOCIATED METHOD, FOR MAINTAINING AN ASSET REPOSITORY
83138782	Granted	8918763	1/30/2013	12/23/2014	13/754467	US	MARKED TEST SCRIPT CREATION
84072969	Allowed		6/26/2012		14/394257	US	METHOD AND SYSTEM FOR ENVIRONMENTAL WATERMARKING
82092713	Granted	8689096	11/19/2001	4/1/2014	10/495670	US	Computer-based Method, Software Module And Computer Program Product For Processing Information In Transaction-tax Related Applications
81990329	Granted	6859526	7/3/2001	2/22/2005	09/898353	US	System And Program Product For Managing Call Information
81990701	Granted	8036983	1/18/2002	10/11/2011	10/052608	US	System For And Method Of Web Based Non-wage Compensation
82164326	Granted	5860133	12/1/1995	1/12/1999	08/565751	US	METHOD FOR ALTERING MEMORY CONFIGURATION AND SIZING MEMORY MODULES WHILE MAINTAINING SOFTWARE CODE STREAM COHERENCE
82165136	Granted	5842017	1/29/1996	11/24/1998	08/593756	US	METHOD AND APPARATUS FOR FORMING A TRANSLATION UNIT
82165757	Granted	6009521	10/23/1998	12/28/1999	09/178184	US	System For Assigning Boot Strap Processor In Symmetric Multiprocessor Computer With Watchdog Reassignment
82165823	Granted	6101608	2/20/1997	8/8/2000	08/804097	US	METHOD AND APPARATUS FOR SECURE REMOTE WAKE-UP OF A COMPUTER OVER A NETWORK
82167758	Granted	7348498	7/17/2003	3/25/2008	10/621661	US	Partially Voided Anti-pads
82177811	Granted	8473673	6/24/2005	6/25/2013	11/166608	US	Memory Controller Based (de)compression
82178870	Granted	8230275	5/26/2005	7/24/2012	11/138005	US	Use Of Parity Bits To Detect Memory Installation Defects
82179368	Granted	7444681	1/12/2004	10/28/2008	10/756473	US	Security Measures In A Partitionable Computing System
82180808	Granted	7403396	1/20/2005	7/22/2008	11/039042	US	Communicating With An Electronic Module That Is Slidably Mounted In A System
82181741	Granted	7908422	6/10/2009	3/15/2011	12/481628	US	System And Method For A Distributed Crossbar Network Using A Plurality Of Crossbars
82182365	Granted	7600082	11/30/2004	10/6/2009	11/000279	US	Virtualization Logic

PATENT
REEL: 038498 FRAME: 0677

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82183493	Granted	7652896	12/29/2004	1/26/2010	11/027431	US	Component For Impedance Matching
82189358	Granted	7694926	7/11/2007	4/13/2010	11/776252	US	Mounting Bracket
82195730	Granted	D514109	10/25/2004	1/31/2006	29/215774	US	Computer Having An External Panel
82197287	Granted	8046196	5/2/2008	10/25/2011	12/114673	US	Modular Networked Sensor Assembly
82209965	Granted	D551620	8/3/2005	9/25/2007	29/235638	US	Computer Power Supply Having A Front Bezel
82217330	Granted	7908470	10/31/2006	3/15/2011	11/590080	US	Multi-processor Computer With Plural Boot Memories
82220510	Granted	6325636	7/20/2000	12/4/2001	09/625002	US	Passive Midplane For Coupling Web Server Processing Cards With A Network Interface(s)
82221890	Granted	7619897	10/31/2006	11/17/2009	11/590127	US	USER INTERFACE MODULE FOR A SERVER CHASSIS
82222139	Granted	7941655	10/31/2006	5/10/2011	11/590092	US	Extensible Firmware Interface With Pre-start Configuration Phase For Computers
82226066	Granted	7498524	4/23/2007	3/3/2009	11/738895	US	ENCLOSURE AND GASKET ASSEMBLY FOR REDUCING EMI
82238054	Granted	8037578	5/20/2008	10/18/2011	12/123657	US	Low-profile Assemblies
82238060	Granted	7723621	5/21/2008	5/25/2010	12/124670	US	Flexible Gasket
82240616	Granted	7768787	9/25/2008	8/3/2010	12/238303	US	Electronic Device With Modular Bezel, And Method Of Configurating Electronic Device With Modular Bezel
82244675	Granted	9058466	10/28/2008	6/16/2015	12/259387	US	ENABLING SECURITY OF A COMPUTER SYSTEM
82245239	Granted	8225031	10/30/2008	7/17/2012	12/262063	US	MEMORY MODULE INCLUDING ENVIRONMENTAL OPTIMIZATION
82246673	Granted	8509960	7/31/2009	8/13/2013	12/533990	US	PROVIDING COOLING TO A COMPUTER SYSTEM VIA A PEDESTAL HAVING A COOLING FAN
82260473	Granted	8237579	12/11/2009	8/7/2012	12/635923	US	Reference Signal Synchronized To Clock Signal
82264838	Granted	8411436	10/26/2010	4/2/2013	12/912390	US	HEAT SINK ASSEBMLY CONTAINER
82554401	Published		6/20/2008		12/999942	US	LOW LEVEL INITIALIZER
82846915	Granted	D672354	10/13/2011	12/11/2012	29/403999	US	Cover Plate for A Computing Device
82852305	Granted	8570744	10/30/2009	41576	13/379393	US	A COLD PLATE HAVING BLADES THAT INTERLEAVE WITH MEMORY MODULES
82901954	Published		3/15/2012		13/421457	US	SUPPORT MEMBER TO POSITION A SYSTEM BOARD
82949654	Granted	8473687	5/5/2012	6/25/2013	13/464982	US	Computer Cache System With Stratified Replacement
82962678	Granted	9121422	5/31/2012	9/1/2015	13/484609	US	System Board Fastener
83038164	Granted	D700612	7/31/2012	41702	29/428441	US	A Removable Bezel of a Computing Device with an LCD Display
83096223	Granted	9149753	3/26/2013	10/6/2015	13/850801	US	Filter Member
83136240	Allowed		6/7/2010		13/702117	US	MODULE AND PORT
83140963	Granted	D705784	1/4/2013	5/27/2014	29/441454	US	BEZEL FOR A COMPUTING DEVICE
83543109	Published		4/27/2011		14/005255	US	ROTATIONAL LOCKOUT
83689698	Granted	D740293	11/11/2013	10/6/2015	29/472319	US	A Removable Bezel of a Computing Device with an LCD Display
84088578	Published		4/27/2012		14/396731	US	BLADE ENCLOSURE
84122564	Granted	D724081	3/5/2013	3/10/2015	29/447626	US	Top Loading Fan Cartridge

PATENT
REEL: 038498 FRAME: 0678

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84171323	Application		5/29/2015		14/726017	US	RACK MOUNTABLE POWER DISTRIBUTION UNITS
84291360	Application		6/30/2015		29/532002	US	MICROSERVER
81951182	Granted	5883824	11/29/1993	36235	08/158649	US	Parallel Adding And Averaging Circuit And Method
81994571	Granted	6832308	2/15/2000	12/14/2004	09/505249	US	Apparatus And Method For Instruction Fetch Unit
82000376	Granted	6836127	7/27/2001	12/28/2004	09/916408	US	Dual Switching Reference Voltages
82004870	Granted	6772402	5/2/2002	38202	10/136338	US	Failure Path Grouping Method, Apparatus, And Computer-Readable Medium
82013489	Granted	5889979	5/24/1996	3/30/1999	08/653645	US	Transparent Data-Triggered Pipeline Latch
82013492	Granted	5757687	8/6/1996	35941	08/692655	US	Method And Apparatus For Bounding Alignment Shifts To Enable At-Speed Denormalized Result Generation In An FMAC
82015109	Granted	5809275	3/1/1996	9/15/1998	08/609581	US	STORE-TO-LOAD HAZARD RESOLUTION SYSTEM AND METHOD FOR A PROCESSOR THAT EXCUTES INSTRUCTIONS OUT OF ORDER
82015112	Granted	5838942	3/1/1996	11/17/1998	08/609807	US	Panic Trap System And Method
82019045	Granted	5748934	5/31/1996	5/5/1998	08/658922	US	Operand Dependency Tracking System And Method For A Processor That Executes Instructions Out Of Order And That Permits Multiple Precision Data Words
82022294	Granted	5838692	11/14/1996	36116	08/749121	US	System And Method For Extracting Realtime Debug Signals From An Integrated Circuit
82024979	Granted	6313523	10/28/1999	11/6/2001	09/429512	US	IC Die Power Connection Using Canted Coil Spring
82055630	Granted	6240523	7/30/1999	5/29/2001	09/365055	US	METHOD AND APPARATUS FOR AUTOMATICALLY DETERMINING THE PHASE RELATIONSHIP BETWEEN TWO CLOCKS GENERATED FROM THE SAME SOURCE
82083479	Granted	6769102	7/19/2002	38195	10/199127	US	VERIFYING PROXIMITY OF GROUND METAL TO SIGNAL TRACES IN AN INTEGRATED CIRCUIT
82084409	Granted	7085959	7/3/2002	38930	10/187833	US	Method And Apparatus For Recovery From Loss Of Lock Step
82084973	Granted	8463578	7/16/2004	6/11/2013	10/892231	US	Hardware Based Utilization Metering
82085975	Granted	6820021	11/1/2002	38307	10/286679	US	System And Method For Generating A SHMOO Plot By Varying The Resolution Thereof
82096277	Granted	7869516	3/31/2003	1/11/2011	10/403864	US	MOTION ESTIMATION USING BIT-WISE BLOCK COMPARISONS FOR VIDEO COMPRESSSION
82117316	Granted	6779142	8/31/2000	8/17/2004	09/653642	US	APPARATUS AND METHOD FOR INTERFACING A HIGH SPEED SCAN-PATH WITH SLOW-SPEED TEST EQUIPMENT
82118126	Granted	6754057	9/29/2001	6/22/2004	09/967763	US	CAPACITOR DAMAGE ARRESTOR
82120619	Granted	7149814	1/4/2002	12/12/2006	10/037689	US	METHOD AND APPARATUS TO PROVIDE SOUND ON A REMOTE CONSOLE
82120622	Granted	7085385	1/4/2002	8/1/2006	10/037491	US	Method And Apparatus For Initiating Strong Encryption Using Existing SSL Connection For Secure Key Exchange

PATENT
REEL: 038498 FRAME: 0679

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82127303	Granted	5740454	12/20/1995	4/14/1998	08/576193	US	CIRCUIT FOR SETTING COMPUTER SYSTEM BUS SIGNALS TO PREDETERMINED STATES IN LOW POWER MODE
82127612	Granted	5943482	6/5/1996	8/24/1999	08/658602	US	EXPANSION CARD INSERTION AND REMOVAL
82127924	Granted	5747893	5/10/1996	5/5/1998	08/644228	US	TERMINATION SCHEME FOR TWISTED-WIRE PAIRS
82128740	Granted	6233242	12/30/1996	5/15/2001	08/774557	US	NETWORK SWITCH WITH SHARED MEMORY SYSTEM
82128863	Granted	6222840	12/30/1996	4/24/2001	08/774547	US	METHOD AND SYSTEM FOR PERFORMING CONCURRENT READ AND WRITE CYCLES IN A NETWORK SWITCH
82130237	Granted	6268845	6/30/1997	7/31/2001	08/885090	US	BEZEL BUTTON CONTROLS OVER USB
82130858	Granted	6167403	5/14/1998	12/26/2000	09/078721	US	NETWORK DEVICE WITH A MANAGEMENT INFORMATION BASE INCLUDING A PLURALITY OF SELECTABLE TRAP DEFINITIONS
82131422	Granted	6246666	4/9/1998	37054	09/058043	US	METHOD AND APPARATUS FOR CONTROLLING AN INPUT/OUTPUT SUBSYSTEM IN A FAILED NETWORK SERVER
82135793	Granted	6108770	6/24/1998	8/22/2000	09/103984	US	METHOD AND APPARATUS FOR PREDICTING MEMORY DEPENDENCE USING STORE SETS
82136855	Granted	6272624	4/2/1999	37110	09/285529	US	METHOD AND APPARATUS FOR PREDICTING MULTIPLE CONDITIONAL BRANCHES
82137038	Granted	6360241	4/20/1999	3/19/2002	09/294597	US	COMPUTER METHOD AND APPARATUS FOR DIVISION AND SQUARE ROOT OPERATIONS USING SIGNED DIGIT
82137041	Granted	6564239	12/14/2001	5/13/2003	10/016902	US	COMPUTER METHOD AND APPARATUS FOR DIVISION AND SQUARE ROOT OPERATIONS USING SIGNED DIGIT
82137044	Granted	6779012	4/18/2003	8/17/2004	10/419454	US	COMPUTER METHOD AND APPARATUS FOR DIVISION AND SQUARE ROOT OPERATIONS USING SIGNED DIGIT
82137170	Granted	6133717	9/30/1998	10/17/2000	09/164416	US	METHODS AND APPARATUS FOR SYNCHRONIZING A PLURALITY OF POWER SUPPLIES
82161266	Granted	6018771	11/25/1992	1/25/2000	07/981274	US	DYNAMIC ASSIGNMENT OF MULTICAST NETWORK ADDRESSES
82165445	Granted	6073159	12/31/1996	6/6/2000	08/775553	US	THREAD PROPERTIES ATTRIBUTE VECTOR BASED THREAD SELECTION IN MULTITHREADING PROCESSOR
82165571	Granted	6085294	10/24/1997	7/4/2000	08/957129	US	DISTRIBUTED DATA DEPENDENCY STALL MECHANISM
82165574	Granted	6249846	4/11/2000	6/19/2001	09/547163	US	DISTRIBUTED DATA DEPENDENCY STALL MECHANISM
82165634	Granted	6122714	10/24/1997	9/19/2000	08/957298	US	ORDER SUPPORTING MECHANISMS FOR USE IN A SWITCH-BASED MULTI-PROCESSOR SYSTEM
82171001	Granted	7746872	5/21/2004	6/29/2010	10/850672	US	Packet Routing As A Function Of Direction
82175876	Granted	8000322	3/14/2005	8/16/2011	11/079414	US	Crossbar Switch Debugging
82193357	Granted	7447900	9/15/2004	11/4/2008	10/942171	US	METHOD AND A SYSTEM FOR DESIGNATING A USER SELECTED CONSOLE DEVICE AS THE PRIMARY CONSOLE DEVICE FOR A PARTICULAR COMPUTER

PATENT
REEL: 038498 FRAME: 0680

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82194725	Granted	7467306	3/8/2005	12/16/2008	11/074424	US	Methods And Systems For Allocating Power To An Electronic Device
82197098	Granted	8467489	8/24/2005	6/18/2013	11/210929	US	Data Clock Recovery System And Method Employing Delayed Data Clock Phase Shifting
82199849	Granted	7661003	1/21/2005	2/9/2010	11/040394	US	SYSTEMS AND METHODS FOR MAINTAINING PERFORMANCE OF AN INTEGRATED CIRCUIT WITHIN A WORKING POWER LIMIT
82202093	Granted	9104894	12/16/2005	8/11/2015	11/303113	US	Hardware Enablement Using An Interface
82208336	Granted	7543173	8/2/2005	6/2/2009	11/195274	US	Timestamp Generator
82217705	Granted	8522042	10/31/2006	8/27/2013	11/590293	US	Method And Apparatus For Enforcement Of Software License Protection
82220513	Granted	6411506	7/20/2000	6/25/2002	09/620107	US	High Density Web Server Chassis System And Method
82220579	Granted	7774652	9/19/2006	8/10/2010	11/523472	US	Circuitry And Method To Detect Conditions Of Data
82220948	Granted	8688933	8/31/2006	4/1/2014	11/514010	US	Firmware Component Modification
82221260	Granted	8661162	10/26/2006	2/25/2014	11/588903	US	Address Handling
82225448	Allowed		9/28/2007		11/863842	US	Method And System For Migrating Critical Resources Within Computer Systems
82238183	Granted	8358591	6/5/2008	1/22/2013	12/156925	US	Network Traffic Monitoring In A Server Network Environment
82241681	Granted	8201166	4/30/2008	6/12/2012	12/113062	US	VIRTUALIZATION PLATFORM CONFIGURED WITH VIRTUAL CONNECT CONTROL
82259093	Granted	8521940	10/27/2009	8/27/2013	12/606339	US	Paired Node Controllers
82260467	Granted	8214702	11/9/2009	7/3/2012	12/614512	US	Distributed Joint Test Access Group Test Bus Controller Architecture
82999249	Granted	8464005	5/4/2012	6/11/2013	13/464689	US	Accessing Common Registers In A Multi-core Processor
83167836	Published		10/19/2010		13/817852	US	SYSTEMS AND METHODS FOR PREDICTIVE CONTROL OF POWER EFFICIENCY
84114672	Published		11/26/2014		14/554423	US	Systems And Methods For Determining Electrical Connectivity
81972533	Granted	6957433	1/8/2001	10/18/2005	09/757269	US	System And Method For Adaptive Performance Optimization Of Data Processing Systems
81988832	Granted	7167965	4/30/2001	1/23/2007	09/843882	US	Method And System For Online Data Migration On Storage Systems With Performance Guarantees
81988889	Granted	6802023	3/15/2001	38265	09/810102	US	Redundant Controller Data Storage System Having Hot Insertion System And Method
81993140	Granted	6874050	1/16/2002	3/29/2005	10/051478	US	Circuit And Method For Expanding A Serial Bus
82002437	Granted	6825411	5/6/2003	11/30/2004	10/430728	US	Method And Apparatus For Controlling Electromagnetic Radiation Emissions From Electronic Device Enclosures

PATENT
REEL: 038498 FRAME: 0681

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82012175	Granted	6092168	10/25/1996	36725	08/738132	US	DATA STORAGE SYSTEM AND METHOD FOR DEALLOCATING SPACE BY WRITING AND DETECTING A PREDEFINED DATA PATTERN
82029656	Granted	6028766	7/18/1997	2/22/2000	08/896932	US	STRATEGICALLY PLACED COMPLIANCE BUMPS FOR SHOCK ATTENTUATION
82080668	Granted	6898667	5/23/2002	5/24/2005	10/154870	US	Managing Data In A Multi-Level RAID Storage Array
82082915	Granted	7529966	8/20/2004	5/5/2009	10/922730	US	Storage System With Journaling
82086722	Granted	6606690	2/20/2001	8/12/2003	09/785473	US	System And Method For Accessing A Storage Area Network As Network Attached Storage
82117247	Granted	6996691	8/29/2003	38755	10/652328	US	Method For Transaction Command Ordering In A Remote Data Replication System
82119869	Granted	6775790	6/1/2001	8/10/2004	09/872980	US	DISTRIBUTED FINE-GRAINED ENHANCEMENTS FOR DISTRIBUTED TABLE DRIVEN I/O MAPPING
82119935	Granted	6880052	3/26/2002	38454	10/106906	US	STORAGE AREA NETWORK, DATA REPLICATION AND STORAGE CONTROLLER, AND METHOD FOR REPLICATING DATA USING VIRTUALIZED VOLUMES
82119938	Granted	6934826	3/26/2002	8/23/2005	10/106904	US	System and method for dynamically allocating memory and managing memory allocated to logging in a storage area network
82120061	Granted	7318149	9/28/2001	39455	09/965998	US	SEMI-PERSISTENT RELOCATABLE RAM-BASED VIRTUAL FLOPPY DISK METHOD
82120064	Granted	7822961	10/31/2007	10/26/2010	11/931652	US	SEMI-PERSISTENT RELOCATABLE RAM-BASED VIRTUAL FLOPPY DISK METHOD
82120556	Granted	8046469	10/22/2001	40841	10/043924	US	System And Method For Interfacing With Virtual Storage
82121684	Granted	6898668	6/24/2002	38496	10/179727	US	System And Method For Reorganizing Data In A Raid Storage System
82121687	Granted	7281089	2/28/2005	10/9/2007	11/068550	US	System And Method For Reorganizing Data In A Raid Storage System
82126931	Granted	5737744	10/13/1995	4/7/1998	08/542709	US	DISK ARRAY CONTROLLER FOR PERFORMING EXCLUSIVE OR OPERATIONS
82132487	Granted	6209023	1/5/1999	3/27/2001	09/225437	US	SUPPORTING A SCSI DEVICE ON A NON-SCSI TRANSPORT MEDIUM OF A NETWORK
82133417	Granted	6675253	4/4/2000	1/6/2004	09/542309	US	DYNAMIC ROUTING OF DATA ACROSS MULTIPLE DATA PATHS FROM A SOURCE CONTROLLER TO A DESTINATION CONTROLLER
82164887	Granted	5774643	10/13/1995	6/30/1998	08/542536	US	ENHANCED RAID WRITE HOLE PROTECTION AND RECOVERY
82166012	Granted	7353277	11/14/2000	4/1/2008	09/712101	US	Dynamic Load Balancing Of Video Requests

PATENT
REEL: 038498 FRAME: 0682

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82172504	Allowed		2/1/2005		11/048520	US	Automated Selection Of An Optimal Path Between A Core Switch And Teamed Network Resources Of A Computer System
82175435	Granted	7363541	2/23/2004	4/22/2008	10/785500	US	Command Management Using Task Attributes
82182242	Granted	8650267	12/5/2003	2/11/2014	10/728465	US	Method And System For Switching Between Remote Console Sessions
82182932	Granted	8090837	5/27/2004	1/3/2012	10/856263	US	Communication In Multiprocessor Using Proxy Sockets
82185179	Granted	7299385	7/28/2004	11/20/2007	10/900948	US	Managing A Fault Tolerant System
82189799	Granted	7739418	4/12/2004	6/15/2010	10/823241	US	Resource Management System
82192358	Granted	8375114	4/9/2004	2/12/2013	10/821832	US	Device Loading In Storage Networks
82205279	Granted	8706687	1/24/2007	4/22/2014	11/626678	US	Log Driven Storage Controller With Network Persistent Memory
82217576	Granted	7840877	10/31/2006	11/23/2010	11/590129	US	Mass Storage System And Method
82222448	Granted	7853821	5/11/2006	12/14/2010	11/432258	US	Identifying One Or More Storage Devices Causing A Failure Condition During Discovery Of Storage Devices
82224200	Granted	8005013	6/12/2007	8/23/2011	11/761378	US	Managing Connectivity In A Virtual Network
82224632	Granted	8909742	12/18/2006	12/9/2014	11/612434	US	Distributed Configuration Of Network Interface Cards
82227815	Granted	7991746	4/8/2008	8/2/2011	12/099696	US	Storage System And Method
82227821	Published		4/24/2008		12/109294	US	A Storage Management System
82236746	Published		1/3/2008		12/810180	US	Performing Mirroring Of A Logical Storage Unit
82239428	Granted	7937548	7/3/2008	5/3/2011	12/167251	US	System And Method For Improved Snapclone Performance In A Virtualized Storage System
82249166	Granted	8588607	1/29/2009	11/19/2013	12/362484	US	Dispersion Scheme For Physical Layer Diagnosis In Bi-directional Dual-fiber Optical Networks
82249793	Granted	8370571	4/8/2009	2/5/2013	12/420405	US	TRANSFER CONTROL OF A STORAGE VOLUME BETWEEN STORAGE CONTROLLERS IN A CLUSTER
82250105	Granted	8145850	8/7/2009	3/27/2012	12/537256	US	Method And System For Visualizing A Storage Area Network
82258031	Granted	8370833	4/10/2008	2/5/2013	12/101051	US	Method And System For Implementing A Virtual Storage Pool In A Virtual Environment
82259156	Granted	8638233	10/12/2010	1/28/2014	12/902359	US	Cable Connection Component Configured To Provide Visible Indications
82259162	Granted	8287302	10/12/2010	10/16/2012	12/902443	US	Cable End Connectors
82259285	Published		3/12/2010		12/722708	US	Detecting Engagement Conditions Of A Fiber Optic Connector
82259972	Granted	8291171	11/30/2009	10/16/2012	12/627677	US	ALTERING PREFETCH DEPTH BASED ON READY DATA
82261532	Granted	8364905	8/16/2010	1/29/2013	12/857306	US	STORAGE SYSTEM WITH MIDDLE-WAY LOGICAL VOLUME
82407497	Granted	8392931	12/16/2010	3/5/2013	12/969981	US	Data Transfer Protocol For Data Replication Between Multiple Pairs Of Storage Controllers On A SAN Fabric
82578769	Granted	7543100	6/18/2001	6/2/2009	09/883681	US	Node Controller for a Data Storage System

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82578792	Granted	7162654	1/4/2001	1/9/2007	09/755254	US	Isolation of 12C Buses In A Multiple Power Domain Environment Using Switches
82578829	Granted	7124324	8/22/2002	10/17/2006	10/226762	US	Method of Testing Fibre Channel Ports in a Storage Server at Full Bandwidth Without Connection to External Devices
82578832	Granted	7146521	8/21/2002	12/5/2006	10/226823	US	Preventing Damage of Storage Devices and Data Loss in a Data Storage System
82578875	Granted	7444489	11/7/2005	10/28/2008	11/269024	US	Applications for Non-Disruptively Moving Data Between Logical Disk Regions in a Data Storage System
82585719	Published		4/5/2011		13/080041	US	ERROR LOGGING IN A STORAGE DEVICE
82651066	Published		8/30/2008		13/061493	US	Use Of Hybrid PCB Materials In Printed Circuit Boards
82654415	Granted	8566542	1/6/2011	10/22/2013	12/985893	US	Backup Using Storage Array LUN Level Snapshot
82799736	Granted	8984502	10/28/2011	3/17/2015	13/284640	US	SYSTEMS AND METHODS FOR COMPOSING OR DECOMPOSING A COMPOSITE IMAGE FOR FIRMWARE UPDATE IMAGES
82832992	Granted	8958997	11/30/2011	2/17/2015	13/307192	US	UNINTERRUPTIBLE POWER SUPPLY TESTING
82852259	Published		9/27/2011		13/246504	US	Link Throughput Enhancer
82899833	Granted	8959191	4/6/2012	2/17/2015	13/441349	US	SCRIPT MODIFICATION SUGGESTION
82961785	Granted	8694826	2/29/2012	4/8/2014	13/407982	US	SAS HOST CACHE CONTROL
83014477	Granted	8972618	7/31/2012	3/3/2015	13/563166	US	STAGED DISCOVERY IN A DATA STORAGE FABRIC
83021244	Published		7/28/2010		13/702759	US	File Based Cache Loading
83038184	Granted	8924751	7/31/2012	12/30/2014	13/563634	US	SAS Power Management
83094852	Published		5/7/2010		13/639511	US	Workload Performance Control
83102589	Granted	9009562	1/30/2013	4/14/2015	13/753902	US	PROVIDING MEMORY PROTECTION USING A MODIFIED ERROR CORRECTION CODE
83137597	Granted	D682265	1/25/2013	5/14/2013	29/444113	US	Hard Drive Carrier
83139449	Granted	9009526	1/24/2013	4/14/2015	13/748923	US	REBUILDING DRIVE DATA
83206021	Published		5/31/2013		13/907807	US	STORAGE UNIT PERFORMANCE ADJUSTMENT
83873857	Published		10/25/2011		14/349675	US	ENVIRONMENTAL DATA RECORD
83952228	Published		5/1/2012		14/368761	US	PREARRANGING DATA TO COMMIT TO NON-VOLATILE MEMORY
84141147	Published		10/31/2012		14/427073	US	WRITING STANDARD TAPE FORMAT TO MEMORY
84141167	Application		12/11/2012		14/428453	US	APPLICATION SERVER TO NVRAM PATH
84228927	Application		5/14/2015		14/712002	US	SYSTEM AND METHOD FOR CABLE MONITORING
82022852	Granted	6192439	8/11/1998	2/20/2001	09/132620	US	PCI-COMPLIANT INTERRUPT STEERING ARCHITECTURE
82102139	Granted	7136957	3/24/2004	11/14/2006	10/808881	US	Device Bandwidth Management Using A Bus Configuration Multiplexer
82121807	Granted	7577877	5/22/2003	40043	10/444154	US	MECHANISMS TO PREVENT UNDESIRABLE BUS BEHAVIOR
82126553	Granted	5841446	11/1/1996	36123	08/742881	US	METHOD AND APPARATUS FOR ADDRESS MAPPING OF A VIDEO MEMORY USING TILING

PATENT
REEL: 038498 FRAME: 0684

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82127987	Granted	6269273	6/16/1998	7/31/2001	09/098077	US	DELIVERING MULTIPLE OPTICAL SIGNALS USING LIGHT THAT DOES NOT CARRY THE DATA
82130174	Granted	5930496	9/26/1997	7/27/1999	08/938361	US	COMPUTER EXPANSION SLOT AND ASSOCIATED LOGIC FOR AUTOMATICALLY DETECTING COMPATIBILITY WITH AN EXPANSION CARD
82130486	Granted	6012114	6/30/1997	1/4/2000	08/885063	US	SYSTEM FOR PREVENTING SOFTWARE OF A COMPUTER SYSTEM FROM INTERACTING WITH A CONNECTOR TO AVOID DATA CORRUPTION DUE TO SURPRISE REMOVAL OF A CIRCUIT CARD
82130927	Granted	5987538	8/15/1997	11/16/1999	08/911608	US	APPARATUS FOR INITIATING GENERATION OF AN INTER-PROCESSOR INTERRUPT BY A PERIPHERAL DEVICE NOT DIRECTLY CONNECTED TO ANY OF THE MULTI- PROCESSOR LOCAL CONTROLLERS
82131608	Granted	6466993	11/5/1998	10/15/2002	09/186540	US	METHOD AND APPARATUS FOR PERFORMING TRANSACTIONS RENDERING BETWEEN HOST PROCESSORS AND I/O DEVICES USING CONCURRENT NON-BLOCKING QUEUING TECHNIQUES AND I/O BUS WRITE OPERATIONS
82131983	Granted	6230225	12/1/1998	5/8/2001	09/203083	US	METHOD AND APPARATUS FOR MULTICASTING ON A BUS
82132985	Granted	6266731	9/3/1998	7/24/2001	09/148042	US	HIGH SPEED PERIPHERAL INTERCONNECT APPARATUS, METHOD AND SYSTEM
82199474	Granted	7386750	7/15/2005	6/10/2008	11/182378	US	Reduced Bus Turnaround Time In A Multiprocessor Architecture
82206839	Granted	7783843	5/16/2005	8/24/2010	11/130536	US	Bus Interface Adapted To Coalesce Snoop Responses
82220828	Granted	6757748	7/20/2000	6/29/2004	09/620409	US	MODULAR NETWORK INTERFACE SYSTEM AND METHOD
82241678	Granted	9032128	4/28/2008	5/12/2015	12/988459	US	Method And System For Generating And Delivering Inter-Processor Interrupts In A Multi-Core Processor And In Certain Shared-Memory Multi-Processor Systems
83013644	Application		7/27/2012		13/560509	US	INDICATING A SYNCHRONIZATION POINT BETWEEN A TRANSMITTER AND A RECEIVER OF AN OPTICAL LINK
83163737	Published		9/14/2010		13/809452	US	COMPUTER SYSTEM FABRIC SWITCH
83543653	Published		4/13/2011		14/009761	US	INPUT/OUTPUT PROCESSING
83962444	Allowed		1/6/2012		14/361185	US	CONNECTOR MODULES TO OPTICALLY CONNECT TO ELECTRONIC DEVICES
83962467	Published		1/6/2012		14/361221	US	CONNECTOR MODULE HAVING A MOVEABLE OPTICAL CONNECTOR
83983506	Published		4/11/2012		14/368933	US	OPTICAL PLENUM
83220860	Published		10/26/2010		13/876574	US	METHODS AND SYSTEMS FOR DETECTING SUSPECTED DATA LEAKAGE USING TRAFFIC SAMPLES

PATENT
REEL: 038498 FRAME: 0685

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82066616	Granted	6003092	2/7/1997	12/14/1999	08/930175	US	SIGNAL TRANSMISSION BETWEEN NETWORKED COMPUTERS
82068053	Granted	6351466	5/1/1998	2/26/2002	09/071085	US	Switching Systems And Methods Of Operation Of Switching Systems
82079603	Granted	6910057	10/17/2001	6/21/2005	09/977985	US	Truth Table Candidate Reduction For Cellular Automata Based Random Number Generators
82135166	Granted	6163870	11/6/1997	12/19/2000	08/965610	US	MESSAGE ENCODING WITH IRREGULAR GRAPHING
82182992	Granted	7474793	9/2/2004	1/6/2009	10/933789	US	Methods For Compression Using A Denoiser
82263716	Published		10/29/2010		12/916383	US	HEADLESS APPLIANCE
82267088	Granted	6011910	4/8/1997	36529	08/833663	US	Supporting Authentication Across Multiple Network Access Servers
82267148	Granted	6084873	3/18/1997	7/4/2000	08/819874	US	Method for bypassing telephone network
82267403	Granted	6128715	9/2/1999	10/3/2000	08/866822	US	Asynchronous Transmit Packet Buffer
82267838	Granted	5991348	8/12/1997	11/23/1999	08/909860	US	Method And Apparatus For Regenerating Symbol Timing From A Probing Signal In A System Having Non-Linear Network And Codec Distortion
82268021	Granted	6111920	11/26/1997	8/29/2000	08/980027	US	METHOD AND SYSTEM FOR TIMING RECOVERY IN A BAUD-RATE SAMPLED DATA STREAM
82268396	Granted	6018767	2/24/1998	1/25/2000	09/028404	US	Method And System For Managing Subscription Services With A Cable Modem
82269020	Granted	5974547	3/20/1998	10/26/1999	09/045577	US	Technique For Reliable Network Booting Of An Operating System To A Client Computer
82269086	Granted	6052411	4/6/1998	4/18/2000	09/056166	US	Idle Mode For Digital Subscriber Line
82269398	Granted	6538985	5/25/1999	3/25/2003	09/318533	US	Channel Reservation Media Access Control Protocol Using Orthogonal Frequency Division Multiplexing
82269458	Granted	6453024	2/25/1999	9/17/2002	09/257813	US	Graphical Software For Reconfiguring Modems Having An Electrically Adaptable Telephone Line Interface
82269647	Granted	6256693	12/17/1999	7/3/2001	09/464262	US	MASTER/SLAVE DATA BUS EMPLOYING UNIDIRECTIONAL ADDRESS AND DATA LINES AND REQUEST/ACKNOWLEDGE SIGNALING
82270646	Granted	6105151	10/1/1997	8/15/2000	08/942407	US	System For Detecting Network Errors
82270649	Granted	6134678	10/1/1997	10/17/2000	08/942573	US	Method Of Detecting Network Errors
82271084	Granted	6064673	7/1/1997	36662	08/886687	US	Communications System Having Distributed Control and Real-Time Bandwidth Management
82271210	Granted	6937699	9/27/1999	38594	09/406320	US	System And Method For Advertising Using Data Network Telephone Connections
82271708	Granted	6327625	11/30/1999	12/4/2001	09/451395	US	FIFO-Based Network Interface Supporting Out-of-Order Processing

PATENT
REEL: 038498 FRAME: 0686

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82272203	Granted	7092671	11/30/2000	8/15/2006	09/727727	US	METHOD AND SYSTEM FOR WIRELESSLY AUTODIALING A TELEPHONE NUMBER FROM A RECORD STORED ON A PERSONAL INFORMATION DEVICE
82273208	Granted	6854015	2/28/2001	2/8/2005	09/796398	US	SYSTEM FOR ISOLATING ETHERNET NETWORK TRAFFIC
82273703	Granted	7684383	1/30/2003	3/23/2010	10/356704	US	Method and System for Dynamic Call Type Detection for Circuit and Packet Switched Networks
82274327	Granted	7860089	7/16/2008	12/28/2010	12/174043	US	METHOD AND SYSTEM FOR NETWORK BASED CALL-PICKUP
82274390	Granted	7440442	10/21/2003	10/21/2008	10/690074	US	Ip-based Enhanced Emergency Services Using Intelligent Client Devices
82274453	Granted	7613170	6/29/2004	11/3/2009	10/880686	US	Method And Apparatus For Pstn-based IP Active Call Recovery And Re-routing
82274456	Granted	7990955	9/23/2009	40757	12/565017	US	Method And Apparatus For Pstn-based IP Active Call Recovery And Re-routing
82274825	Granted	8218748	9/21/2006	7/10/2012	11/524763	US	Telephone Call Chaining
82275263	Granted	5832277	3/8/1996	11/3/1998	08/613084	US	SYSTEM FOR ARBITRATING DEMAND ON MEMORY DURING CONFIGURATION OF A COMPUTER ADD-ON CARD
82275266	Granted	6125179	12/13/1995	9/26/2000	08/571710	US	ECHO CONTROL DEVICE WITH QUICK RESPONSE TO SUDDEN ECHO-PATH CHANGE
82275389	Granted	6055245	2/5/2000	4/25/2000	08/831459	US	APPARATUS AND METHOD FOR DIGITALLY CONVEYING ALERT TONES BETWEEN AN ANALOG MODEM AND AN ISDN TERMINAL ADAPTER
82772059	Granted	8509225	7/8/2011	8/13/2013	13/178911	US	IP-Based Enhanced Emergency Services Using Intelligent Client Devices
90016459	Application		1/24/2013		14/763107	US	Address Resolution In Software-Defined Networks
82020977	Granted	7085234	1/8/2002	8/1/2006	10/038579	US	Method And Apparatus For Automatic Load-balancing On Multisegment Devices
82025786	Granted	6128729	12/16/1997	10/3/2000	08/991943	US	Method And System For Automatic Configuration Of Network Links To Attached Devices
82026098	Granted	7116678	4/30/2004	38993	10/837264	US	High Speed Physical Layer For CSMA/CD Systems
82033346	Granted	6079034	12/5/1997	36697	08/986077	US	Hub-Embedded System For Automated Network Fault Detection And Isolation
82035716	Granted	6577600	1/11/1999	6/10/2003	09/228913	US	Cost Calculation In Load Balancing Switch Protocols
82036898	Granted	6269104	4/21/1998	7/31/2001	09/063723	US	LINK CONTROL STATE MACHINE FOR CONTROLLING A MEDIA ACCESS CONTROLLER, A SERIAL PHYSICAL LAYER DEVICE AND A MEDIA INDEPENDENT INTERFACE PHYSICAL LAYER DEVICE
82045142	Granted	6460078	10/18/2000	10/1/2002	09/691726	US	APPARATUS FOR AUTOMATICALLY CONFIGURING MEDIA CONNECTORS OF A NODE INTERFACE DEVICE

PATENT
REEL: 038498 FRAME: 0687

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82088033	Granted	7366771	3/12/2002	39567	10/099372	US	APPARATUS & METHOD FOR AUTOMATICALLY SWITCHING MEDIA CONNECTIONS WHEN OPERATING IN FORCED SPEED AND DUPLEX MODE
82088036	Granted	7340511	4/21/2004	3/4/2008	10/829522	US	APPARATUS & METHOD FOR CONFIGURING NETWORK MEDIA CONNECTIONS
82088279	Granted	7305507	8/26/2005	12/4/2007	11/212146	US	MULTI-STAGE ROUND ROBIN ARBITRATION SYSTEM
82128797	Granted	6233246	12/30/1996	5/15/2001	08/774553	US	NETWORK SWITCH WITH STATISTICS READ ACCESSES
82173626	Granted	7370346	4/29/2003	39574	10/425436	US	Method And Apparatus For Access Security Services
82173629	Granted	8826385	4/15/2008	9/2/2014	12/082835	US	Method And Apparatus For Access Security Services
82179806	Granted	7623452	8/1/2003	40141	10/633440	US	User Configurable Functions For Adjusting Service Differentiation Meters
82183307	Granted	7474653	12/5/2003	1/6/2009	10/729518	US	Decision Cache Using Multi-key Lookup
82186547	Granted	7760622	4/28/2008	7/20/2010	12/150369	US	Redundant Router Set Up
82186550	Granted	8195781	8/19/2004	6/5/2012	10/923235	US	Network Management With Scalable Trap Definitions
82205093	Granted	8243595	8/5/2005	41135	11/198056	US	Prioritization Of Network Traffic Sent To A Processor By Using Packet Importance
82205528	Granted	7467247	10/31/2005	39798	11/261663	US	Timeouts On Accessing A Shared Resource
82206029	Granted	8612647	4/12/2005	41625	11/103966	US	Priority Aware Queue
82210523	Granted	7636315	6/21/2005	40169	11/157683	US	Broadcast Traceroute
82214267	Granted	7941727	10/31/2006	40673	11/591034	US	CHECKSUM GENERATOR FOR VARIABLE-LENGTH DATA
82214648	Granted	8054847	10/31/2006	40855	11/591167	US	Buffer Management In A Network Device
82216079	Allowed		10/30/2006		11/590208	US	Method And System For Filling Cache Memory For Cache Memory Initialization
82218017	Granted	7697519	10/31/2006	4/13/2010	11/590714	US	Packet Processing
82225754	Granted	7808898	7/8/2008	10/5/2010	12/168898	US	Flow Estimator
82229132	Published		3/7/2007		11/714937	US	CONFIGURABLE NETWORK DEVICE USER INTERFACE
82229507	Granted	8391288	1/31/2007	3/5/2013	11/669815	US	Security System For Protecting Networks From Vulnerability Exploits
82230062	Granted	7594047	7/9/2007	9/22/2009	11/825739	US	Buffer Circuit
82231250	Granted	8571048	4/30/2007	10/29/2013	11/742573	US	Dynamic Memory Queue Depth Algorithm
82231253	Granted	8340091	7/11/2007	12/25/2012	11/827295	US	Packet Processing
82231940	Granted	8549239	6/20/2007	10/1/2013	11/820806	US	Network Message Logging And Archival
82239617	Granted	7965636	12/5/2008	6/21/2011	12/315780	US	Loadbalancing Network Traffic Across Multiple Remote Inspection Devices
82240553	Granted	8099637	10/30/2007	1/17/2012	11/928678	US	Software Fault Detection Using Progress Tracker
82244672	Application		2/18/2009		12/388159	US	Sending A Test Signal To Illuminate Indicators At First And Second Network Equipment
82246295	Granted	9160688	6/30/2009	10/13/2015	12/494993	US	System And Method For Selective Direct Memory Access
82247543	Granted	8214680	2/12/2009	7/3/2012	12/370209	US	POE POWERED MANAGEMENT CIRCUITRY USING OUT-OF-BAND DATA PORT

PATENT
REEL: 038498 FRAME: 0688

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82249730	Granted	8320120	12/19/2008	11/27/2012	12/340314	US	Reversible Air Flow Fan System
82251293	Granted	7257107	7/8/2004	39308	10/887321	US	DEVICE AND METHOD FOR DETECTING UNAUTHORIZED, "ROGUE" WIRELESS LAN ACCESS POINTS
82259720	Granted	8264969	10/30/2009	41163	12/609070	US	COMMUNICATIONS LINK HEALTH MONITORING
82262276	Published		2/17/2010		12/707046	US	VIRTUAL INSERTION INTO A NETWORK
82264589	Granted	8614890	4/18/2011	41632	13/088526	US	Chassis Extension Module
82266713	Granted	6163545	1/15/1998	36879	09/007802	US	System And Method For Data Transfer Across Multiple Clock Domains
82266773	Granted	5828329	12/5/1996	36095	08/760504	US	Adjustable Temperature Coefficient Current Reference
82267646	Granted	5926463	10/6/1997	36361	08/943769	US	METHOD AND APPARATUS FOR VIEWING AND MANAGING A CONFIGURATION OF A COMPUTER NETWORK
82267709	Granted	5970089	8/12/1997	10/19/1999	08/909997	US	METHOD AND APPARATUS FOR GENERATING A PROBING SIGNAL FOR A SYSTEM HAVING NON-LINEAR NETWORK AND CODEC DISTORTION
82267715	Granted	6256353	10/19/1999	7/3/2001	09/421955	US	METHOD AND APPARATUS FOR GENERATING A PROBING SIGNAL FOR A SYSTEM HAVING NON-LINEAR NETWORK AND CODEC DISTORTION
82267775	Granted	6075774	11/18/1997	6/13/2000	08/972284	US	Method and Device for Generating A Frame Check Sequence
82267901	Granted	6275498	3/19/1998	8/14/2001	09/044403	US	Extended PHY Addressing
82268213	Granted	5978378	9/11/1997	11/2/1999	08/927641	US	Method And Apparatus For VLAN Support
82268273	Granted	6052803	9/26/1997	36634	08/938572	US	KEY-BASED TECHNIQUE FOR ASSURING AND MAINTAINING INTEGRITY OF FIRMWARE STORED IN BOTH VOLATILE AND NON-VOLATILE MEMORY
82268333	Granted	6195351	1/28/1998	2/27/2001	09/014548	US	Logical Switch Set
82268645	Granted	6185520	5/22/1998	2/6/2001	09/083909	US	Method And System For Bus Switching Data Transfers
82268774	Granted	6222820	5/28/1998	4/24/2001	09/086040	US	METHOD OF VCC/VPC REDUNDANCY FOR ASYNCHRONOUS TRANSFER MODE NETWORKS
82268897	Granted	6327620	8/10/1998	12/4/2001	09/131725	US	Methods and apparatus for collecting, storing, processing and using Network Traffic Data
82269023	Granted	6438695	10/30/1998	8/20/2002	09/183449	US	Secure Wiretap Support For Internet Protocol Security
82269206	Granted	7023863	8/19/2004	4/4/2006	10/922647	US	APPARATUS AND METHOD FOR PROCESSING ENCRYPTED PACKETS IN A COMPUTER NETWORK DEVICE
82269332	Granted	6066001	11/30/1998	5/23/2000	09/200883	US	Coupler For Minimizing EMI Emissions
82269338	Granted	6137689	5/28/1998	10/24/2000	09/086505	US	Protective Enclosure Apparatus And Method
82269461	Granted	6782066	1/14/1999	8/24/2004	09/231034	US	METHOD AND SYSTEM FOR DETECTING FRAME SLIPS IN A DIGITAL COMMUNICATIONS CHANNEL
82269707	Granted	6975627	10/13/1999	12/13/2005	09/417102	US	Modification Of Tag Fields In Ethernet Data Packets
82269770	Granted	6324575	1/29/1999	11/27/2001	09/240360	US	Intelligent Selection Of Multicast Filtering Modes For Switch Ports

PATENT
REEL: 038498 FRAME: 0689

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0690

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82269773	Granted	6310882	1/27/1999	10/30/2001	09/238880	US	HIGH SPEED SWITCH ARCHITECTURE USING SEPARATE TRANSMIT AND RECEIVE CHANNELS WITH INDEPENDENT FORWARDING TABLES
82269899	Granted	6217350	2/1/1999	4/17/2001	09/241341	US	Media Jack Adaptor and System
82270082	Granted	6257906	2/8/1999	7/10/2001	09/246534	US	FUNCTIONALLY ILLUMINATED ELECTRONIC CONNECTOR WITH IMPROVED LIGHT DISPERSION
82270085	Granted	6152779	11/30/1998	11/28/2000	09/201322	US	Connector Shield
82270145	Granted	6457055	5/12/1999	9/24/2002	09/310469	US	CONFIGURING ETHERNET DEVICES
82270331	Granted	6986157	12/21/1998	1/10/2006	09/217347	US	Method and System for Dynamic Service Registration in a Data-Over-Cable System
82270892	Granted	6704284	1/7/2000	3/9/2004	09/479501	US	Management System And Method For Monitoring Stress In A Network
82270955	Granted	6496867	8/27/1999	12/17/2002	09/384120	US	A SYSTEM AND METHOD TO NEGOTIATE PRIVATE NETWORK ADDRESSES FOR INITIATING TUNNELING ASSOCIATIONS THROUGH PRIVATE AND PUBLIC NETWORKS
82271018	Granted	7603408	7/24/2002	10/13/2009	10/019988	US	Method And System For Network Management
82271081	Granted	6047032	11/7/1997	4/4/2000	08/965835	US	Signal Equalization And Data Recovery With Non-Linear Digital Threshold Feedback
82271270	Granted	6826613	3/15/2000	11/30/2004	09/525966	US	VIRTUALLY ADDRESSING STORAGE DEVICES THROUGH A SWITCH
82271459	Granted	6173848	10/8/1999	1/16/2001	09/415571	US	Mounting Shelf For Installation Of Lan Hubs
82271648	Granted	7107326	11/27/2000	9/12/2006	09/722939	US	Method and System for Integrating IP Address Reservations with Policy Provisioning
82271705	Granted	6535983	11/8/1999	3/18/2003	09/435722	US	SYSTEM AND METHOD FOR SIGNALING AND DETECTING AN END DEVICE POWERED BY HUB/SWITCH/CONCENTRATOR OVER ETHERNET
82272083	Granted	6775301	3/8/2000	8/10/2004	09/520931	US	System and Method For Compensating For Channel Jitter
82272332	Granted	7233601	9/14/2000	6/19/2007	09/662158	US	Cascade Architecture and Operation for Packet-Based Communication Systems
82272392	Granted	6662332	11/1/2000	12/9/2003	09/704076	US	INTERLEAVER FOR BURST ERROR CORRECTION
82272455	Granted	6766377	8/24/2000	38188	09/645247	US	Media Gateway Proxy
82272458	Granted	7634577	4/19/2004	12/15/2009	10/827009	US	Media Gateway Proxy
82273394	Granted	7065670	10/31/2002	6/20/2006	10/284475	US	SERVER MONITORING AND FAILOVER MECHANISM
82273958	Granted	7624434	3/1/2002	11/24/2009	10/090543	US	SYSTEM FOR PROVIDING FIREWALL CAPABILITIES TO A COMMUNICATION DEVICE
82274267	Granted	7420968	6/6/2003	9/2/2008	10/456702	US	High-Speed Switch Architecture
82274519	Granted	7480299	2/22/2005	1/20/2009	11/064227	US	Rules Engine for Access Control Lists in Network Units
82274579	Granted	7584299	7/29/2005	9/1/2009	11/192771	US	CONFIGURATION OF VPNS

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0691

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82274828	Granted	6058262	4/18/1997	5/2/2000	08/844080	US	COMPUTER-AIDED-DESIGN METHOD AND APPARATUS FOR NETWORKS
82275326	Granted	5883809	7/26/1996	3/16/1999	08/688818	US	Behavioral Language Models For Testing And Verification Of Digital Electronic Circuits
82275392	Granted	6075860	2/19/1997	6/13/2000	08/802070	US	Apparatus And Method For Authentication And Encryption OF A Remote Terminal Over A Wireless Link
82690041	Published		3/26/2012		13/430265	US	PACKET DESCRIPTOR TRACE INDICATORS
82750038	Granted	8332554	6/29/2011	12/11/2012	13/172298	US	Method and Apparatus For Real-Time Transport of Multi-Media Information In A Network
82828117	Published		1/27/2012		13/360284	US	PROPER INSTALLATION DETERMINATION BASED ON ARBITRARY PATTERN IDENTIFICATION
82829643	Published		11/14/2011		13/295599	US	Network Device Heating Based on Power Classification and Temperature
82859713	Granted	9008099	11/23/2011	4/14/2015	13/304036	US	METHOD AND SYSTEM FOR SLIDING WINDOW PROCESSING OF A DATAGRAM
82859796	Granted	8879563	2/10/2012	11/4/2014	13/370357	US	CONTENT-BASED FORWARDING OF NETWORK TRAFFIC
82894961	Published		11/23/2011		13/304104	US	Open Network Connection
82914675	Granted	8266303	1/9/2012	9/11/2012	13/346033	US	MANAGING NETWORK CONNECTIONS (as amended)
82942409	Granted	8541961	2/14/2012	9/24/2013	13/396384	US	Electron Beam Switch
82990089	Granted	8804707	4/9/2012	8/12/2014	13/442591	US	Switching Fabrics and Control Protocols for them
83008240	Granted	8762722	5/29/2012	6/24/2014	13/482295	US	Secure Information Distribution Between Nodes (network Devices)
83010584	Allowed		5/17/2013		13/896378	US	BLOOM FILTER WITH MEMORY ELEMENT
83096910	Allowed		9/26/2012		13/627578	US	Sensing Current To Protect A Fuse
83139638	Published		6/13/2013		13/917369	US	COUNTER POLICY IMPLEMENTATION
83154786	Published		3/27/2013		13/851345	US	ADAPTER TO PROVIDE POWER FROM A POWER SUPPLY
83198072	Published		3/15/2013		13/832330	US	DEVICE LOCAL REPUTATION SCORE CACHE
83198713	Allowed		3/14/2013		13/804062	US	RATE REDUCTION FOR AN APPLICATION CONTROLLER
83213721	Granted	8964931	3/15/2013	42059	13/835529	US	FREQUENCY SCALING COUNTER
83261186	Published		5/13/2013		13/893007	US	Proactive Containment Of Network Security Attacks
83425388	Published		2/10/2011		13/978784	US	SYSTEMS, METHODS, AND APPARATUS TO AUTHENTICATE COMMUNICATIONS MODULES
83793442	Published		9/28/2011		14/238573	US	MANAGING A SWITCH FABRIC
83957804	Published		5/20/2014		14/282859	US	METHODS FOR PACKET FORWARDING THROUGH A COMMUNICATION LINK OF A DISTRIBUTED LINK AGGREGATION GROUP USING MESH TAGGING
84060898	Application		10/2/2014		14/504700	US	FIBER CHANNEL 1:N REDUNDANCY
84077612	Published		7/31/2012		14/391834	US	MANAGING AN INTERFACE BETWEEN AN APPLICATION AND A NETWORK

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0692

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84088366	Allowed		12/15/2014		14/570083	US	A Communication Device Ingress Information Management System And Method
90017166	Application		7/24/2015		14/763484	US	NETWORK CONTROLLER PROVISIONED MACSEC KEYS
90056854	Application		3/15/2013		14/777489	US	TRAFFIC CONTROL ACROSS A LAYER 2 – LAYER 3 BOUNDARY IN A SOFTWARE DEFINED NETWORK
90057020	Application		6/14/2013		14/777423	US	DATA LOOP DETECTION
82089095	Published		5/22/2007		11/805041	US	Wireless Network Control And Protection System
82238804	Granted	8788637	9/1/2008	7/22/2014	12/202350	US	Systems And Methods For Downloading Boot Code Associated With Base Stations
82263656	Granted	8331303	10/1/2010	12/11/2012	12/896397	US	Adaptive Wireless Network
82265777	Granted	6005519	9/4/1996	36515	08/707558	US	Tunable Microstrip Antenna And Method For Tuning Same
82269401	Granted	6697354	8/19/1998	2/24/2004	09/136484	US	Method and System for Distributed Network Address Translation for Mobile Network Devices
82272266	Granted	6933896	4/7/2003	8/23/2005	10/408394	US	Extendable Planar Diversity Antenna
82272893	Granted	6366261	9/8/2000	4/2/2002	09/657385	US	Method and Apparatus for overmolded antenna
82272953	Granted	7110393	2/28/2001	9/19/2006	09/795587	US	System and Method for Providing User Mobility Handling in a Network Telephony System
82273640	Granted	6760804	9/11/2001	7/6/2004	09/954113	US	Apparatus and method for providing an interface between legacy applications and a wireless communication network
82273646	Granted	7325048	7/3/2002	1/29/2008	10/189210	US	METHOD FOR AUTOMATICALLY CREATING A MODEM INTERFACE FOR USE WITH A WIRELESS DEVICE
82274015	Granted	7280621	3/31/2003	10/9/2007	10/403553	US	Preamble Detector Method and Device for OFDM Systems
82274018	Granted	7203245	3/31/2003	4/10/2007	10/403552	US	Symbol Boundary Detector Method and Device for OFDM Systems
82274078	Granted	7548579	3/31/2003	6/16/2009	10/403546	US	Symbol Spreading Method and Device for OFDM Systems
82274204	Granted	7257088	5/11/2004	8/14/2007	10/843218	US	SDMA System Using MU-SIMO for the Uplink and MU-MISO for the Downlink
82607445	Allowed		3/22/2011		13/069072	US	LOCATION-BASED ASSOCIATION FOR COMMUNICATIONS NETWORKS
82683589	Granted	8730811	4/7/2011	5/20/2014	13/081766	US	Managing Network Traffic
82749122	Granted	8625462	9/30/2011	1/7/2014	13/250500	US	OWNERSHIP REQUESTS FOR ACCESS POINTS
83037394	Published		7/25/2012		13/557287	US	COVER HAVING AN ANTENNA RADIATING ELEMENT FOR A WIRELESS ACCESS POINT
83140302	Published		1/30/2013		13/754585	US	PERFORMING DATA OPERATIONS WHILE PRESERVING GRAPHICAL USER INTERFACE REAL-ESTATE
84076381	Published		6/29/2012		14/391224	US	Routing Packet From Edge Device To Home Network Or From Home Network To Remote Access Network
84298599	Application		7/10/2015		14/796476	US	MANAGING MULTIPLE VIRTUAL NETWORK MEMBERSHIPS
82233002	Granted	8150851	10/27/2008	4/3/2012	12/258638	US	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82246922	Granted	8117343	10/28/2008	2/14/2012	12/260024	US	Landmark Chunking Of Landmarkless Regions
82264781	Published		10/17/2010		12/906108	US	Storage Tiers for Different Backup Types
82615975	Granted	8438137	2/28/2011	5/7/2013	13/037309	US	AUTOMATIC SELECTION OF SOURCE OR TARGET DEDUPLICATION
82689211	Granted	8589648	7/7/2011	11/19/2013	13/177693	US	PERFORMING A COPY OPERATION ON A REPLICATED VIRTUAL CARTRIDGE
82852966	Granted	8612705	7/29/2009	12/17/2013	13/260104	US	MAKING A PHYSICAL COPY OF DATA AT A REMOTE STORAGE DEVICE
83731367	Published		6/14/2011		14/117761	US	DEDUPLICATION IN DISTRIBUTED FILE SYSTEMS
83952434	Published		5/1/2012		14/395492	US	SEGMENT COMBINING FOR DEDUPLICATION
84210238	Published		3/26/2015		14/670041	US	Load Balancing Data Access In Virtualized Storage Nodes
81968348	Granted	6700729	10/17/2000	3/2/2004	09/691646	US	Alignment Marks For Tape Head Positioning
81972284	Granted	6966522	3/25/2004	11/22/2005	10/809013	US	Irregular Surfaced Tape Guide
81978968	Granted	7440360	8/13/2003	10/21/2008	10/640708	US	Apparatus And Method For Retrieving Data Related To A Data Cartridge In A Media Storage System
81995387	Granted	6897432	3/20/2001	5/24/2005	09/813205	US	Imaging apparatus having discontinuous lens reference surfaces and method of assembling the imaging apparatus
82000130	Granted	6866405	2/6/2003	3/15/2005	10/359756	US	Variable Intensity Illuminator Lens
82028663	Granted	6775093	5/9/1997	8/10/2004	08/853608	US	Data Cartridge-To-Caddy Referencing System For A Data Cartridge Handling Mechanism Within An Autochanger
82030031	Granted	6018444	10/28/1997	1/25/2000	08/959509	US	BATCH FABRICATED SERVO WRITE HEAD HAVING LOW WRITE-GAP LINE WIDTH VARIATION
82034651	Granted	5930089	3/13/1998	7/27/1999	09/042323	US	Head Cleaner For Linear Tape Drive
82043021	Granted	6003802	4/3/1998	12/21/1999	09/055016	US	Tape Leader Pin Assembly And Method For Making The Same
82047140	Granted	6751058	1/24/2003	6/15/2004	10/350430	US	Positioning System For Removable Data Storage Cartridges
82047512	Granted	6158899	1/27/1999	12/12/2000	09/238687	US	Method And Apparatus For Alleviating ESD Induced EMI Radiating From I/O Connector Apertures
82048451	Granted	6215618	4/1/1999	4/10/2001	09/285804	US	Linear Tape Drive Head Cleaning Process
82064123	Granted	6833970	7/31/2001	12/21/2004	09/917786	US	DATA STORAGE
82064183	Granted	6958873	7/31/2001	10/25/2005	09/917853	US	Data Rewrite Control In Data Transfer And Storage Apparatus
82064186	Granted	6792568	7/31/2001	9/14/2004	09/917865	US	DATA TRANSFER AND STORAGE DEVICE AND METHOD
82065557	Granted	7363425	12/28/2001	4/22/2008	10/034518	US	System And Method For Securing Drive Access To Media Based On Medium Identification Numbers
82067243	Granted	6058494	7/3/1997	5/2/2000	08/887917	US	STORAGE SYSTEM WITH PROCEDURE FOR MONITORING LOW LEVEL STATUS CODES, DELIVERING HIFH LEVEL STATUS CODES BASED THEREON AND TAKING APPROPRIATE REMEDIAL ACTIONS

PATENT
REEL: 038498 FRAME: 0693

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82067741	Granted	7075874	7/17/2001	7/11/2006	09/905984	US	DATA STORAGE DEVICE MONITORING SYSTEM, METHOD AND REMOVABLE DATA CARRIER USE WITH DATA STORAGE SYSTEMS
82068113	Granted	6631485	1/16/1998	10/7/2003	09/600306	US	Methods And Apparatus For Data Storage On Magnetic Media Including Error Correction Codes
82255598	Granted	7263686	4/4/2003	8/28/2007	10/407849	US	SYSTEM AND METHOD FOR AUTOMATED CODE GENERATION USING LANGUAGE NEUTRAL SOFTWARE CODE
82256849	Granted	7408440	10/25/2004	8/5/2008	10/972975	US	System And Method For Analyzing Message Information From Diverse Network Devices
82256852	Granted	7408441	10/25/2004	8/5/2008	10/973084	US	SYSTEM AND METHOD FOR ANALYZING USER-GENERATED EVENT INFORMATION AND MESSAGE INFORMATION FROM NETWORK DEVICES
82257158	Granted	7937690	5/23/2006	5/3/2011	11/439457	US	EVALUATING PERFORMANCE OF SOFTWARE APPLICATION
82257287	Granted	7761492	3/30/2007	40379	11/694833	US	SYSTEMS AND PROCESSES FOR DETERMINING COSTS ASSOCIATED WITH INTERNAL SOFTWARE DEVELOPMENT
82257407	Granted	7831596	7/2/2007	11/9/2010	11/772705	US	SYSTEMS AND PROCESSES FOR EVALUATING WEBPAGES
82257659	Published		8/15/2008		12/192637	US	MANAGING DEPLOYMENT OF ACTIVE OBJECTS TO COMPUTER SYSTEMS
82262339	Published		4/9/2010		12/757112	US	SYSTEM AND METHOD FOR PROCESSING DATA
84226554	Application		4/22/2015		14/437660	US	PRODUCT INTELLIGENCE ENGINE
82210586	Granted	8234257	7/5/2006	7/31/2012	11/480483	US	Method An Apparatus For Compressing And/or Decompressing A Data Structure
82254098	Granted	8064724	10/25/2007	40869	11/924237	US	APPARATUS, AND ASSOCIATED METHOD, FOR DISPLAYING DATA USING DATA PAINTING OF AN ASYMMETRICAL FACIAL IMAGE
82255601	Granted	8311865	2/14/2003	11/13/2012	10/368282	US	Generating A Resource Allocation Action Plan
82257347	Granted	9043014	8/23/2007	5/26/2015	11/844224	US	APPARATUS, AND ASSOCIATED METHOD, FOR GENERATING AN INFORMATION TECHNOLOGY INCIDENT REPORT
82187423	Granted	7735119	5/6/2005	6/8/2010	11/124549	US	Access Control In A Web Application Using Event Filtering
82215581	Granted	7970142	8/5/2005	6/28/2011	11/996747	US	SYSTEM, METHOD AND APPARATUS FOR DECRYPTING DATA STORED ON REMOBABLE MEDIA
82251917	Granted	6430549	7/17/1998	37474	09/118621	US	System and Method for Selectively Defining Access to Application Features
82253540	Granted	7100197	12/10/2001	38958	10/013609	US	Network User Authentication System And Method
82253726	Granted	8150679	8/15/2008	41002	12/192913	US	APPARATUS, AND ASSOCIATED METHOD, FOR DETECTING FRAUDULENT TEXT MESSAGE
82253792	Granted	8849960	2/11/2005	41912	11/057103	US	Non-invasive Method And System For Automated Administration Of Diverse Security Constrained Servers

PATENT
REEL: 038498 FRAME: 0694

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82256660	Granted	7509676	7/30/2004	39896	10/909258	US	SYSTEM AND METHOD FOR RESTRICTING ACCESS TO AN ENTERPRISE NETWORK
83099432	Granted	9075704	1/25/2013	42192	13/750333	US	MITIGATING RISKS DURING A HIGH AVAILIBILITY AND DISASTER RECOVERY (HA/DR) REHEARSAL
83204461	Published		3/18/2013		13/846083	US	Securing Confidential Information In A Document
83814335	Published		10/28/2011		14/239407	US	METHOD AND SYSTEM FOR SINGLE POINT OF FAILURE ANALYSIS AND REMEDIATION
81988391	Granted	6549418	9/26/2001	37726	09/965281	US	Land Grid Array Integrated Circuit Device Module
81988394	Granted	6477058	6/28/2001	37565	09/894923	US	Integrated Circuit Device Package Including Multiple Stacked Components
83138742	Published		1/28/2013		13/751353	US	UNIT UNDER TEST AUTOMATION
83140594	Published		4/30/2013		13/874090	US	USING CUSTOMER COMPUTING SYSTEM TO TEST OTHER CUSTOMER COMPUTING SYSTEMS
83150126	Published		2/20/2013		13/771293	US	PROTECTING MEMORY DIAGNOSTICS FROM INTERFERENCE
83778059	Published		7/29/2011		14/232003	US	TRANSMITTING A DIAGNOSTIC CODE FROM A PROCESSOR
82091156	Granted	7818530	11/26/2003	40470	10/723950	US	Data Management Systems, Articles Of Manufacture, And Data Storage Methods
82169570	Granted	8650372	10/10/2003	41681	10/684001	US	Methods And Systems For Calculating Required Scratch Media
82224881	Application		11/5/2004		10/982184	US	Single Repository Manifestation Of A Multi-repository System
82585284	Published		4/29/2011		13/098048	US	DATABASE ARCHIVING MODEL ERROR DETECTION AND CORRECTION SYSTEM
82641262	Granted	8386494	8/7/2008	2/26/2013	13/057930	US	Providing Data Structures For Determining Whether Keys Of An Index Are Present In A Storage System
82870596	Published		3/7/2012		13/414175	US	IMPLEMENTING A SCALABLE TEST ENVIRONMENT
82110506	Granted	6263345	9/28/1998	7/17/2001	09/162245	US	HISTOGRAM SYNTHESIS MODELER FOR A DATABASE QUERY OPTIMIZER
82243424	Granted	8666966	1/30/2009	3/4/2014	12/362702	US	Providing Parallel Result Streams For Database Queries
82251164	Published		8/26/2009		12/548198	US	Distributed Data Analysis
82260533	Published		1/5/2010		12/652424	US	ALLOCATING RESOURCES IN A DATA WAREHOUSE
82756427	Published		10/13/2011		13/272598	US	Parameters Expressions for Modeling User Defined Function Execution in Analytical Data Processing Systems
82924247	Granted	8812484	3/30/2010	8/19/2014	13/383775	US	SYSTEM AND METHOD FOR OUTER JOINS ON A PARALLEL DATABASE MANAGEMENT SYSTEM
83209035	Published		5/1/2013		13/875046	US	INCREMENTALLY UPDATED SAMPLE TABLES
82094525	Granted	7392519	9/23/2003	6/24/2008	10/667525	US	Localization Cataloguing Tool
82243427	Published		10/30/2008		12/289602	US	Federated Configuration Data Management

PATENT
REEL: 038498 FRAME: 0695

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82245050	Published		10/16/2008		12/253001	US	System and Method for Displaying Interactive Graphical Representations of Workgroups Manipulatable to Input Constraints (As Amended)
82264274	Published		10/28/2010		12/914459	US	METHOD AND SYSTEM FOR TIME SHEET MESSAGING
82581660	Granted	8504585	5/31/2011	41492	13/149869	US	MATCHING A USER TO A CONVERSATION
82923471	Granted	8938406	7/30/2009	1/20/2015	13/384516	US	Constructing A Bayesian Network Based On Received Events Associated With Network Entities
83097889	Published		10/25/2012		13/660422	US	TARGET TREE GENERATION
83118742	Published		5/27/2010		13/696411	US	Bundling Configuration Items Into A Composite Configuration Item
83719064	Published		5/20/2011		14/118235	US	SYSTEM AND METHOD FOR CONFIGURATION POLICY EXTRACTION
83822656	Application		4/30/2014		14/266135	US	ACTIONS FOR AN INFORMATION TECHNOLOGY CASE
81956492	Granted	6012095	11/18/1997	36529	08/972830	US	Generic Notification Framework System And Method For Enhancing Operation Of A Management Station On A Network
81982832	Granted	7307962	3/2/2001	39427	09/796708	US	System For Inference Of Network Infrastructure Devices
81982895	Granted	7050931	11/6/2003	38860	10/703007	US	Computing Performance Thresholds Based On Variations In Network Traffic Patterns
81982898	Granted	7185109	4/20/2001	39140	09/838162	US	RECURSIVE DISCOVERY OF CDP TYPE OF NODES IN A NETWORK OF VARIOUS NODE TYPES
81985019	Granted	6944660	5/4/2001	38608	09/848216	US	System And Method For Monitoring Browser Event Activities
82008680	Granted	5764883	3/28/1996	35955	08/623353	US	SYSTEM AND METHOD FOR CHECKING FOR DYNAMIC RESOURCE MISUSE IN A COMPUTER PROGRAM
82032902	Granted	6148338	4/3/1998	36844	09/055057	US	SYSTEM FOR LOGGING AND ENABLING ORDERED RETRIEVAL OF MANAGEMENT EVENTS
82034342	Granted	6147693	5/29/1998	36844	09/087363	US	Localizable Date Time Spinner
82038026	Granted	6175363	5/29/1998	36907	09/086635	US	METHOD AND SYSTEM TO PROVIDE FUNCTIONALITY ACCESS BASED ON USER APPROACH TO NETWORK AND SYSTEM MANAGEMENT TASKS
82060061	Granted	6941367	5/10/2001	38601	09/853103	US	METHOD, SYSTEM AND COMPUTER PROGRAM PRODUCT FOR MONITORING OBJECTS IN AN IT NETWORK
82070618	Granted	6920492	6/18/2001	7/19/2005	09/883723	US	Process For Controlling Devices Of An Intranet Network Through The Web
82106513	Granted	7451203	12/22/2003	11/11/2008	10/740897	US	Method And System For Communicating Between A Management Station And At Least Two Networks Having Duplicate Internet Protocol Addresses
82173689	Granted	7571181	12/22/2004	40029	11/021956	US	Network Usage Analysis System And Method For Detecting Network Congestion

PATENT
REEL: 038498 FRAME: 0696

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82174253	Granted	7483384	9/22/2003	1/27/2009	10/668888	US	System And Method For Monitoring Network Traffic
82177934	Granted	8213439	12/29/2004	7/3/2012	11/023409	US	Method And System For Managing A Network Having An HSRP Group
82189361	Granted	7876694	7/2/2004	1/25/2011	10/884468	US	IDENTIFYING VPN FAULTS BASED ON VIRTUAL ROUTING ADDRESS AND EDGE INTERFACE RELATIONSHIP INFORMATION
82222073	Granted	7127498	9/16/2002	39014	10/244825	US	Software Application Domain And Storage Domain Constraining Process And Method
82223069	Granted	6584072	3/8/2000	37796	09/521475	US	METHOD FOR DETERMINING THE DROP RATE, THE TRANSIT DELAY, AND THE BREAK STATE OF COMMUNICATIONS OBJECTS
82223072	Granted	RE40744	11/20/2001	39980	09/988789	US	Method For Determining The Drop Rate, The Transit Delay And The Break State Of Communications Objects
82223195	Granted	6587440	7/8/1999	7/1/2003	09/349155	US	METHOD FOR DETERMINING COMPUTER NETWORK TOPOLOGIES
82223321	Granted	6411997	11/15/1996	6/25/2002	08/749671	US	Method Of Determining The Topology Of A Network Of Objects
82235684	Granted	8180718	9/27/2008	5/15/2012	12/239751	US	ENGINE FOR PERFORMING ROOT CAUSE AND EFFECT ANALYSIS
82239371	Published		9/27/2008		12/239748	US	Business Process Optimization And Problem Resolution
82249418	Published		3/16/2009		12/404968	US	Extendable Distributed Network Management System And Method
82259282	Granted	8464279	12/18/2009	6/11/2013	12/641876	US	DOMAIN EVENT CORRELATION
82260035	Granted	8958310	4/17/2010	2/17/2015	12/762303	US	Investigating Quality Of Service Disruptions In Multicast Forwarding Trees
82263152	Granted	8924537	9/9/2010	12/30/2014	12/878684	US	BUSINESS PROCESSES TRACKING
82752159	Published		5/31/2011		13/149113	US	IDENTIFYING A DIFFERENCE IN APPLICATION PERFORMANCE
82841900	Published		10/17/2011		13/274918	US	DISCOVERING REPRESENTATIVE COMPOSITE CI PATTERNS IN AN IT SYSTEM
82853115	Granted	8634321	12/18/2009	1/21/2014	13/259098	US	Proxy Agents In A Network
82963059	Published		4/24/2012		13/454572	US	DETECTING ABNORMAL BEHAVIOR IN THE CLOUD SYSTEM BASED ON TIME INTERVALS (as amended)
83012811	Allowed		8/23/2012		13/592858	US	DETERMINING THE TYPE OF A NETWORK TIER
83014334	Allowed		7/27/2012		13/560401	US	MONITORING THREAD STARVATION USING STACK TRACE SAMPLING AND BASED ON A TOTAL ELAPSED TIME
83037620	Published		8/9/2012		13/571214	US	NETWORK MONITORING
83098516	Published		11/28/2012		13/687584	US	GENERATING A GENERALIZED UNIFORM RESOURCE IDENTIFIER

PATENT
REEL: 038498 FRAME: 0697

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0698

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83184710	Published		8/6/2010		13/812949	US	SYSTEM AND METHODS FOR APPORTIONING POWER CONSUMPTION
83185171	Granted	9122784	8/26/2010	9/1/2015	13/812613	US	ISOLATION OF PROBLEMS IN A VIRTUAL ENVIRONMENT
83617593	Published		3/17/2011		14/002274	US	SELF-ORGANIZATION OF A SATELLITE GRID
84312725	Application		7/9/2015		14/795280	US	VARIANCE BASED TIME SERIES DATASET ALIGNMENT
84312977	Application		4/3/2013		14/765319	US	EXPLORATION MAPS FOR VISUALIZING SOFTWARE PRODUCT KNOWLEDGE
82216889	Granted	8548947	4/28/2006	10/1/2013	11/413534	US	Systems And Methods For File Maintenance
82241990	Granted	8549480	9/27/2008	10/1/2013	12/239753	US	Maintenance For Automated Software Testing
82249358	Granted	8291068	1/14/2009	10/16/2012	12/320004	US	Automatic Protocol Detection
82259411	Published		10/26/2009		12/605416	US	GRAPHICAL USER INTERFACE HIERARCHY GENERATION
82259657	Granted	8549476	7/30/2009	10/1/2013	12/512841	US	Comparison Of Result Of Program Operation To Result Of An Operation Of A Different Version Of The Program
82262471	Published		8/31/2010		12/872245	US	MAINTAINING A DATABASE OF PATCH DATA
82951878	Published		7/30/2012		13/561685	US	APPLICATION TESTING
82963823	Granted	8874736	4/23/2012	41940	13/453034	US	EVENT EXTRACTOR
83701566	Published		5/3/2011		14/114145	US	AUTOMATIC CLASSIFICATION ADJUSTMENT OF RECORDED ACTIONS FOR AUTOMATION SCRIPT
83991701	Published		1/26/2012		14/373843	US	IMAGE-BASED APPLICATION AUTOMATION
83992637	Published		1/31/2012		14/374841	US	CONTINUOUS DEPLOYMENT OF CODE CHANGES
84312957	Application		2/27/2013		14/761583	US	DETERMINING EVENT AND INPUT COVERAGE METRICS FOR A GRAPHICAL USER INTERFACE CONTROL INSTANCE
81977462	Granted	7062649	1/12/2001	6/13/2006	09/760236	US	System And Method For Categorizing Security Profile Rules Within A Computer System
81977465	Granted	7065644	1/12/2001	6/20/2006	09/759932	US	System And Method For Protecting A Security Profile Of A Computer System
81977591	Granted	7213146	2/20/2001	5/1/2007	09/789200	US	System And Method For Establishing Security Profiles Of Computers
81988457	Granted	6801948	12/15/2000	10/5/2004	09/738078	US	SYSTEM AND METHOD FOR A STREAMS BASED NETWORK ACCESS CONTROL FOR A COMPUTER
82039334	Granted	7062780	1/27/2004	6/13/2006	10/765621	US	Granular Access Control Of Inter-Process Communications In A Compartment Mode Workstation Labeled Environment
82061621	Granted	7237107	12/7/2000	6/26/2007	09/732954	US	Method And Apparatus For Discovering A Trust Chain Imparting A Required Attribute To A Subject
82245614	Granted	8763102	9/19/2008	6/24/2014	12/233666	US	Single Sign On Infrastructure
82262966	Published		6/22/2010		12/821118	US	MANAGING ENCRYPTION KEYS
82581222	Published		4/9/2007		11/733169	US	APPARATUS AND METHOD FOR DEVELOPING SECURE SOFTWARE
84162687	Application		8/29/2012		14/424401	US	SECURITY SCAN BASED ON DYNAMIC TAINT

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84173610	Application		2/27/2015		14/634563	US	VISUALIZATION OF SECURITY RISKS
90050920	Application		9/4/2015		14/846462	US	APPLICATION SECURITY TESTING
82097459	Granted	7546339	8/12/2003	39973	10/638560	US	CLIENT-SERVER APPARATUS AND METHOD USING ALTERNATIVE-RESPONSE PROTOCOLS
82104767	Granted	6889160	5/30/2003	38475	10/449555	US	Simulation Of Network Service Test Environments
82176125	Granted	7984128	5/23/2003	40743	10/445236	US	System And Method For Discovering Managed Information Technology Resources
82242923	Published		10/30/2008		12/261760	US	SYSTEMS AND METHODS FOR DEFINING BEST PRACTICES, MANAGING BEST PRACTICES, AND VALIDATING SERVICE MODELS
82243616	Granted	7124289	10/31/2000	10/17/2006	09/699350	US	Automated Provisioning Framework For Internet Site Servers
82244171	Granted	8676931	10/6/2006	3/18/2014	11/544185	US	Methods For Managing Manual Changes To Network Infrastructures Through Automated Systems
82244234	Granted	7451071	7/26/2001	39763	09/766615	US	Data Model For Automated Server Configuration
82244237	Granted	7743147	4/20/2001	40351	09/838142	US	AUTOMATED PROVISIONING OF COMPUTING NETWORKS USING A NETWORK DATABASE DATA MODEL
82244240	Granted	8359377	4/30/2001	1/22/2013	09/843816	US	Interface For Automated Deployment And Management Of Network Devices
82248170	Granted	8239872	12/11/2008	41128	12/314481	US	Method And System For Controlling Distribution Of Work Items To Threads In A Server
82262906	Published		7/8/2010		12/832436	US	GENERATION OF OPERATIONAL POLICIES FOR MONITORING APPLICATIONS
82277513	Granted	7290139	5/30/2003	10/30/2007	10/452802	US	A SYSTEM FOR UPDATING AN INFORMATION STATE RECEIVED FROM ANOTHER COMPUTER BASED UPON VALIDATION RULES THAT APPLY TO THE INFORMATION STATE
82850241	Granted	8756324	12/2/2011	41807	13/310002	US	AUTOMATIC CLOUD TEMPLATE APPROVAL
83014314	Granted	8856740	7/31/2012	41919	13/563532	US	Implementing Multiple Versions of a Plug-In Concurrently
83117723	Published		6/7/2011		13/811616	US	METHOD AND SYSTEM FOR DEPLOYING SaaS (Software As A Service) SERVICE BUNDLES
83140448	Published		6/30/2010		13/702045	US	SYSTEM AND METHOD FOR AN AUTOMATED DATA DISCOVERY SERVICE
83142025	Granted	9104668	7/1/2010	42227	13/703289	US	MIGRATING ARTIFACTS BETWEEN SERVICE-ORIENTED ARCHITECTURE REPOSITORIES
83820120	Application		4/1/2014		14/242230	US	CLOUD TOPOLOGY VISUALIZATIONS
83825696	Application		4/30/2014		14/266531	US	DATA RECONSTRUCTION
83992806	Application		12/3/2012		14/443875	US	BINDING OF APPLICATION AND INFRASTRUCTURE BLUEPRINTS
84118668	Application		7/3/2012		14/406671	US	MANAGING A MULTITENANT CLOUD SERVICE

PATENT
REEL: 038498 FRAME: 0699

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84158376	Published		2/13/2015		14/622454	US	CUSTOMIZED VIRTUAL MACHINE CREATION
82021166	Granted	6021492	10/9/1996	2/1/2000	08/728008	US	Software Metering Management Of Remote Computing Devices
81995135	Granted	7506046	7/31/2001	39889	09/919527	US	Network Usage Analysis System And Method For Updating Statistical Models
82062749	Granted	7334017	10/16/2001	39497	09/977501	US	Content Provider Entity For Communication Session
82071302	Granted	7573899	4/18/2003	40036	10/418958	US	Adaptor Module
82084097	Granted	7782838	6/24/2003	40414	10/602444	US	Intermediate Packetizing Of Voice Data For Communication Between Circuit-switched Network Nodes
82100459	Granted	8275368	10/21/2003	9/25/2012	10/688979	US	Method And Apparatus For Operating A Telecommunication Platform
82116941	Granted	6226511	4/6/2000	5/1/2001	09/543836	US	Method and apparatus for configuration of authentication center operations in a mobile telephone system
82181057	Granted	7751389	7/1/2004	7/6/2010	10/883343	US	Telecommunications System And Method For Forwarding Messages Based Upon Subscriber Identification Information
82206776	Granted	8156194	7/10/2006	4/10/2012	11/483163	US	Signalling Gateway
82208399	Granted	8244252	2/6/2008	8/14/2012	11/722843	US	Method For Activating A Network-based Service In A Communication Network, Apparatus, Device And Network Therefor
82208462	Published		8/3/2006		11/462049	US	Method And System For Managing A Meeting
82223756	Published		10/1/2007		12/444962	US	Management Of Access To Address Data
82224194	Granted	8208930	6/21/2006	6/26/2012	11/471780	US	Message Routing In A Telecommunication System
82228877	Published		3/31/2008		12/597290	US	Obtaining Feedback For An Accessed Information Item
82249856	Granted	8885553	4/2/2010	11/11/2014	12/753549	US	Packet Routing Method, Proxy Server And Apparatus
82257911	Granted	8331913	7/24/2009	12/11/2012	12/508692	US	Method And Apparatus For Obtaining Subscriber Information
82277762	Granted	7409207	10/17/2003	8/5/2008	10/686661	US	Communication System And Method
82863311	Granted	8923837	10/13/2011	12/30/2014	13/272700	US	PROVISIONING A TELEPHONY NETWORK IN RESPONSE TO AN ELECTRONIC DEVICE ATTACHING TO THE NETWORK
83012900	Granted	8930294	7/30/2012	1/6/2015	13/562256	US	PREDICTING USER ACTIVITY BASED ON USAGE DATA RECEIVED FROM CLIENT DEVICES
83097411	Published		12/14/2012		13/715753	US	POLICY COORDINATION BETWEEN POLICY ENFORCEMENT POINTS
83101464	Granted	9152715	12/4/2012	10/6/2015	13/693626	US	A Visual Approach to Searching Databases
83189144	Granted	8738785	2/28/2013	5/27/2014	13/780931	US	Message Exchange Between Software Components
83700272	Published		7/25/2011		14/110277	US	Transferring a Conference Session Between Conference Servers Due to Failure
81966914	Granted	6839771	4/13/2000	1/4/2005	09/549124	US	METHOD AND SYSTEM FOR USING A UNIVERSAL SERIAL BUS (USB) AS A PEER-TO-PEERNETWORK

PATENT
REEL: 038498 FRAME: 0700

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82003997	Granted	7320130	3/25/2003	1/15/2008	10/395090	US	Mutual Exclusion Lock Implementation For A Computer Network
82007000	Granted	7447146	12/19/2001	11/4/2008	10/028298	US	METHOD AND APPARATUS FOR SUPPORTING MULTIPLE INDEPENDENT FAILURE DOMAINS
82065806	Granted	7822862	6/9/2003	10/26/2010	10/457021	US	METHOD OF SATISFYING A DEMAND ON A NETWORK FOR A NETWORK RESOURCE
82087784	Granted	7281056	6/4/2002	39364	10/163290	US	Assigning A Device To A Network
82166258	Granted	7346801	8/1/2003	39525	10/633161	US	PERSISTENT RESERVATION IO BARRIERS
82179686	Granted	7308638	6/29/2004	12/11/2007	10/879255	US	System And Method For Controlling Application Of An Error Correction Code (ECC) Algorithm In A Memory Subsystem
82179932	Granted	8176259	1/20/2004	5/8/2012	10/760813	US	System And Method For Resolving Transactions In A Cache Coherency Protocol
82181867	Granted	7890798	3/22/2004	2/15/2011	10/806261	US	Computer Cluster With Second-node Instance Of Application Having Access To State Snapshot Of First-node Instance Of Application
82182056	Granted	8281079	1/13/2004	41184	10/756535	US	Multi-processor System Receiving Input From A Pre-fetch Buffer
82203218	Granted	8316111	10/11/2005	41233	11/248873	US	System And Methods For Placing And Dragging Programmatic Packages In Clustered Computing Systems
81967727	Granted	6763459	1/14/2000	7/13/2004	09/483356	US	Lightweight Public Key Infrastructure Employing Disposable Certificates
81971849	Granted	7607135	6/15/2001	40106	09/882845	US	Apparatus And Method For Enhancing Performance Of A Computer System
81984836	Granted	6823300	11/10/2000	38314	09/709695	US	Memory Efficient Occurrence Model Design For VLSI Cad
81994574	Granted	6826573	2/15/2000	38321	09/504205	US	Method For Queue Issue Pointer
82001252	Granted	7571143	1/15/2002	40029	10/045149	US	Software Pay-per-use Pricing
82017674	Granted	6219832	10/28/1998	36998	09/181588	US	System And Method Of Using Annotations To Optimize Dynamically Translated Code In The Presence Of Signals
82029785	Granted	6154878	7/21/1998	36858	09/120040	US	System And Method For On-line Replacement Of Software
82031531	Granted	6070230	12/29/1997	5/30/2000	08/999027	US	Multi-Threaded Read Ahead Prediction By Pattern Recognition
82031966	Granted	6658486	2/25/1998	37957	09/030500	US	SYSTEM AND METHOD FOR EFFICENTLY BLOCKING EVENT SIGNALS ASSOCIATED WITH AN OPERATING SYSTEM
82031969	Granted	7386861	7/23/2003	39609	10/625790	US	System And Method For Efficiently Blocking Event Signals Associated With An Operating System
82083977	Granted	7266810	4/9/2002	39329	10/120036	US	Runtime Profiling Of Platform-independent Software Applications
82094402	Granted	7415699	6/27/2003	8/19/2008	10/608330	US	METHOD AND APPARATUS FOR CONTROLLING EXECUTION OF A CHILD PROCESS GENERATED BY A MODIFIED PARENT PROCESS

PATENT
REEL: 038498 FRAME: 0701

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82099208	Granted	8156217	11/24/2003	4/10/2012	10/723643	US	Dynamically Balancing Load For Servers
82103705	Granted	7523503	1/21/2003	4/21/2009	10/349423	US	METHOD FOR PROTECTING SECURITY OF NETWORK INTRUSION DETECTION SENSORS
82104575	Granted	7328238	1/29/2003	2/5/2008	10/353562	US	System And Method For Control Of Web Pages
82110323	Granted	5884328	8/29/1997	36235	08/920401	US	SYSTEM AND METHOD FOR SYCHRONIZING A LARGE DATABASE AND ITS REPLICA
82110383	Granted	5974574	9/30/1997	10/26/1999	08/940447	US	METHOD OF COMPARING REPLICATED DATABASES USING CHECKSUM INFORMATION
82110443	Granted	6115830	3/28/1998	36774	09/050226	US	FAILURE RECOVERY FOR PROCESS RELATIONSHIPS IN A SINGLE SYSTEM IMAGE ENVIRONMENT
82110569	Granted	6724762	10/25/2002	38097	10/280772	US	SYSTEM AND METHOD FOR IMPLEMENTING MULTI-PATHING DATA TRANSFERS IN A SYSTEM AREA NETWORK
82111883	Granted	5818445	9/9/1992	10/6/1998	07/943221	US	METHOD AND SYSTEM FOR CREATING COMPUTER-PROGRAM-BASED APPLICATIONS WITH DEVELOPER SPECIFIED LOOK AND FEEL
82128113	Granted	5887169	3/15/1996	36242	08/816321	US	METHOD AND APPARATUS FOR PROVIDING DYNAMIC ENTRY POINTS INTO A SOFTWARE LAYER
82132736	Granted	6131118	7/7/1998	36809	09/111042	US	FLEXIBLE DISPLAY OF MANAGEMENT DATA IN A PROGRAMMABLE EVENT DRIVEN PROCESSING SYSTEM
82136546	Granted	6237005	6/29/1998	37033	09/106300	US	WEB SERVER MECHANISM FOR PROCESSING MULTIPLE TRANSACTIONS IN AN INTERPRETED LANGUAGE EXECUTION ENVIRONMENT
82165199	Granted	6061773	5/3/1996	36655	08/642368	US	VIRTUAL MEMORY SYSTEM WITH PAGE TABLE SPACE SEPARATING A PRIVATE SPACE AND SHARED SPACE IN A VIRTUAL MEMORY
82166075	Granted	7596563	10/28/1999	9/29/2009	09/428384	US	Computerized File System And Method
82166381	Granted	7114020	4/28/2000	9/26/2006	09/561444	US	SOFTWARE MECHANISM FOR UNIQUE IDENTIFICATION OF SCSI DEVICE
82180997	Granted	7694295	1/28/2004	4/6/2010	10/766064	US	Displaying A Vendor Provided Information Screen In Response To A Log-in Experience
82188425	Granted	7484221	10/20/2004	1/27/2009	10/970480	US	Method And Apparatus For Logging The Execution History Of An Operating System Kernel
82189796	Granted	7281163	6/22/2004	10/9/2007	10/874035	US	Management Device Configured To Perform A Data Dump
82190606	Granted	8108560	11/22/2005	1/31/2012	11/283879	US	A Method And Apparatus For Managing Data Transfer In A Computer Memory
82191734	Granted	7403535	12/14/2004	7/22/2008	11/013185	US	Aggregation Of Network Resources Providing Offloaded Connections Between Applications Over A Network
82191920	Granted	8977651	4/14/2004	42073	10/823845	US	Method And Apparatus For Multi-process Access To A Linked-list

PATENT
REEL: 038498 FRAME: 0702

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82195787	Granted	7646708	8/22/2005	40190	11/208689	US	Network Resource Teaming Combining Receive Load-balancing With Redundant Network Connections
82197851	Granted	7478265	10/14/2004	39826	10/964862	US	Error Recovery For Input/output Operations
82200158	Granted	7392374	9/21/2004	39623	10/946200	US	Moving Kernel Configurations
82200161	Granted	7467328	9/3/2004	39798	10/934506	US	Kernel Configuration Recovery
82200476	Granted	7818623	10/18/2006	10/19/2010	11/550538	US	KERNEL DEBUGGING IN A CLUSTER COMPUTING SYSTEM
82200848	Granted	8271993	3/4/2005	9/18/2012	11/885395	US	A Method And Apparatus For Facilitating Pipeline Throughput
82201661	Granted	8799466	1/31/2005	8/5/2014	11/048254	US	Method And Apparatus For Automatic Verification Of A Network Access Control Construct For A Network Switch
82204715	Granted	8862734	10/25/2006	41926	11/586228	US	System And Method For Selectively Controlling The Addition Of Reserve Computing Capacity
82204784	Granted	7882430	10/27/2005	2/1/2011	11/260918	US	Utility, Method And Device Providing Vector Images That May Be Formatted For Display In Different Locales
82205027	Granted	8312194	9/30/2005	11/13/2012	11/240256	US	Method And Apparatus For Validation Of Continuous Access To A Data Structure
82206968	Granted	7590509	6/23/2005	9/15/2009	11/159607	US	System And Method For Testing A Processor
82207337	Granted	7756803	3/3/2005	7/13/2010	11/885475	US	METHOD OF PREDICTING AVAILABILITY OF A SYSTEM
82207463	Granted	7797756	4/18/2006	9/14/2010	11/406418	US	System And Methods For Managing Software Licenses In A Variable Entitlement Computer System
82207715	Granted	7693045	12/22/2005	4/6/2010	11/315812	US	Verifying Network Connectivity
82208402	Granted	8739288	7/31/2007	41786	11/888772	US	Automatic Detection Of Vulnerability Exploits
82213211	Granted	8738346	10/26/2006	5/27/2014	11/586928	US	Method And Apparatus For Controlling Multiple Simulations
82213955	Granted	7549085	4/28/2006	6/16/2009	11/413898	US	Method And Apparatus To Insert Special Instruction
82214459	Granted	8156370	12/11/2007	4/10/2012	12/520542	US	Computer System And Method Of Control Thereof
82216016	Granted	8108315	6/19/2006	40939	11/455515	US	Discovering Software Code Subject To Licenses
82216265	Published		9/7/2006		11/518084	US	Methods, Apparatus And Computer Systems That Enable Hardware Module Use Rights Owned By One Server To Be Claimed For Use By Another Server In A Common Share Group
82217579	Granted	7711980	5/22/2007	5/4/2010	11/751789	US	COMPUTER SYSTEM FAILURE MANAGEMENT WITH TOPOLOGY-BASED FAILURE IMPACT DETERMINATIONS
82217642	Granted	8032884	10/31/2006	40820	11/555229	US	Thread Hand Off
82219268	Granted	7516358	12/20/2005	39910	11/312201	US	Tuning Core Voltages Of Processors
82219328	Granted	9003410	1/30/2007	42101	11/700748	US	ABSTRACTING A MULTITHREADED PROCESSOR CORE TO A SINGLE THREADED PROCESSOR CORE
82219514	Granted	8739162	4/27/2007	41786	11/796423	US	ACCURATE MEASUREMENT OF MULTITHREADED PROCESSOR CORE UTILIZATION AND LOGICAL PROCESSOR UTILIZATION

PATENT
REEL: 038498 FRAME: 0703

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82220135	Granted	7788477	1/31/2007	40421	11/701310	US	METHODS, APPARATUS AND ARTICLES OF MANUFACTURE TO CONTROL OPERATING SYSTEM IMAGES FOR DISKLESS SERVERS
82222385	Granted	7941812	1/30/2007	5/10/2011	11/699950	US	INPUT/OUTPUT VIRTUALIZATION THROUGH OFFLOAD TECHNIQUES
82223009	Granted	7729368	1/19/2007	6/1/2010	11/655581	US	NETWORK BUFFER CACHING
82223012	Granted	7620854	1/30/2007	11/17/2009	11/668489	US	Method And System For Handling Input/output (I/O) Errors
82224506	Granted	8196117	1/3/2007	6/5/2012	11/649464	US	Merging Sample Based Profiling Data
82225133	Application		1/30/2007		11/700695	US	INCREMENTAL UPDATING OF A WEBPAGE
82227632	Granted	8037477	1/23/2007	10/11/2011	11/657493	US	EFFICIENT DETECTION OF SOURCES ON INCREASING MEMORY CONSUMPTION
82228445	Published		6/25/2008		12/145923	US	A Method And A Computer Program For Inode Allocation And De-allocation
82229753	Granted	8341285	9/30/2008	12/25/2012	12/242714	US	A Method And System For Transferring Files
82235369	Granted	8782655	7/1/2008	7/15/2014	12/216235	US	CONTROLLING COMPUTING RESOURCE CONSUMPTION
82238303	Granted	8712597	6/11/2008	4/29/2014	12/155930	US	Method Of Optimizing Air Mover Performance Characteristics To Minimize Temperature Variations In A Computing System Enclosure
82240493	Published		4/21/2009		12/427615	US	Method Of Computer Clustering
82246670	Application		6/30/2009		12/494861	US	Out-of-band Management Of Virtual Machines
82247048	Granted	8046460	1/23/2009	10/25/2011	12/358317	US	AUTOMATIC SERVER DEPLOYMENT USING A PRE-PROVISIONED LOGICAL VOLUME
82247732	Granted	8516099	1/26/2009	41506	12/359564	US	SCALING MANAGEMENT TASKS PERFORMED BY A MANAGEMENT SYSTEM ACCORDING TO A DETERMINED SIZE OF A MANAGED ENVIRONMENT
82248920	Granted	8392736	7/31/2009	3/5/2013	12/533849	US	Managing Memory Power Usage
82249295	Granted	9031876	6/19/2009	5/12/2015	12/488068	US	Managing Keys For Encrypted Shared Documents
82258409	Granted	9154385	3/17/2009	10/6/2015	12/406067	US	LOGICAL SERVER MANAGEMENT INTERFACE DISPLAYING REAL-SERVER TECHNOLOGIES
82258598	Published		8/6/2010		12/851558	US	Classification Of Application Commands
82261718	Granted	8505020	8/29/2010	8/6/2013	12/870835	US	Computer Workload Migration Using Processor Pooling
82263782	Granted	8353489	9/21/2010	41289	12/886749	US	MOUNTING KIT
82278203	Granted	7827480	2/28/2003	11/2/2010	10/375083	US	System And Method Of Using A Transactional Unit Comprised Of Transactional Subunits
82672122	Published		8/29/2011		13/220272	US	UPDATING COMPUTER READABLE INSTRUCTIONS ON DEVICES IN A DATA STORAGE FABRIC
82904410	Published		1/31/2012		13/362508	US	REMOTE SERVER CONFIGURATION
83159755	Published		1/24/2013		13/748761	US	RESOURCE-TYPE WEIGHTING OF USE RIGHTS
84273667	Application		8/3/2015		14/816062	US	VIRTUAL MACHINE MIGRATION

PATENT
REEL: 038498 FRAME: 0704

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81968165	Granted	7103639	12/5/2000	9/5/2006	09/730221	US	Method And Apparatus For Processing Unit Synchronization For Scalable Parallel Processing
81987518	Granted	7342805	9/10/2003	3/11/2008	10/659452	US	Capacitor Plate For Substrate Components
81988514	Granted	6843664	1/18/2002	1/18/2005	10/053763	US	Electrical Adapter
81992948	Granted	7103654	8/7/2001	9/5/2006	09/923881	US	Server System With Segregated Management Lan And Payload Lan
81993887	Granted	7103761	8/7/2001	9/5/2006	09/923880	US	Server System With Multiple Management User Interfaces
82002941	Granted	6807596	7/26/2001	10/19/2004	09/916752	US	System For Removing And Replacing Core I/O Hardware In An Operational Computer System
82004252	Published		2/6/2002		10/071442	US	System For Offering Services Using Network Of Unowned Computers
82009181	Granted	5860095	1/2/1996	1/12/1999	08/582542	US	CONFLICT CACHE HAVING CACHE MISS COUNTERS FOR A COUMPUTER MEMORY SYSTEM
82019795	Granted	6223256	7/22/1997	4/24/2001	08/898637	US	Computer Cache Memory With Classes And Dynamic Selection Of Replacement Algorithms
82085036	Granted	6843660	11/21/2003	1/18/2005	10/719937	US	Cable Systems And Related Methods
82087094	Granted	6976119	6/14/2002	12/13/2005	10/173331	US	Method And System For Providing A Location Of A Data Interface
82087409	Granted	6842345	8/29/2002	1/11/2005	10/230771	US	Circuit Board Support Assembly
82089530	Granted	6829142	10/25/2002	12/7/2004	10/280471	US	Cell Thermal Connector
82095152	Granted	7039736	1/15/2003	5/2/2006	10/342886	US	Systems And Methods For Accessing Bus-Mastered System Resources
82095647	Granted	6840388	10/28/2002	1/11/2005	10/282807	US	Tool-Less Rack Mounting System
82095650	Granted	6795307	10/31/2002	9/21/2004	10/285892	US	Tool-Less Latch Mechanism For An Enclosure Panel
82099769	Granted	7386744	3/15/2004	6/10/2008	10/801247	US	RACK EQUIPMENT POWER PRICING PLAN CONTROL SYSTEM AND METHOD
82102205	Granted	6771507	1/31/2003	8/3/2004	10/355707	US	Power Module For Multi-Chip Printed Circuit Boards
82103954	Granted	6995581	1/13/2005	2/7/2006	11/033751	US	Apparatus And Method For Detecting And Rejecting High Impedance Failures In Chip Interconnects
82117559	Granted	6469899	12/20/2000	10/22/2002	09/742755	US	MODULAR RACK-MOUNT SERVER ARRANGEMENT
82120058	Granted	7167371	7/30/2003	1/23/2007	10/630565	US	LOW PROFILE LATCH ACTIVATOR
82121624	Granted	6898676	10/3/2002	5/24/2005	10/263741	US	COMPUTER SYSTEM SUPPORTING BOTH DIRTY-SHARED AND NON DIRTY-SHARED DATA PROCESSING ENTITIES
82121867	Granted	6669497	6/25/2002	12/30/2003	10/178986	US	SELF-LOCKING MECHANISM FOR A HOT PLUGGABLE PRINTED CIRCUIT BOARD
82121870	Granted	6790068	11/20/2003	9/14/2004	10/719703	US	SELF-LOCKING MECHANISM FOR A HOT PLUGGABLE PRINTED CIRCUIT BOARD
82121996	Granted	7092258	9/15/2003	8/15/2006	10/662657	US	Cable Management System And Method Of Installation And Operation Thereof
82128986	Granted	5816673	10/11/1996	10/6/1998	08/730470	US	COMPUTER CHASSIS ASSEMBLY

PATENT
REEL: 038498 FRAME: 0705

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82132175	Granted	6442021	6/15/1998	8/27/2002	09/097873	US	HOT-PLUGGABLE DISK CARRIER HAVING ENHANCED ROTATIONAL DRIVE VIBRATION CONTROL CAPABILITY
82132544	Granted	6988626	7/31/1998	1/24/2006	09/127571	US	COMPUTER COMPONENT RACK MOUNTING ARRANGEMENT
82133105	Granted	6185092	9/3/1999	2/6/2001	09/390233	US	COMPUTER SYSTEM WITH IN-LINE SWITCHBOX MOUNTING
82133108	Granted	6208522	2/12/1999	3/27/2001	09/249506	US	COMPUTER CHASSIS ASSEMBLY WITH A SINGLE CENTER PLUGGABLE MIDPLANE BOARD
82133111	Granted	6459589	3/26/2001	10/1/2002	09/817851	US	COMPUTER CHASSIS ASSEMBLY WITH A SINGLE CENTER PLUGGABLE MIDPLANE BOARD
82134728	Granted	5822195	3/31/1997	10/13/1998	08/834793	US	INTERFACE THAT PERMITS DATA BUS SIGNALS TO PASS BETWEEN HIGH FREQUENCY PROCESSING UNIT AND LOW FREQUENCY EXPANSION DEVICES
82134980	Granted	6209065	10/24/1997	3/27/2001	08/957230	US	MECHANISM FOR OPTIMIZING GENERATION OF COMMIT-SIGNALS IN A DISTRIBUTED SHARED-MEMORY SYSTEM
82135541	Granted	5940868	7/18/1997	8/17/1999	08/896393	US	LARGE MEMORY ALLOCATION METHOD AND APPARATUS
82136726	Granted	6185663	6/15/1998	2/6/2001	09/094733	US	COMPUTER METHOD AND APPARATUS FOR FILE SYSTEM BLOCK ALLOCATION WITH MULTIPLE REDO
82137164	Granted	6060974	9/29/1998	5/9/2000	09/162929	US	HEADER PLATE FOR A LOW PROFILE SURFACE MOUNT TRANSFORMER
82049576	Granted	6745294	6/8/2001	6/1/2004	09/877539	US	Multi-Processor Computer System With Lock Driven Cache-Flushing System
82051319	Granted	6156972	4/30/1999	12/5/2000	09/302709	US	INNER BEZEL FOR A COMPUTER CHASSIS
82054505	Granted	6654854	6/25/1999	11/25/2003	09/344460	US	CACHING METHOD USING CACHE TAG AND CACHE DATA STORED IN DYNAMIC RAM ENBEDDED IN LOGIC CHIP
82058069	Granted	6442552	6/30/2000	8/27/2002	09/608124	US	Method And Apparatus For Implementing Three Tier Client Asynchronous Transparency
82062872	Granted	7113911	11/21/2001	9/26/2006	09/990768	US	Voice Communication Concerning A Local Entity
82066622	Granted	6272147	9/26/1997	8/7/2001	08/938119	US	DATA NETWORKS
82071116	Granted	6943683	1/21/2003	9/13/2005	10/349504	US	Location Device
82071737	Granted	6163881	3/20/1997	12/19/2000	08/821743	US	Method Of Monitoring The Operation Of A Computer
82077044	Granted	6163797	7/22/1998	12/19/2000	09/121206	US	APPLICATION DISPATCHER FOR SEAMLESS, SERVER APPLICATION SUPPORT FOR NETWORK TERMINALS ANS NON-NETWORK TERMINALS
82078352	Granted	6076105	8/1/1997	6/13/2000	08/905287	US	DISTRIBUTED RESOURCE AND PROJECT MANAGEMENT
82081724	Granted	6935419	2/20/2002	8/30/2005	10/080002	US	Heat Sink Apparatus With Air Duct
82082414	Granted	6670628	4/4/2002	12/30/2003	10/116507	US	LOW HEAT LOSS AND SMALL CONTACT AREA COMPOSITE ELECTRODE FOR A PHASE CHANGE MEDIA MEMORY DEVICE
82083602	Granted	6683322	3/1/2002	1/27/2004	10/086606	US	FLEXIBLE HYBRID MEMORY ELEMENT

PATENT
REEL: 038498 FRAME: 0706

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82085414	Granted	6670631	5/20/2002	12/30/2003	10/151856	US	LOW-FORWARD-VOLTAGE MOLECULAR RECTIFIER
82085912	Granted	7310343	12/20/2002	12/18/2007	10/327356	US	SYSTEMS AND METHODS FOR RAPID SELECTION OF DEVICES IN A TREE TOPOLOGY NETWORK
82086533	Granted	6621728	1/31/2002	9/16/2003	10/061925	US	METHOD OF WRITING A FOUR-TRANSISTOR MEMORY CELL ARRAY
82087406	Granted	6757179	8/29/2002	6/29/2004	10/230807	US	Circuit Board Support Assembly
82089470	Granted	6930884	6/11/2003	8/16/2005	10/458296	US	Land Grid Array Assembly Using A Compressive Load
82091528	Granted	6755242	8/20/2002	6/29/2004	10/225335	US	Active Heat Sink Structure With Directed Air Flow
82092965	Granted	7272806	2/19/2003	9/18/2007	10/368789	US	System And Method For Evaluating Power And Ground Vias In A Package Design
82093775	Granted	6680852	9/30/2002	1/20/2004	10/262220	US	Color-Coding Technique For Slot Selection In Bladed Systems
82096964	Granted	7275242	10/4/2002	9/25/2007	10/264681	US	System And Method For Optimizing A Program
82099706	Granted	7512701	1/16/2003	3/31/2009	10/345587	US	System And Method For Efficiently Replicating A File Among A Plurality Of Recipients In A Reliable Manner
82099766	Granted	7929022	9/15/2005	4/19/2011	11/226953	US	Method Of Producing A Transit Graph
82099835	Granted	6861876	3/25/2003	38412	10/397938	US	Pulse Evaluate Logic-Latch
82100585	Granted	6841985	7/29/2003	1/11/2005	10/630175	US	Method And Circuit For Measuring On-Chip, Cycle-To-Cycle Clock Jitter
82101578	Granted	7404112	8/6/2003	7/22/2008	10/635103	US	Data Selection Circuit For Performance Counter
82101584	Granted	7430696	8/6/2003	9/30/2008	10/635079	US	Zeroing Circuit For Performance Counter
82101893	Granted	7088130	10/3/2005	8/8/2006	11/242402	US	Partial Termination Voltage Current Shunting
82104761	Granted	7421500	1/10/2003	9/2/2008	10/340436	US	Grid Computing Control System
82105205	Granted	7320096	5/9/2003	1/15/2008	10/435153	US	System And Method For Testing Memory At Full Bandwidth
82105325	Granted	7392347	5/10/2003	6/24/2008	10/435140	US	Systems And Methods For Buffering Data Between A Coherency Cache Controller And Memory
82107140	Granted	6870394	1/31/2003	3/22/2005	10/355591	US	Controlled Input Molecular Crossbar Latch
82110695	Granted	6665811	8/24/2000	12/16/2003	09/645477	US	METHOD AND APPARATUS FOR CHECKING COMMUNICATIVE CONNECTIVITY BETWEEN PROCESSOR UNITS OF A DISTRIBUTED SYSTEM
82110821	Granted	6625745	3/17/2000	9/23/2003	09/528476	US	NETWORK COMPONENT FAILURE IDENTIFICATION WITH MINIMAL TESTING
82116437	Granted	5991518	1/28/1997	36487	08/790269	US	METHOD AND APPARATUS FOR SPLIT-BRAIN AVOIDANCE IN A MULTI-PROCESSOR SYSTEM
82116443	Granted	5884018	1/28/1997	3/16/1999	08/789257	US	METHOD AND APPARATUS FOR DISTRIBUTED AGREEMENT ON PROCESSOR MEMBERSHIP IN A MULTI-PROCESSOR SYSTEM
82117313	Granted	6456510	8/31/2000	37523	09/653133	US	REGULATED DC POWER SUPPLY
82117562	Granted	6615295	12/26/2000	9/2/2003	09/749111	US	RELAXED READ COMPLETION ORDERING IN A SYSTEM USING TRANSACTION ORDER QUEUE

PATENT
REEL: 038498 FRAME: 0707

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82117685	Granted	6751721	8/31/2000	6/15/2004	09/652165	US	BROADCAST INVALIDATE SCHEME
82117688	Granted	7076597	10/14/2003	7/11/2006	10/685039	US	Broadcast Invalidate Scheme
82117874	Granted	6654858	8/31/2000	37950	09/652324	US	METHOD FOR REDUCING DIRECTORY WRITES AND LATENCY IN A HIGH PERFORMANCE, DIRECTORY-BASED, COHERENCY PROTOCOL
82117877	Granted	6704817	8/31/2000	38055	09/652323	US	COMPUTER ARCHITECTURE AND SYSTEM FOR EFFICIENT MANAGEMENT OF BI-DIRECTIONAL BUS
82117937	Granted	7079615	11/20/2001	7/18/2006	09/988691	US	Expanded Comparator For Control Of Digital Delay Lines In A Delay Locked Loop Or Phase Locked Loop
82117940	Granted	7213087	8/31/2000	5/1/2007	09/651924	US	MECHANISM TO CONTROL THE ALLOCATION OF AN N-SOURCE SHARED BUFFER
82118066	Granted	6629257	8/31/2000	9/30/2003	09/652980	US	SYSTEM AND METHOD TO AUTOMATICALLY RESET AND INITIALIZE A CLOCKING SUBSYSTEM WITH RESET SIGNALING TECHINQUE
82118189	Granted	6633489	7/31/2001	10/14/2003	09/919295	US	DYNAMIC ISOLATING MOUNT FOR PROCESSOR PACKAGES
82118558	Granted	7421733	2/6/2002	9/2/2008	10/072840	US	SYSTEM AND METHOD FOR PROVIDING MULTI-CLASS PROCESSING OF LOGIN REQUESTS
82118564	Granted	7284067	2/20/2002	39371	10/079359	US	Method For Integrated Load Balancing Among Peer Servers
82119875	Granted	6718404	6/1/2001	4/6/2004	09/872721	US	DATA MIGRATION USING PARALLEL, DISTRIBUTED TABLE DRIVEN I/O MAPPING
82120184	Granted	6751710	6/11/2001	6/15/2004	09/878982	US	Scalable Multiprocessor System And Cache Coherence Method
82120187	Granted	6622218	1/7/2002	9/16/2003	10/042029	US	CACHE COHERENCE PROTOCOL ENGINE AND METHOD FOR EFFICIENT PROCESSING OF INTERLEAVED MEMORY TRANSACTIONS IN A MULTIPROCESSOR SYSTEM
82120436	Granted	6714411	12/31/2001	38076	10/038799	US	Computer Server Hot Plug Fan Tray Assembly And Method Of Fan Removal
82120496	Granted	6669423	12/14/2001	37985	10/017958	US	TOOLLESS THUMB SCREW WITH ADJUSTABLE HEIGHT KNOB
82120499	Granted	6856514	10/27/2003	38398	10/694121	US	TOOLLESS THUMB SCREW WITH ADJUSTABLE HEIGHT KNOB
82121681	Granted	6738274	9/9/2002	38125	10/237843	US	POWER SUPPLY WITH INTEGRATED BRIDGE AND BOOST CIRCUIT
82126928	Granted	5809280	10/13/1995	9/15/1998	08/542711	US	ADAPTIVE AHEAD FIFO WITH LRU REPLACEMENT
82128110	Granted	5793693	11/4/1996	8/11/1998	08/743501	US	CACHE MEMORY USING UNIQUE BURST COUNTER CIRCUITRY AND ASYNCHRONOUS INTERLEAVED RAM BANKS FOR ZERO WAIT STATE OPERATION
82129613	Granted	5974567	6/20/1997	10/26/1999	08/879912	US	GHOST PARTITION

PATENT
REEL: 038498 FRAME: 0708

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82129736	Granted	5860142	12/27/1996	1/12/1999	08/775023	US	METHOD AND APPARATUS FOR MAPPING THE MEMORY SYSTEM OF A COMPUTER FOR MAXIMIZING MEMORY USAGE
82129925	Granted	5886872	4/23/1997	3/23/1999	08/839066	US	PIVOTABLE SUPPORT AND HEAT SINK APPARATUS REMOVABLY CONNECTABLE WITHOUT TOOLS TO A COMPUTER PROCESSOR
82129928	Granted	5946189	10/5/1998	8/31/1999	09/167046	US	PIVOTABLE SUPPORT AND HEAT SINK APPARATUS REMOVABLY CONNECTABLE WITHOUT TOOLS TO A COMPUTER PROCESSOR
82130861	Granted	6067585	5/14/1998	36669	09/078815	US	AN ADAPTIVE INTERFACE CONTROLLER THAT CAN OPERATE WITH SEGMENTS OF DIFFERENT PROTOCOL AND TRANSMISSION RATES IN A SINGLE INTEGRATED DEVICE
82130924	Granted	5951661	8/15/1997	9/14/1999	08/911248	US	BUS PROTOCOL VIOLATION MONITOR SYSTEMS AND METHODS
82131926	Granted	6792490	11/16/2001	9/14/2004	09/991058	US	SYSTEM AND METHOD FOR HIDING PERIPHERAL DEVICES IN A COMPUTER SYSTEM
82132235	Granted	6717821	9/17/2002	4/6/2004	10/244876	US	INTEGRATED CIRCUIT DEVICE/CIRCUIT BOARD CONNECTION APPARATUS
82132358	Granted	6832247	6/15/1998	12/14/2004	09/098027	US	METHOD AND APPARATUS FOR AUTOMATIC MONITORING OF SIMPLE NETWORK MANAGEMENT PROTOCOL MANAGEABLE DEVICES
82132421	Granted	6449677	3/11/1999	9/10/2002	09/266356	US	METHOD AND APPARATUS FOR MULTIPLEXING AND DEMULTIPLEXING ADDRESSES OF REGISTERED PERIPHERAL INTERCONNECT APPARATUS
82132550	Granted	6742020	6/8/2000	5/25/2004	09/589778	US	SYSTEM AND METHOD FOR MANAGING DATA FLOW AND MEASURING SERVICE IN A STORAGE NETWORK
82133171	Granted	6189058	2/12/1999	2/13/2001	09/249032	US	CROSSBAR CONNECT SWITCH MECHANISM FOR HOT PLUGABILITY
82133174	Granted	6738882	11/30/1999	5/18/2004	09/451052	US	CONCURRENT MULTI-PROCESSOR MEMORY TESTING BEYOND 32-BIT ADDRESSES
82133294	Granted	6654816	5/31/2000	11/25/2003	09/583671	US	COMMUNICATION INTERFACE SYSTEMS FOR LOCALLY ANALYZING COMPUTERS
82133420	Granted	6754780	4/4/2000	6/22/2004	09/542969	US	PROVIDING DATA IN RESPONSE TO A READ COMMAND THAT MAINTAINS CACHE LINE ALIGNMENT
82134605	Granted	6212535	9/19/1996	4/3/2001	08/710696	US	BROWSER-BASED ELECTRONIC MESSAGING
82134668	Granted	6101543	10/25/1996	8/8/2000	08/738155	US	PSEUDO NETWORK ADAPTER FOR FRAME CAPTURE, ENCAPSULATION AND ENCRYPTION
82135103	Granted	6571324	6/26/1997	5/27/2003	08/883381	US	WARMSWAP OF FAILED MEMORY MODULES AND DATA RECONSTRUCTION IN A MIRRORED WRITEBACK CACHE SYSTEM

PATENT
REEL: 038498 FRAME: 0709

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82135235	Granted	5920721	6/11/1997	7/6/1999	08/873147	US	COMPILER GENERATING FUNCTIONALLY-ALIKE CODE SEQUENCE IN AN EXECUTABLE PROGRAM INTENDED FOR EXECUTION IN DIFFERENT RUN-TIME ENVIRONMENTS
82135790	Granted	5953503	10/29/1997	9/14/1999	08/959594	US	COMPRESSION PROTOCOL WITH MULTIPLE PRESET DICTIONARIES
82136108	Granted	5890959	3/31/1998	4/6/1999	09/052751	US	HIGH EFFICIENCY BLOWER SYSTEM WITH INTEGRAL BACKFLOW PREVENTOR
82164950	Granted	5764996	11/27/1995	6/9/1998	08/563221	US	A METHOD AND APPARATUS FOR OPTIMIZING PCI INTERRUPT BINDING AND ASSOCIATED LATENCY IN EXTENDED/BRIDGED PCI BUSSES
82165259	Granted	6108305	11/20/1998	8/22/2000	09/197137	US	METHOD AND APPARATUS FOR RELATIVE ERROR SCHEDULING IN A COMMUNICATIONS NETWORK USING DISCRETE RATES AND PROPORTIONAL RATE SCALING
82165325	Granted	5754860	7/23/1996	5/19/1998	08/685346	US	METHOD AND APPARATUS FOR SOFTWARE TESTING USING A DIFFERENTIAL TESTING TECHNIQUE TO TO TEST COMPILERS
82165949	Granted	6653869	2/15/2002	11/25/2003	10/077194	US	UNIVERSAL CMOS SINGLE INPUT, LOW SWING SENSE AMPLIFIER WITHOUT REFERENCE VOLTAGE
82166009	Granted	6738928	6/19/2000	5/18/2004	09/596460	US	METHOD AND EXPERT SYSTEM FOR ANALYSIS OF CRASH DUMPS
82166261	Granted	6804813	11/3/2000	10/12/2004	09/706176	US	SYSTEM AND METHOD FOR REMOTE AND LOCAL DIAGNOSIS USING AUTOMATICALLY IDENTIFIED SYMBOL LIBRARIES TO CREATE RECORD BASED REQUESTS WITH TAG LISTS OF DATA TO BE COLLECTED FROM AN OPERATING SYSTEM
82166321	Granted	6801986	8/20/2001	10/5/2004	09/933536	US	LIVELOCK PREVENTION BY DELAYING SURRENDER OF OWNERSHIP UPON INTERVENING OWERSHIP REQUEST DURING LOAD LOCKED/STORE CONDITIONAL ATOMIC MEMORY OPERATION
82169255	Granted	7580814	3/23/2004	8/25/2009	10/807701	US	Sequence Simulator
82169510	Granted	7578733	7/27/2004	8/25/2009	10/900862	US	Enclosures With Redundant Fans In Doors With Interlocks
82169630	Granted	7446024	6/21/2005	11/4/2008	11/158760	US	Method Of Forming Nanowires With A Narrow Diameter Distribution
82171007	Granted	7284168	1/26/2005	10/16/2007	11/043377	US	Method And System For Testing Ram Redundant Integrated Circuits
82171253	Granted	7290169	4/6/2004	10/30/2007	10/818975	US	Core-level Processor Lockstepping
82173188	Granted	7472398	11/17/2003	12/30/2008	10/715250	US	Method And System For Hosting An Application With A Facade Server
82174310	Granted	6816378	4/28/2003	11/9/2004	10/425548	US	Stack Up Assembly
82174313	Granted	6873530	7/13/2004	3/29/2005	10/890937	US	Stack Up Assembly

PATENT
REEL: 038498 FRAME: 0710

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82174316	Granted	6862186	7/13/2004	3/1/2005	10/890626	US	Stack Up Assembly
82177994	Granted	7321482	3/19/2004	1/22/2008	10/804624	US	Sub-circuit Voltage Manipulation
82178681	Granted	7273386	7/28/2004	9/25/2007	10/901338	US	Pin Shroud
82179311	Granted	8038451	11/18/2005	10/18/2011	11/283199	US	Multi-board Printed Circuit Assembly Having Aligned Connectors
82179554	Granted	7280364	11/24/2004	10/9/2007	10/996722	US	Apparatus And Method For Multiprocessor Circuit Board
82180685	Granted	7299380	1/27/2004	11/20/2007	10/766200	US	Testing A Receiver Connected To A Reference Voltage Signal
82181303	Granted	7412045	10/30/2003	8/12/2008	10/699365	US	Telecommunications Service Program
82183862	Granted	7409576	9/8/2004	8/5/2008	10/935941	US	High-availability Cluster With Proactive Maintenance
82184237	Granted	7432742	3/22/2004	10/7/2008	10/805979	US	System And Method For Detecting An Edge Of A Data Signal
82184681	Granted	7411440	7/12/2005	8/12/2008	11/180096	US	System Located In An Integrated Circuit For Reducing Calibration Components
82187675	Granted	7403204	8/23/2005	7/22/2008	11/209897	US	Method And Apparatus For Managing Changes In A Virtual Screen Buffer
82188296	Granted	7610526	1/24/2005	10/27/2009	11/041821	US	On-chip Circuitry For Bus Validation
82192109	Granted	7262964	4/27/2005	8/28/2007	11/115559	US	Airflow Control Baffle
82196042	Granted	7402531	12/9/2005	7/22/2008	11/297900	US	Method For Selectively Controlling Lengths Of Nanowires
82201658	Granted	6779187	2/7/2000	8/17/2004	09/499423	US	METHOD AND SYSTEM FOR DYNAMIC INTERCEPTION OF FUNCTION CALLS TO DYNAMIC LINK LIBRARIES INTO A WINDOWED OPERATING SYSTEM
82201907	Granted	7242199	4/21/2005	7/10/2007	11/112795	US	Active Interconnects And Control Points In Integrated Circuits
82203158	Granted	7251547	10/8/2004	7/31/2007	10/960574	US	Correlation Of Vent Tile Settings And Rack Temperatures
82208279	Granted	7738681	11/1/2005	6/15/2010	11/264202	US	Fingerprint And Physical Attribute Detection
82211270	Granted	8019871	7/27/2006	9/13/2011	11/494101	US	Federation Of Grids Using Rings Of Trust
82216139	Granted	8060388	2/10/2006	11/15/2011	11/351955	US	Resource Distribution
82216517	Granted	7525833	10/21/2005	4/28/2009	11/255722	US	Nanoscale Shift Register And Signal Demultiplexing Using Microscale/nanoscale Shift Registers
82226072	Granted	7817653	4/19/2007	10/19/2010	11/737360	US	PRIORITY SELECTION CIRCUIT
82240805	Granted	8043687	10/16/2008	10/25/2011	12/253158	US	Structure Including A Graphene Layer And Method For Forming The Same
82242488	Granted	7925927	10/30/2008	4/12/2011	12/262032	US	Simulator For Determining Data Loss In A Fault Tolerant System
82249355	Granted	8108557	1/22/2009	1/31/2012	12/357636	US	System And Method For Measuring Clock Skew On A Network
82251356	Granted	7797530	4/9/2001	9/14/2010	10/276334	US	Authentication And Encryption Method And Apparatus For A Wireless Local Access Network
82257851	Granted	6839706	8/6/2001	1/4/2005	09/682209	US	Block Data Storage Within A Computer Network

PATENT
REEL: 038498 FRAME: 0711

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82265774	Granted	6751272	2/11/1998	6/15/2004	09/022069	US	DYNAMIC ADJUSTMENT TO PRESERVE SIGNAL-TO-NOISE RATIO IN A QUADRATURE DETECTOR SYSTEM
82266461	Granted	5771235	5/1/1996	6/23/1998	08/641619	US	Scalable CSMA/CD Repeater
82266524	Granted	5801602	4/30/1996	9/1/1998	08/641375	US	Isolation And Signal Filter Transformer
82266776	Granted	5999535	5/28/1997	12/7/1999	08/864294	US	SHORT CUT FORWARDING OF LOCAL CELLS-IN-FRAMES TRAFFIC WITHIN LOCAL-AREA-NETWORKS
82267085	Granted	6147987	4/11/2000	11/14/2000	08/835758	US	Supporting Load Sharing Across Multiple Network Access Servers
82267151	Granted	6032232	5/29/1997	2/29/2000	08/865243	US	Multiported Memory Access System With Arbitration And A Source Burst Limiter For Blocking A Memory Access Request
82267397	Granted	6058110	5/13/1997	5/2/2000	08/855051	US	Bypassing Telephone Network With Dual Band Modem
82267649	Granted	6145109	12/12/1997	11/7/2000	08/989616	US	Forward Error Correction System For Packet Based Real Time Media
82268147	Granted	6577642	1/15/1999	6/10/2003	09/232762	US	METHOD AND SYSTEM FOR VIRTUAL NETWORK ADMINISTRATION WITH A DATA-OVER CABLE SYSTEM
82268585	Granted	6959082	7/10/2001	10/25/2005	09/902213	US	Method And System For Automatic Gain Control With Adaptive Table Lookup
82268834	Granted	6112258	3/19/1998	8/29/2000	09/044291	US	MULTI-CYCLE I/O ASIC COMMUNICATION SYSTEM HAVING AN ARBITER CIRCUIT CAPABLE FOR UPDATING ADDRESS TABLE ASSOCIATED WITH EACH I/O ASIC ON BUS
82268837	Granted	6226292	3/19/1998	5/1/2001	09/044285	US	FRAME REPLICATION IN A NETWORK SWITCH FOR MULTI-PORT FRAME FORWARDING
82269272	Granted	6151213	5/12/1999	11/21/2000	09/310868	US	Ventilation And Cooling Control System For Modular Platforms
82269395	Granted	6032218	5/28/1998	2/29/2000	09/086241	US	CONFIGURABLE WEIGHTED ROUND ROBIN ARBITER
82269833	Granted	6654461	9/14/1999	11/25/2003	09/395633	US	Synthesized Telephone Line Ring Signal Impedance Termination
82269893	Granted	6275933	4/30/1999	8/14/2001	09/303341	US	Security System For A Computerized Apparatus
82269956	Granted	6757276	11/24/1998	6/29/2004	09/198827	US	Touch Tone Replacement for Internet Telephony
82270334	Granted	6724889	11/1/1999	4/20/2004	09/431416	US	Method And System For Line Status Indicators Using Line Side Power
82270580	Granted	6934740	9/19/2000	8/23/2005	09/664667	US	Method and apparatus for sharing common data objects among multiple applications in a client device
82270586	Granted	6807182	1/31/2000	10/19/2004	09/494399	US	Stacked Network Devices Including A Protocol Engine And Distributed Trunk Ports And Method Of Operating Same
82270706	Granted	6751230	5/24/1999	6/15/2004	09/317775	US	UPSTREAM CHANNEL MULTICAST MEDIA ACCESS CONTROL (MAC) ADDRESS METHOD FOR DATA-OVER-CABLE SYSTEMS

PATENT
REEL: 038498 FRAME: 0712

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82270709	Granted	6707799	5/27/1999	3/16/2004	09/321314	US	DYNAMIC CONTROL PROTOCOL FOR FRAME RELAY FRAGMENTATION IN SUPPORT OF REAL-TIME APPLICATIONS SUCH AS VOIP AND VOFR
82270772	Granted	6643289	12/29/1999	11/4/2003	09/474687	US	Method Of MPOA Status Change Notification
82271207	Granted	6804224	2/29/2000	10/12/2004	09/515365	US	System and Method for Providing Telephone Service Having Private Branch Exchange Features in a Voice-Over-Data Telephony System
82271267	Granted	6804262	4/28/2000	10/12/2004	09/560087	US	Method and Apparatus for Channel Determination Through Power Measurements
82271273	Granted	6633565	6/29/1999	10/14/2003	09/342465	US	Apparatus For And Method Of Flow Switching In A Data Communications Network
82271831	Granted	6732281	5/31/2000	5/4/2004	09/583833	US	System And Method For Loading Data Onto Carriers
82271834	Granted	7222255	2/28/2001	5/22/2007	09/795730	US	System and Method For Network Performance Testing
82271954	Granted	6628754	1/5/2001	9/30/2003	09/755927	US	METHOD FOR RAPID NOISE REDUCTION FROM AN ASYMMETRIC DIGITAL SUBSCRIBER LINE MODEM
82271957	Granted	6765989	8/21/2000	7/20/2004	09/643069	US	METHOD FOR OPTIMIZING DOWNSTREAM DATA TRANSFER IN AN ASYMMETRIC DIGITAL SUBSCRIBER LINE MODEM
82272080	Granted	6700895	3/15/2000	3/2/2004	09/526649	US	Method and System for Computationally Efficient Calculation of Frame Loss Rates Over an Array of Virtual Buffers
82272146	Granted	6801527	5/1/2000	10/5/2004	09/562131	US	STACKABLE NETWORK UNIT INCLUDING REGISTERSFOR IDENTIFYING STACK MEMBERS AND TRUNK PORTS
82272209	Granted	6674794	2/4/2000	1/6/2004	09/498328	US	System and method for sampling phase adjustment by an analog modem
82272767	Granted	6694360	6/9/2000	2/17/2004	09/591568	US	Multi-Mode Network Interface Having Loadable Software Images
82272956	Granted	6754310	3/8/2001	6/22/2004	09/801953	US	Telephony Interface Device For Providing Diagnostic Information To A Telephone
82273205	Granted	6674844	6/18/2001	1/6/2004	09/883892	US	SYSTEM FOR PROVIDING MODEM ACCESS VIA AN IR INTERFACE IN A PBX
82273268	Granted	6963541	2/27/2001	11/8/2005	09/796585	US	UPSTREAM TRANSMISSION PROFILES FOR A DOCSIS OR DOCSIS-LIKE SYSTEM
82273331	Granted	6633230	7/2/2001	10/14/2003	09/897266	US	Apparatus and Method for Providing Improved Stress Thresholds in Network Management Systems
82273517	Granted	7289449	8/6/2001	10/30/2007	09/923848	US	DEVICE AND METHOD FOR MANAGING FAULT DETECTION AND FAULT ISOLATION IN VOICE AND DATA NETWORKS
82273769	Granted	7096274	2/12/2002	8/22/2006	10/074803	US	Optimum Frame Size Predictor For Wireless Local Area Network
82273889	Granted	6674652	1/29/2002	1/6/2004	10/060429	US	INTEGRATED SHIELD WRAP

PATENT
REEL: 038498 FRAME: 0713

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82275269	Granted	5926226	8/9/1996	7/20/1999	08/694949	US	A METHOD FOR ADJUSTING THE QUALITY OF A VIDEO CODER
82275332	Granted	5943338	8/19/1996	8/24/1999	08/699564	US	REDUNDANT ATM INTERCONNECT MECHANISM
82275455	Granted	5845243	2/3/1997	12/1/1998	08/794121	US	METHOD AND APPARATUS FOR WAVELET BASED DATA COMPRESSION HAVING ADAPTIVE BIT RATE CONTROL FOR COMPRESSION OF AUDIO INFORMATION
82578786	Granted	6677831	1/31/2001	1/13/2004	09/773111	US	Differential Impedance Control on Printed Circuit
82947636	Granted	7308451	12/14/2001	12/11/2007	10/017504	US	METHOD AND SYSTEM FOR GUIDED CLUSTER BASED PROCESSING PROTOTYPES
82020857	Granted	5841777	8/30/1996	11/24/1998	08/707812	US	SYSTEM AND METHOD FOR ACCOMMODATING ABR AND CBR TRAFFIC ON A SHARED COMMUNICATIONS CHANNEL
82027037	Granted	6275350	4/3/1998	8/14/2001	09/054648	US	Magnetic Head And Method For Compensating For Magnetic Tape Dimensional Instability
82045139	Granted	6175865	11/12/1998	1/16/2001	09/190695	US	Apparatus For Automatically Configuring Network Media Connections
82068803	Granted	6811080	2/25/2000	11/2/2004	09/937020	US	Intelligent Media Reader And Label Printer
81967103	Granted	7039638	4/27/2001	5/2/2006	09/844730	US	Distributed clustering system and method
81988013	Granted	7221474	7/27/2001	5/22/2007	09/917393	US	METHOD FOR VISUALIZING LARGE VOLUMES OF MULTIPLE-ATTRIBUTE DATA WITHOUT AGGREGATION USING A PIXEL BAR CHART
81996068	Granted	6845380	3/4/2002	1/18/2005	10/092094	US	METHOD AND SYSTEM OF VALUING TRANSFORMATION BETWEEN EXTENSIBLE MARKUP LANGUAGE (XML) DOCUMENTS
81999317	Granted	7350206	11/5/2001	3/25/2008	10/011378	US	Method To Reduce Provisioning Time In Shared Storage Systems By Preemptive Copying Of Images
82006556	Granted	7610211	6/21/2002	10/27/2009	10/177273	US	Investigating Business Processes
82006559	Granted	7565304	6/21/2002	7/21/2009	10/176505	US	IMPROVING BUSINESS PROCESSES BASED ON A PREDICTIVE MODEL
82006562	Granted	7822658	6/4/2002	10/26/2010	10/164194	US	Dynamic Prioritization Of Activities
82085411	Granted	7743127	10/10/2002	6/22/2010	10/269896	US	Resource Allocation In Data Centers Using Models
82086413	Granted	7739313	5/30/2003	6/15/2010	10/448899	US	Method And System For Finding Conjunctive Clusters
82091654	Granted	7415445	9/24/2002	8/19/2008	10/253041	US	Feature Selection For Two-class Classification Systems
82098899	Granted	7426525	8/8/2003	9/16/2008	10/637308	US	METHOD AND APPARATUS FOR IDENTIFYING AN OBJECT USING AN OBJECT DESCRIPTION LANGUAGE
82102208	Granted	7581008	11/12/2003	8/25/2009	10/706401	US	SYSTEM AND METHOD FOR ALLOCATING SERVER RESOURCES
82179935	Granted	8412671	8/13/2004	4/2/2013	10/918587	US	System And Method For Developing A Star Schema
82183301	Granted	7761455	3/31/2004	7/20/2010	10/814715	US	Loading Data From A Vertical Database Table Into A Horizontal Database Table
82194227	Granted	7325005	7/30/2004	1/29/2008	10/902924	US	System And Method For Category Discovery

PATENT
REEL: 038498 FRAME: 0714

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82206341	Granted	7716227	11/3/2005	5/11/2010	11/266162	US	Visually Representing Series Data Sets In Accordance With Importance Values
82206401	Granted	7505868	4/29/2005	3/17/2009	11/117989	US	Performing Quality Determination Of Data
82208900	Application		11/10/2005		11/272211	US	System And Method For Data Prediction
82212083	Granted	8359190	10/27/2006	1/22/2013	11/588690	US	Identifying Semantic Positions Of Portions Of A Text
82212086	Granted	7555427	1/31/2007	6/30/2009	11/700430	US	Providing A Topic List
82214204	Application		3/27/2006		11/389844	US	Systems And Methods For Desiging Business Services
82216142	Granted	7818272	7/31/2006	10/19/2010	11/496807	US	METHOD FOR DISCOVERY OF CLUSTERS OF OBJECTS IN AN ARBITRARY UNDIRECTED GRAPH USING A DIFFERENCE BETWEEN A FRACTION OF INTERNAL CONNECTIONS AND MAXIMUM FRACTION OF CONNECTIONS BY AN OUTSIDE OBJECT
82220699	Granted	8209695	7/28/2006	6/26/2012	11/495357	US	Reserving Resources In A Resource-on-demand System For User Desktop Utility Demand
82222133	Granted	7761444	10/5/2006	7/20/2010	11/543494	US	Identifying A Sequence Of Blocks Of Data To Retrieve Based On A Query
82222946	Granted	8799041	10/31/2006	8/5/2014	11/590110	US	Calculating An Amount Of Enterprise Resource Tobe Assigned Based On Received Parameters
82226690	Granted	8141090	4/24/2007	3/20/2012	11/789411	US	Automated Model-based Provisioning Of Resources
82226693	Granted	8065676	4/24/2007	11/22/2011	11/789412	US	Automated Provisioning Of Virtual Machines For A Virtual Machine Buffer Pool And Production Pool
82228820	Granted	7921410	4/9/2007	4/5/2011	11/784611	US	ANALYZING AND APPLICATION OR SERVICE LATENCY
82229441	Granted	7840556	7/31/2007	11/23/2010	11/831902	US	Managing Performance Of A Database Query
82233563	Granted	8108409	7/19/2007	1/31/2012	11/880390	US	Determining Top Combinations of Items To Present To A User (as amended)
82234994	Granted	7761466	7/30/2007	7/20/2010	11/830841	US	Hash-based Image Identification
82235246	Granted	8224739	7/30/2007	7/17/2012	11/830606	US	Allocating Goods To Bidders In Combinatorial Auctions
82242305	Published		5/16/2008		12/988368	US	Provisioning A Geographical Image For Retrieval
82243052	Published		9/30/2008		12/242637	US	Managing Execution Of Database Queries
82247360	Granted	8212817	10/31/2008	7/3/2012	12/290616	US	Spatial Temporal Visual Analysis Of Thermal Data
82248233	Granted	8904381	1/23/2009	12/2/2014	12/358995	US	User Defined Data Partitioning (UDP) - Grouping of Data Based on Computation Model
82248479	Granted	8122066	10/14/2008	2/21/2012	12/251320	US	Database Query Profiler
82248482	Granted	8180693	10/31/2008	5/15/2012	12/262519	US	PREDICTION OF FINANCIAL PERFORMANCE FOR A GIVEN PORTFOLIO OF MARKETING INVESTMENTS
82248485	Granted	8027897	10/31/2008	9/27/2011	12/262533	US	A System And Method For Optimizing Financial Performance Generated By Marketing Investments Under Budget Constraints
82249604	Published		4/30/2009		12/432951	US	Modeling Multi Dimensional Sequence Data Over Streams
82249607	Published		2/6/2009		12/367200	US	System And Method For Generating A User Profile

PATENT
REEL: 038498 FRAME: 0715

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82249610	Granted	8643646	3/16/2009	2/4/2014	12/381716	US	Constructing A Cell-based Cluster Of Data Records Of A Scatter Plot
82250417	Granted	8117220	4/30/2009	2/14/2012	12/433791	US	Artificial Record Added To A Database
82258094	Granted	8954893	11/6/2009	2/10/2015	12/614193	US	Visually Representing A Hieararchy Of Category Nodes
82258097	Granted	8725660	7/30/2009	5/13/2014	12/512243	US	Applying Non-linear Transformation Of Feature Values For Training A Classifier
82258100	Published		7/31/2009		12/533763	US	Method And System For Providing Website Content
82258343	Granted	8112408	7/28/2009	2/7/2012	12/510933	US	System And Method For Generating A User Defined Function Using A Shell
82258469	Granted	8898209	7/12/2009	11/25/2014	12/501446	US	Compression Of Non Dyadic Sensor Data Organized Within A Non Dyadic Hierarchy
82258532	Published		7/19/2009		12/505503	US	Execution Of Query Plans For Database Query Within Environments Of Databases
82258535	Granted	8099399	7/27/2009	1/17/2012	12/509704	US	Determining Whether Change In Workload Of Database System Has Occurred, And/or Whether Executing Current Workload Will Likely Result In Problem Developing With Database System
82259594	Granted	8311957	11/13/2009	11/13/2012	12/618181	US	Method And System For Developing A Classification Tool
82261280	Granted	8452717	4/27/2010	5/28/2013	12/768169	US	Presenting An Interactive Guidance Structure In A Collaborative Environment
82261283	Published		4/27/2010		12/768178	US	Template-based Technique For Making A Best Practices Framework Actionable
82263338	Granted	8954451	6/30/2010	2/10/2015	12/828240	US	Selecting Microblog Entries Based On Web Pages, Via Path Similarity Within Hierarchy Of Categories
82263593	Granted	8549004	9/30/2010	10/1/2013	12/895683	US	ESTIMATION OF UNIQUE DATABASE VALUES
82263650	Granted	9087142	10/30/2010	7/21/2015	12/916501	US	DETERMINING A SIMILARITY BETWEEN TREE RELATED STRUCTURES
82265336	Published		3/31/2011		13/077932	US	Optimizing workforce capacity and capability
82275887	Granted	8725781	1/30/2011	5/13/2014	13/017013	US	SENTIMENT CUBE
82275890	Granted	8949211	1/31/2011	2/3/2015	13/018412	US	OBJECTIVE-FUNCTION BASED SENTIMENT
82613061	Published		6/30/2011		13/173643	US	Method and System of Extracting Concepts and Relationships From Texts
82690147	Published		10/31/2011		13/285825	US	System and Method for Event Detection and Correlation from Moving Object Sensor Data
82775156	Published		10/15/2011		13/274315	US	OPTIMIZER
82819627	Published		10/20/2011		13/277322	US	ESTIMATING A USER'S INTEREST IN AN ITEM
82850178	Granted	9064245	2/22/2012	6/23/2015	13/402229	US	GENERATING A CALENDAR GRAPHICAL VISUALIZATION INCLUDING PIXELS REPRESENTING DATA RECORDS CONTAINING USER FEEDBACK

PATENT
REEL: 038498 FRAME: 0716

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0717

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82850198	Published		4/30/2012		13/459362	US	Managing Memory
82850218	Published		2/27/2012		13/406142	US	DETERMINING DISTANCE BETWEEN DATA SEQUENCES
82852903	Granted	8868973	7/2/2009	10/21/2014	13/379135	US	AUTOMATING DIAGNOSES OF COMPUTER-RELATED INCIDENTS
82929153	Published		3/16/2012		13/422139	US	An algorithms for extracting acronym-definition pairs with high recall rate using relevance feedback
82929199	Published		3/12/2012		13/418055	US	Page-Feed – A New Paradigm of Query Engines Collaboration
82965495	Published		4/24/2012		13/454420	US	Multi-Engine Executable Data-Flow Editor and Translator
83010733	Granted	9053439	9/28/2012	6/9/2015	13/631480	US	PREDICTING NEAR-FUTURE PHOTOVOLTAIC GENERATION
83013810	Granted	8972242	7/31/2012	3/3/2015	13/563647	US	VISUAL ANALYSIS OF PHRASE EXTRACTION FROM A CONTENT STREAM
83108377	Published		11/27/2012		13/686297	US	CAUSAL TOPIC MINER
83138908	Published		1/31/2013		13/756221	US	CLUSTERING SIGNIFIERS IN A SEMANTICS GRAPH
83139094	Granted	9063802	1/31/2013	6/23/2015	13/756126	US	EVENT DETERMINATION
83139117	Published		3/9/2013		13/791911	US	REWARD POPULATION GROUPING
83148414	Published		1/8/2013		13/736258	US	TEXT DETECTION IN IMAGES OF GRAPHICAL USER INTERFACES
83204627	Published		4/25/2013		13/870267	US	GENERATING A SUMMARY BASED ON READABILITY
83204664	Published		6/21/2013		13/923500	US	COMPUTING A MOMENT FOR CATEGORIZING A DOCUMENT
83209144	Published		3/15/2013		13/842318	US	UPDATING ROAD MAPS
83209685	Published		4/5/2013		13/857885	US	RECOVERING A FAILURE IN A DATA PROCESSING SYSTEM
83209805	Published		3/28/2013		13/852882	US	SYNONYM DETERMINATION AMONG N-GRAMS
83209871	Published		5/17/2013		13/896795	US	CONVERTING A HYBRID FLOW
83267830	Published		7/31/2013		13/955961	US	VISUAL ANALYTICS OF TEMPORAL-SPATIAL RELATIONSHIPS USING A HIERARCHICAL PIXEL CALENDAR TREE
83271740	Published		6/20/2013		13/922554	US	CONVERTING AN INPUT SCRIPT
83713442	Published		10/28/2013		14/065101	US	CLUSTERING AND ANALYSIS OF ELECTRONIC MEDICAL RECORDS
83818059	Published		2/26/2014		14/191420	US	PIXEL-BASED VISUALIZATIONS OF TIME SERIES DATA USING HELICES
83933622	Published		10/31/2011		14/354802	US	EMAIL TAGS
84014641	Application		8/5/2014		14/452135	US	SOCIAL ACTION AND SOCIAL TIE PREDICTION
84078900	Published		6/8/2012		14/397636	US	PATIENT INFORMATION INTERFACE
84273647	Application		12/7/2012		14/648950	US	CREATING MULTIMODAL OBJECTS OF USER RESPONSES TO MEDIA
90016894	Application		8/3/2015		29/535083	US	A DISPLAY SCREEN FOR DISPLAYING COLLABORATIVE RESOURCES ON A COMPUTING DEVICE
82063619	Granted	7437568	8/16/2001	10/14/2008	09/931526	US	Apparatus And Method For Establishing Trust

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0718

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82069802	Granted	7096204	10/6/2000	8/22/2006	10/110280	US	Electronic Commerce System
82097522	Granted	8069450	1/26/2004	11/29/2011	10/765827	US	Computer Operating System Data Management
82105889	Granted	7594006	4/27/2004	9/22/2009	10/833379	US	Trending Method And Apparatus For Resource Demand In A Computing Utility
82169195	Granted	7437758	10/31/2003	10/14/2008	10/697044	US	Propagation Of Viruses Through An Information Technology Network
82174130	Granted	7383306	7/31/2003	6/3/2008	10/632402	US	System And Method For Selectively Increasing Message Transaction Costs
82176872	Granted	8689000	5/21/2004	4/1/2014	10/557953	US	Use Of Certified Secrets In Communication
82191731	Granted	8589679	7/14/2005	11/19/2013	11/182527	US	Identifier-based Signcryption With Two Trusted Authorities
82203719	Granted	8274912	8/3/2005	9/25/2012	11/575397	US	Mapping Discovery For Virtual Network
82203842	Granted	8544002	10/28/2005	9/24/2013	11/718196	US	Virtual Computing Infrastructure
82204028	Granted	7685125	10/6/2005	3/23/2010	11/664466	US	Proving Relationships Between Data
82208216	Granted	8161558	4/25/2006	4/17/2012	11/411685	US	Network Management And Administration
82232876	Granted	8504733	7/31/2007	8/6/2013	11/831782	US	Subtree For An Aggregation System
82251419	Granted	9026803	11/30/2009	5/5/2015	12/627500	US	Computing Entities, Platforms And Methods Operable To Perform Operations Selectively Using Different Cryptographic Algorithms
82631733	Allowed		8/4/2009		13/057511	US	END-TO-END NETWORK ACCESS ANALYSIS
83138407	Published		1/31/2013		13/755195	US	SECURITY THREAT ANALYSIS
83969769	Published		2/22/2012		14/371610	US	COMPUTER INFRASTRUCTURE SECURITY MANAGEMENT
84255642	Application		5/15/2015		14/713617	US	DATA MANAGER
82136540	Granted	6226630	7/22/1998	5/1/2001	09/120780	US	METHOD AND APPARATUS FOR FILTERING INCOMING INFORMATION USING A SEARCH ENGINE AND STORED QUERIES DEFINING USER FOLDERS
82173314	Granted	7275068	12/19/2003	9/25/2007	10/741247	US	Discovering Communities-of-practice
82219511	Granted	7711657	6/26/2006	40302	11/476305	US	RESOURCE-RESERVATION PRICING STRUCTURES BASED ON EXPECTED ABILITY TO DELIVER
82263464	Granted	8332392	6/30/2010	12/11/2012	12/827152	US	SELECTION OF ITEMS FROM A FEED OF INFORMATION
82919355	Published		8/11/2009		13/384705	US	Online Search Based On Geography Tagged Recommendations
83930064	Published		12/20/2011		14/352359	US	ENABLING COLLABORATIVE REACTIONS TO IMAGES
84173799	Published		9/28/2012		14/431218	US	LOCATION BASED ADVERTISING
84200978	Application		9/27/2012		14/431209	US	SHARING CONTENT BETWEEN COLLOCATED MOBILE DEVICES IN AN AD-HOC PRIVATE SOCIAL GROUP
81972035	Granted	6865634	10/16/2003	3/8/2005	10/685416	US	METHOD AND APPARATUS FOR DEADLOCK PREVENTION IN A DISTRIBUTED SHARED MEMORY SYSTEM
81972038	Granted	6651193	4/29/2000	11/18/2003	09/562589	US	Method For Allowing Distributed High Performance Coherent Memory With Full Error Containment

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81999689	Granted	6662277	7/31/2001	12/9/2003	09/919309	US	Cache System With Groups Of Lines And With Coherency For Both Single Lines And Groups Of Lines
82000877	Granted	6735673	1/10/2002	5/11/2004	10/043789	US	Apparatus And Methods For Cache Line Compression
82006994	Granted	6874070	2/22/2002	3/29/2005	10/080440	US	System And Method For Memory Interleaving Using Cell Map With Entry Grouping For Higher-Way Interleaving
82017356	Granted	5689634	9/23/1996	11/18/1997	08/717646	US	THREE PURPOSE SHADOW REGISTER ATTACHED TO THE OUTPUT OF STORAGE DEVICES
82019042	Granted	5893161	11/12/1996	36256	08/747321	US	METHOD FOR ALLOCATING OWNERSHIP OF PORTIONS OF MEMORY IN A COHERENT MEMORY SYSTEM
82024850	Granted	5815432	7/10/1997	36067	08/891173	US	SINGLE-ENDED READ, DUAL-ENDED WRITE SCRAM CELL
82103267	Granted	7107493	1/21/2003	9/12/2006	10/348228	US	System And Method For Testing For Memory Errors In A Computer System
82106387	Granted	8661289	2/17/2006	2/25/2014	11/356559	US	Systems And Methods For CPU Repair
82117499	Granted	6711703	9/28/2001	3/23/2004	09/966891	US	Hard/soft Error Detection
82117691	Granted	6662265	8/31/2000	12/9/2003	09/652704	US	MECHANISM TO TRACK ALL OPEN PAGES IN A DRAM MEMORY SYSTEM
82122059	Granted	7035953	6/25/2002	4/25/2006	10/179001	US	Computer System Architecture With Hot Pluggable Main Memory Boards
82126988	Granted	5774680	12/11/1995	35976	08/570394	US	INTERFACING DIRECT MEMORY ACCESS DEVICES TO A NON-ISA BUS
82126991	Granted	6088517	10/14/1997	36718	08/950297	US	INTERFACING DIRECT MEMORY ACCESS DEVICES TO NON-ISA BUS
82129922	Granted	5940627	3/13/1997	8/17/1999	08/816350	US	USER SELECTABLE FEATURE SET FOR A FLASH ROM BASED PERIPHERAL
82131362	Granted	6167532	2/5/1998	12/26/2000	09/019178	US	AUTOMATIC SYSTEM RECOVERY
82131551	Granted	6249847	8/14/1998	6/19/2001	09/134057	US	COMPUTER SYSTEM WITH SYNCHRONOUS MEMORY ARBITER THAT PERMITS ASYNCHRONOUS MEMORY REQUESTS
82173062	Granted	7694174	2/17/2006	4/6/2010	11/357386	US	Systems And Methods For CPU Repair
82176623	Granted	7353336	3/9/2005	39539	11/075897	US	External Raid-enabling Cache
82179929	Granted	8145847	1/20/2004	3/27/2012	10/760640	US	Cache Coherency Protocol With Ordering Points
82197224	Granted	7546514	4/11/2005	6/9/2009	11/103130	US	Chip Correct And Fault Isolation In Computer Memory Systems
82261715	Granted	8418005	5/6/2010	41373	12/775307	US	Methods, Apparatus And Articles Of Manufacture To Diagnose Temperature Induced Memory Errors
82651109	Published		10/2/2008		13/122544	US	Cache Controller And Method Of Operation
82892428	Granted	8782452	7/27/2009	7/15/2014	13/383359	US	METHOD AND SYSTEM FOR POWER-EFFICIENT AND NON-SIGNAL-DEGRADING VOLTAGE REGULATION IN MEMORY SUBSYSTEMS
83982112	Published		4/11/2012		14/368474	US	PRIORITIZED CONFLICT HANDLING IN A SYSTEM

PATENT
REEL: 038498 FRAME: 0719

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90024617	Application		3/25/2013		14/767479	US	MEMORY DEVICE HAVING ERROR CORRECTION LOGIC
82071422	Granted	7945567	3/17/2003	5/17/2011	10/388601	US	STORING AND/OR RETRIEVING A DOCUMENT WITHIN A KNOWLEDGE BASE OR DOCUMENT REPOSITORY
82098896	Granted	8548882	9/26/2003	10/1/2013	10/672953	US	Determination Of A Bid Value Associated With A Selected Bidder
82220387	Granted	7779344	10/31/2006	8/17/2010	11/590188	US	System And Method For Creating A Value-based Stacked Bar Chart
82224509	Published		10/31/2006		11/590407	US	Methods For Planning Workforce Resources
82238684	Granted	8620834	6/4/2010	12/31/2013	12/794150	US	Forecasting Through Time Domain Analysis
82252043	Granted	6081810	2/3/1998	6/27/2000	09/018149	US	Report Database System
82254287	Granted	7085750	6/28/2002	38930	10/185998	US	Method And System For Mapping A Hypothesis To An Analytical Structure
82255100	Granted	8868405	1/27/2004	41933	10/766308	US	System And Method For Comparative Analysis Of Textual Documents
82255721	Granted	8554593	4/5/2004	41555	10/818008	US	SYSTEM AND METHOD FOR QUANTITATIVE ASSESSMENT OF ORGANIZATIONAL ADAPTABILITY
82257284	Granted	8082194	3/30/2007	40897	11/694734	US	Systems And Processes For Determining Costs Associated With Internal Software Development
82275644	Published		12/14/2010		12/968011	US	DESIGN OF WARRANTY BONUSES FOR PRODUCTS
82277639	Granted	7233955	7/8/2003	39252	10/614517	US	System And Method For Searching And Retrieving Information Regarding Related Goods And Services
82392197	Granted	8396204	10/6/2011	41345	13/267231	US	Call Center Resource Allocation
82572506	Published		4/15/2011		13/088161	US	Determining work placement preferences
82663137	Published		7/7/2011		13/178072	US	MAKING AN EXTENDED WARRANTY COVERAGE DECISION
82839690	Published		1/30/2012		13/361064	US	DOCUMENT CERTIFICATES
82929139	Published		8/17/2009		13/387331	US	SCORING A MATCHING BETWEEN A RESOURCE AND A JOB
82933965	Published		10/26/2009		13/386486	US	ADJUSTING A POINT PREDICTION THAT IS PART OF THE LONG-TERM PRODUCT LIFE CYCLE BASED FORECAST
83097202	Published		3/8/2010		13/581602	US	EVALUATION OF NEXT ACTIONS BY CUSTOMERS
83255613	Published		1/27/2011		13/883364	US	ELECTRONIC BOOK WITH CHANGEABLE PATHS
82077170	Granted	5974146	7/30/1997	36459	08/903102	US	Real Time Bank-centric Universal Payment System (bits)
82077293	Granted	6016484	4/26/1996	1/18/2000	08/639880	US	System, Method And Article Of Manufacture For Network Electronic Payment Instrument And Certification Of Payment And Credit Collection Utilizing A Payment
82077485	Granted	6119105	6/17/1996	36781	08/664446	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR INITIATION OF SOFTWARE DISTRIBUTION FROM A POINT OF CERTIFICATE CREATION UTILIZING AN EXTENSIBLE, FLEXIBLE ARCHITECTURE
82225010	Granted	7610177	10/27/2006	40113	11/588833	US	Manufacturing Execution System, Equipment Interface And Method Of Operating A Manufacturing Execution System

PATENT
REEL: 038498 FRAME: 0720

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82251791	Granted	6009408	4/1/1996	36522	08/625971	US	Automated Processing Of Travel Related Expenses
82252169	Granted	7302399	11/10/1999	39413	09/437278	US	METHOD AND SYSTEM FOR PROCESSING TRAVEL RESERVATION DATA
82252355	Granted	5781892	11/13/1995	35990	08/557508	US	Method And Apparatus For Interacting With A Computer Reservation System
82252730	Granted	5832463	3/28/1996	36102	08/623584	US	Automated System And Method For Checkless Check Transaction
82257038	Granted	7761062	10/26/2005	40379	11/259470	US	Automatically Managing Rental Vehicles
82257095	Granted	7653481	5/25/2006	40204	11/420303	US	In-transit Two-way Route Communication Between A Handheld Positioning Device And A Service Provider
82257410	Granted	7965199	4/2/2008	40715	12/033265	US	VEHICULAR SIGNATURING APPARATUS AND ASSOCIATED METHODOLOGY
82257413	Granted	8793048	12/26/2007	41849	11/964488	US	APPARATUS AND METHOD FOR ANALYZING MULTIPLE FAULT OCCURRENCE OF MULTIPLE-STATE DEVICE
82257596	Published		5/29/2008		12/154993	US	SYSTEM AND METHOD FOR MESSAGE-QUEUE-BASED SERVER TESTING
82962847	Granted	8838301	4/26/2012	41898	13/456784	US	TRAIN TRAFFIC ADVISOR SYSTEM AND METHOD THEREOF
82237679	Granted	8250536	12/24/2007	41142	11/963966	US	Analysis Of A Legacy Source Code Application
82251665	Granted	6670973	6/29/1999	37985	09/342481	US	System And Method For Representing The Information Technology Infrastructure Of An Organization
82252538	Granted	5805812	5/15/1996	36046	08/647552	US	Communication System For The Remote Control Of Equipment
82252601	Granted	5731991	5/3/1996	35878	08/642068	US	Software Product Evaluation
82252604	Granted	5893904	6/14/1996	36263	08/663961	US	System And Method For Brokering The Allocation Of An Item Of Business Property
82252667	Granted	5864660	11/20/1997	1/26/1999	08/975394	US	INTEGRATION TESTING
82253105	Granted	6993745	3/9/2000	1/31/2006	09/522319	US	Method And System For Modeling A Legacy Computer System
82254476	Granted	8386852	11/5/2002	2/26/2013	10/287794	US	Automated Recording And Replaying Of Software Regression Tests
82274705	Granted	7454499	11/7/2002	11/18/2008	10/291095	US	Active Network Defense System and Method
82274765	Granted	8125905	9/3/2009	2/28/2012	12/553664	US	System and Method for Processing Network Packet Flows
82274768	Granted	7024489	12/31/2001	4/4/2006	10/036584	US	System and Method for Disparate Physical Interface Conversion
82274888	Granted	8756337	7/31/2008	6/17/2014	12/183143	US	NETWORK PACKET INSPECTION FLOW MANAGEMENT
82274894	Granted	8307440	7/31/2008	11/6/2012	12/183394	US	NON-BLOCKING SHARED STATE IN AN INTRUSION PREVENTION SYSTEM
84141104	Application		9/10/2012		14/418920	US	USE OF PRIMARY AND SECONDARY CONNECTION TABLES
82579207	Granted	8056130	4/4/2008	11/8/2011	12/098322	US	Real Time Monitoring And Analysis Of Events From Multiple Network Security Devices

PATENT
REEL: 038498 FRAME: 0721

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82579250	Granted	8613083	4/25/2007	12/17/2013	11/740203	US	Method For Batching Events For Transmission By Software Agent
82579287	Granted	7984502	10/1/2008	7/19/2011	12/243838	US	Pattern Discovery In A Network System
82579327	Granted	7647632	1/4/2005	1/12/2010	11/029920	US	Object Reference In A System
82579430	Granted	8577829	9/13/2010	11/5/2013	12/881036	US	Extracting Information From Unstructured Data And Mapping The Information To A Structured Schema Using The Naïve Bayesian Probability Model
82579436	Published		11/9/2010		12/942890	US	Enabling Full-Text Searching Using A Structured Data Store
83099990	Granted	9118704	10/24/2012	42241	13/659677	US	HOMOGLYPH MONITORING
83138802	Granted	9003537	1/31/2013	42101	13/755831	US	CVSS Information Update by Analyzing Vulnerability Information
83696820	Application		6/30/2011		14/125785	US	SYSTEMS AND METHODS FOR MERGING PARTIALLY AGGREGATED QUERY RESULTS
90043618	Application		3/11/2013		14/773983	US	EVENT CORRELATION BASED ON CONFIDENCE FACTOR
82090529	Granted	7305508	10/22/2003	12/4/2007	10/692038	US	Semaphoring System Between System Firmware And Hardware Manipulation Subsystem
82130615	Granted	6249814	9/22/1997	6/19/2001	08/934636	US	Method And Apparatus For Identifying Devices On A Network
82136729	Granted	6199179	6/10/1998	3/6/2001	09/095266	US	METHOD AND APPARATUS FOR FAILURE RECOVERY IN A MULTI-PROCESSOR COMPUTER SYSTEM
82177625	Granted	7293168	12/15/2004	39392	11/014014	US	System And Method For Initially Configuring And Booting A Device Using A Device Identifier
82193606	Granted	7447889	4/20/2005	39756	11/110157	US	Method And Apparatus For Configuring A Computer System Utilizing A Read Only Memory Storing An Option File Containing Selectable Configuration Options And A Script File
82219889	Granted	8082543	8/17/2006	40897	11/465161	US	Methods And Systems For Arbitrating Error Handling And Firmware Updates
82260407	Granted	8601128	12/10/2009	41611	12/635580	US	Managing Hardware Resources For Soft Partitioning
82260593	Granted	8108724	12/17/2009	1/31/2012	12/641072	US	Field Replaceable Unit Failure Determination
82260653	Published		12/16/2009		12/639857	US	PHYSICAL CHASSIS AS A DIFFERENT NUMBER OF LOGICAL CHASSIS
82260656	Granted	8266356	12/10/2009	9/11/2012	12/635613	US	Interconnecting Computing Modules To Form An Integrated System
82962996	Allowed		4/25/2012		13/455467	US	AUTHENTICATION USING LIGHTS-OUT MANAGEMENT CREDENTIALS
82837191	Granted	8086598	2/6/2009	12/27/2011	12/367415	US	QUERY OPTIMIZER WITH SCHEMA CONVERSION
82850138	Published		5/14/2012		13/470762	US	SWITCHING ALGORITHMS DURING A RUN TIME COMPUTATION
82961645	Published		4/27/2012		13/458142	US	EVALUATION BY NESTED QUERIES

PATENT
REEL: 038498 FRAME: 0722

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82251854	Granted	6151609	8/16/1996	11/21/2000	08/699076	US	Remote Editor System
82256597	Granted	7426485	9/14/2004	9/16/2008	10/940425	US	System, Method, And Computer Program Product For Brokering Data Processing Service Licenses
82256600	Granted	8806061	9/14/2004	8/12/2014	10/940424	US	System, Method, And Computer Program Product For Automated Categorization Of Data Processing Services And Components
83991664	Published		4/30/2012		14/373780	US	AUTOMATED EVENT MANAGEMENT
82035590	Granted	6185329	10/13/1998	2/6/2001	09/170995	US	Automatic Caption Text Detection And Processing For Digital Images
82947616	Granted	6701362	2/23/2000	3/2/2004	09/510902	US	METHOD FOR CREATING USER PROFILES
82947656	Granted	8392175	5/21/2010	3/5/2013	12/785105	US	PHRASE-BASED DOCUMENT CLUSTERING WITH AUTOMATIC PHRASE EXTRACTION
82948094	Granted	5913205	3/28/1997	6/15/1999	08/825831	US	QUERY OPTIMIZATION FOR VISUAL INFORMATION RETRIEVAL SYSTEM
82948097	Granted	5911139	3/28/1997	6/8/1999	08/828360	US	A VISUAL IMAGE DATABASE SEARCH ENGINE WHICH ALLOWS FOR DIFFERENT SCHEMA
82948114	Granted	6360234	8/14/1998	3/19/2002	09/134497	US	VIDEO CATALOGER SYSTEM WITH SYNCHRONIZED ENCODERS
82948320	Granted	7031909	3/12/2002	4/18/2006	10/096048	US	METHOD AND SYSTEM FOR NAMING A CLUSTER OF WORDS AND PHRASES
83159715	Published		1/25/2013		13/750746	US	VIDEO-ENABLED ELECTRONIC COMMERCE
82116875	Granted	RE40530	10/20/2000	10/7/2008	09/694416	US	PUBLIC KEY CRYPTOGRAPHIC APPARATUS AND METHOD
82116878	Granted	7231040	10/26/1998	6/12/2007	09/328726	US	A MULTIPRIME RSA PUBLIC KEY CRYPTOSYSTEM
82209524	Granted	7549064	5/10/2005	6/16/2009	11/125458	US	Secure Circuit Assembly
82265216	Granted	8667244	3/21/2011	3/4/2014	13/052755	US	METHODS, SYSTEMS, AND APPARATUS TO PREVENT MEMORY IMPRINTING
84237832	Application		12/11/2012		14/650631	US	Data Operation in Shift Register Ring
84265695	Application		8/4/2015		14/817978	US	SECURE KEY COMPONENT AND PIN ENTRY
82173998	Granted	7310681	6/23/2003	39434	10/601956	US	System And Method For Modeling The Memory State Of A Streaming Media Server
82045331	Granted	6903366	10/31/2003	38510	10/699172	US	Chemically Synthesized And Assembled Electronic Devices
82050509	Granted	6891744	11/6/2002	5/10/2005	10/289703	US	Configurable Nanoscale Crossbar Electronic Circuits Made By Electrochemical Reaction
82086038	Granted	7786467	4/25/2005	8/31/2010	11/114307	US	Three-dimensional Nanoscale Crossbars
82094153	Granted	7359888	1/31/2003	4/15/2008	10/355801	US	Molecular-junction-nanowire-crossbar-based Neural Network
82099709	Granted	7292498	5/6/2005	39392	11/123551	US	Factored Nanoscale Multiplexer/demultiplexer Circuit For Interfacing Nanowires With Microscale And Sub-microscale Electronic Devices

PATENT
REEL: 038498 FRAME: 0723

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82214642	Granted	7530032	10/28/2005	5/5/2009	11/262354	US	NANOWIRE CROSSBAR IMPLEMENTATIONS OF LOGIC GATES USING CONFIGURABLE, TUNNELING RESISTOR JUNCTIONS
82226321	Granted	8766224	10/3/2006	7/1/2014	11/542986	US	Electrically Actuated Switch
82228007	Granted	7763880	2/14/2007	7/27/2010	11/706119	US	Multi-terminal Electrically Actuated Switch
82262090	Granted	8207520	4/2/2010	6/26/2012	12/753715	US	PROGRAMMABLE CROSSPOINT DEVICE WITH AN INTEGRAL DIODE
82264652	Granted	8331129	9/3/2010	12/11/2012	12/875423	US	MEMORY ARRAY WITH WRITE FEEDBACK
82264655	Granted	8766231	3/7/2011	7/1/2014	13/041617	US	Nanoscale Electronic Device with Barrier Layers
82631707	Published		3/17/2011		13/050349	US	SENSING RESISTIVE STATES
82747708	Granted	8445884	1/15/2009	5/21/2013	13/130830	US	MEMRISTOR WITH NANOSTRUCTURE ELECTRODES
82755119	Granted	8542071	10/25/2011	9/24/2013	13/280808	US	CHAOTIC OSCILLATOR-BASED RANDOM NUMBER GENERATION
82756384	Granted	8880782	10/20/2011	41947	13/277837	US	MEMORY ARRAY INCLUDING MULTI-STATE MEMORY DEVICES
82781044	Granted	8450711	1/26/2009	41422	13/142582	US	Semiconductor Memristor Devices
82837254	Granted	8373440	4/6/2009	41317	13/256233	US	THREE DIMENSIONAL MULTILAYER CIRCUIT
82837343	Published		6/25/2009		13/256249	US	SWITCHABLE JUNCTION WITH INTRINSIC DIODES WITH DIFFERENT SWITCHING THRESHOLDS
82852408	Granted	8710483	7/10/2009	41758	13/258499	US	MEMRISTIVE JUNCTION WITH INTRINSIC RECTIFIER
82853092	Published		8/14/2009		13/259177	US	MULTILAYER CIRCUIT
82930547	Granted	8542515	4/30/2010	41541	13/384872	US	CONNECTION AND ADDRESSING OF MULTI-PLANE CROSSPOINT DEVICES
82939893	Allowed		2/9/2010		13/387307	US	MEMORY RESISTOR ADJUSTMENT USING FEEDBACK CONTROL
82943866	Granted	8860519	10/15/2009	10/14/2014	13/388440	US	DEVICE HAVING INDUCTOR AND MEMCAPACITOR
82978184	Granted	8767449	6/28/2012	7/1/2014	13/536602	US	MEMORY DEVICES WITH IN-BIT CURRENT LIMITERS
83013690	Granted	9063864	7/16/2012	6/23/2015	13/549819	US	STORING DATA IN PERSISTENT HYBRID MEMORY
83137846	Granted	8780601	6/8/2010	7/15/2014	13/700224	US	THREE-DIMENSIONAL INTEGRATED CIRCUIT
83138633	Allowed		1/29/2013		13/753152	US	NEURISTOR-BASED RESERVOIR COMPUTING DEVICES
83174511	Granted	8792289	7/28/2010	7/29/2014	13/812050	US	REWRITING A MEMORY ARRAY
83778626	Allowed		6/24/2011		14/127873	US	HIGH-RELIABILITY HIGH-SPEED MEMRISTOR
83785516	Published		2/14/2014		14/181436	US	Electrically Actuated Switch
83927754	Granted	9018083	5/23/2014	4/28/2015	14/286513	US	Electrically Actuated Device And Method Of Controlling The Formation Of Dopants Therein
84078611	Published		7/31/2012		14/396406	US	NON-VOLATILE RESISTIVE MEMORY CELLS
90063532	Application		9/23/2015		14/862987	US	MEMRISTORS WITH ASYMMETRIC ELECTRODES
81998192	Granted	7647384	11/7/2002	40190	10/289308	US	Method And System For Managing Fragmented Information Packets In A Computer Network

PATENT
REEL: 038498 FRAME: 0724

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81998195	Granted	7483980	11/7/2002	1/27/2009	10/289288	US	Method And System For Managing Connections In A Computer Network
82083104	Granted	7043730	8/29/2002	5/9/2006	10/232783	US	System And Method For Demand Oriented Network Resource Management
82083284	Granted	7865715	2/28/2002	1/4/2011	10/084499	US	Increasing Peer Privacy
82172564	Granted	8514865	4/30/2004	8/20/2013	10/835404	US	Assigning Wan Links To Subflows Based On Wan Link Characteristics And Application Preferences
82190981	Granted	7827279	1/30/2004	11/2/2010	10/767285	US	Selecting Nodes Close To Another Node In A Network Using Location Information For The Nodes
82215455	Granted	8031617	7/28/2006	10/4/2011	11/495931	US	Fast Detection Of Path Failure For TCP
82225385	Granted	7788437	10/27/2006	8/31/2010	11/553970	US	Computer System With Network Interface Retransmit
82225442	Granted	8982709	1/31/2007	3/17/2015	11/700441	US	Slecting Service Nodes For An End-to-end Service Path From A Reduced Search Space
82229816	Application		6/22/2007		11/767151	US	Clustering Approach To Estimating A Network Metric For Nodes
82250045	Granted	8392737	6/17/2010	3/5/2013	12/817907	US	A System For Controlling Power Consumption Of A Network
82263155	Granted	8391174	7/13/2010	3/5/2013	12/834951	US	DATA PACKET ROUTING
82766420	Allowed		1/19/2009		13/145251	US	Load Balancing
83011941	Granted	8965398	9/26/2012	2/24/2015	13/627982	US	BLUETOOTH BEACON BASED LOCATION DETERMINATION
83863160	Published		10/11/2011		14/347394	US	Authenticating a User's Location in a Femtocell-Based Network
84076510	Application		6/29/2012		14/391230	US	Wireless Network with Coordinated Sectors to Mitigate Interference
84094658	Published		5/1/2012		14/398579	US	CONFIGURABLE CLOS NETWORK
90017149	Application		1/31/2013		14/763498	US	Generating a Hint for a Query
90051009	Application		3/7/2013		14/773238	US	CLOUD APPLICATION BANDWIDTH MODELING
82175498	Granted	7657137	1/11/2008	2/2/2010	12/008618	US	Photonic Interconnect System
82178495	Granted	7874739	1/22/2008	1/25/2011	12/017336	US	Optical Connections And Methods Of Forming Optical Connections
82178498	Granted	7269321	8/10/2004	39336	10/915613	US	SYSTEM AND METHOD OF CONFIGURING FIBER OPTIC COMMUNICATION CHANNELS BETWEEN ARRAYS OF EMITTERS AND DETECTORS
82198409	Granted	7405866	11/19/2004	7/29/2008	10/993616	US	Composite Material With Controllable Resonant Cells
82207400	Granted	8098971	9/19/2005	1/17/2012	11/230216	US	METHOD AND APPARATUS FOR ELECTROMAGNETIC RESONANCE USING NEGATIVE INDEX MATERIAL
82208273	Granted	7043104	6/14/2005	38846	11/152857	US	High Gain Optical Probe
82213148	Granted	7474810	5/15/2007	39819	11/701014	US	Method And Apparatus For Controlling Light Flux With Sub-micron Plasmon Waveguides
82213586	Granted	7545014	10/12/2006	6/9/2009	11/580385	US	Three-dimensional Resonant Cells With Tilt Up Fabrication

PATENT
REEL: 038498 FRAME: 0725

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82218641	Granted	7546000	9/7/2006	6/9/2009	11/517501	US	Scalable And Defect-tolerant Color-center-based Quantum Computer Architectures And Methods For Fabricating Color-center-based Quantum Computer Architectures
82220573	Granted	7482727	10/13/2006	1/27/2009	11/580641	US	Composite Material With Conductive Nanowires
82222697	Granted	8111440	4/26/2007	2/7/2012	11/789816	US	Structure And Method For Modulating Light
82223570	Granted	7719678	4/25/2007	5/18/2010	11/796011	US	Nanowire Configured To Couple Electromagnetic Radiation To Selected Guided Wave, Devices Using Same, And Methods Of Fabricating Same
82223573	Granted	7805030	3/8/2007	9/28/2010	11/716174	US	Optical Structures Including Selectively Positioned Color Centers, Photonic Chips Including Same, And Methods Of Fabricating Optical Structures
82223762	Granted	7591193	10/11/2006	9/22/2009	11/546598	US	Hot-wire Nano-anemometer
82226945	Granted	7804175	1/31/2007	9/28/2010	11/700034	US	SEMICONDUCTOR STRUCTURES INCLUDING CONDUCTIVE VIAS CONTINUOUSLY EXTENDING THERETHROUGH AND METHODS OF MAKING THE SAME
82227005	Granted	7778501	4/3/2007	40407	11/732549	US	Integrated Circuits Having Photonic Interconnect Layers And Methods For Fabricating Same
82230311	Granted	8054531	6/26/2007	11/8/2011	11/823336	US	MICRO-ELECTRO-MECHANICAL SYSTEMS AND PHOTONIC INTERCONNECTS EMPLOYING THE SAME
82230500	Granted	8150267	4/18/2007	41002	11/788268	US	OPTICAL INTERCONNECT
82230503	Granted	8929741	7/30/2007	1/6/2015	11/881943	US	Optical Interconnect
82232498	Granted	7499615	8/1/2007	39875	11/832559	US	System And Methods For Routing Optical Signals
82232810	Granted	7561320	10/26/2007	40008	11/977886	US	Modulation Of Electromagnetic Radiation With Electrically Controllable Composite Material
82233437	Granted	7925168	10/16/2007	4/12/2011	11/873325	US	OPTICAL INTERCONNECT SYSTEM PROVIDING COMMUNICATION BETWEEN COMPUTER SYSTEM COMPONENTS
82234559	Granted	7546012	10/23/2007	6/9/2009	11/876958	US	Waveguide System With Diffracting Structure
82234931	Granted	7561770	7/30/2007	7/14/2009	11/888016	US	Microresonator Systems And Methods Of Fabricating The Same
82234937	Granted	8175429	6/5/2009	41037	12/479589	US	MICRORESONATOR SYSTEMS AND METHODS OF FABRICATING THE SAME
82235000	Granted	8064739	10/23/2007	11/22/2011	11/977350	US	THREE-DIMENSIONAL DIE STACKS WITH INTER-DEVICE AND INTRA-DEVICE OPTICAL INTERCONNECT
82235249	Granted	7781853	7/26/2007	8/24/2010	11/881266	US	Plasmon-enhanced Electromagnetic-radiation-emitting Devices And Methods For Fabricating The Same
82236308	Granted	8320767	10/31/2008	11/27/2012	12/263407	US	FREE-SPACE PHOTONIC CONNECTION USING WAVELENGTH DIVISION MULTIPLEXING AND OPTICAL ANTENNA

PATENT
REEL: 038498 FRAME: 0726

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82239554	Granted	8571363	12/14/2007	10/29/2013	12/743769	US	RING RESONATOR WITH INDUCTANCE COUPLED HEAT TUNING
82239803	Granted	8129710	10/31/2008	3/6/2012	12/262451	US	Plasmon Enhanced Nanowire Light Emitting Diode
82239863	Granted	8983238	10/28/2008	3/17/2015	12/260016	US	Optical Resonator Tuning Using Piezoelectric Actuation
82240115	Granted	8059443	10/23/2007	11/15/2011	11/975963	US	Three-dimensional Memory Module Architectures
82242554	Granted	8472802	3/10/2008	41450	12/921763	US	Two-phase Optical Communication Methods And Optical Bus Systems For Implementing The Same
82247612	Granted	7907811	10/31/2008	3/15/2011	12/263400	US	Optical Waveguides And Methods Of Making The Same
82249481	Granted	7977622	2/9/2009	7/12/2011	12/322896	US	TUNING AN OPTICAL RESONATOR USING A FEEDBACK SIGNAL REPRESENTING AN AVERAGE DC BALANCED CODING
82258346	Granted	8130754	7/10/2009	3/6/2012	12/501000	US	ON-CHIP AND CHIP-TO-CHIP ROUTING USING A PROCESSOR ELEMENT/ROUTER COMBINATION
82261778	Granted	8452141	7/30/2010	5/28/2013	12/847885	US	OPTICAL WAVEGUIDE COUPLING DEVICE AND ASSOCIATED METHODS
82261784	Granted	8369664	7/30/2010	41310	12/847429	US	OPTICAL APPARATUS FOR FORMING A TUNABLE CAVITY
82261841	Granted	8576890	4/26/2010	41583	12/767474	US	VERTICAL-CAVITY SURFACE-EMITTING LASER
82262591	Granted	8705972	5/11/2010	4/22/2014	12/777500	US	ENERGY-EFFICIENT AND FAULT-TOLERANT RESONATOR-BASED MODULATION AND WAVELENGTH DIVISION MULTIPLEXING SYSTEMS
82263962	Granted	8437592	10/19/2010	5/7/2013	12/907662	US	OPTICAL CHANNEL TAP ASSEMBLY
82405250	Granted	8811778	5/6/2008	8/19/2014	12/991048	US	SYSTEMS AND METHODS FOR ROUTING OPTICAL SIGNALS
82405439	Granted	8724936	5/8/2008	5/13/2014	12/991638	US	Optical Polymorphic Computer Systems
82576771	Granted	8385000	4/15/2011	2/26/2013	13/087776	US	CONCENTRIC RING DIELECTRIC LENS
82595709	Granted	8873893	7/31/2008	10/28/2014	13/002884	US	Nano-wire Optical Block Devices For Amplifying, Modulating, And Detecting Optical Signals
82716639	Granted	8570762	10/31/2008	10/29/2013	13/124097	US	VARIABLY CONFIGURABLE COMPUTER BUSES
82755889	Granted	8948554	10/10/2011	2/3/2015	13/269659	US	SLOT-LINE WAVEGUIDE OPTICAL SWITCH SYSTEM AND METHOD
82755926	Granted	8817254	10/28/2011	8/26/2014	13/284536	US	ENTANGLEMENT PROCESS
82805249	Published		1/30/2009		13/145995	US	PLASMONIC LIGHT EMITTING DIODE
82806460	Granted	8660390	1/27/2009	2/25/2014	13/146473	US	REDUNDANT RING RESONATORS OF VARYING DIMENSIONS TO REDUCE RING RESONATOR TUNING REQUIREMENTS
82852202	Granted	8705911	5/6/2009	4/22/2014	13/258425	US	BUS-BASED SCALABLE OPTICAL FABRICS
82852242	Published		4/28/2009		13/258411	US	HOLOGRAPHIC MIRROR FOR OPTICAL INTERCONNECT SIGNAL ROUTING
82853072	Granted	8476647	9/25/2009	7/2/2013	13/259455	US	SILICON-GERMANIUM, QUANTUM-WELL, LIGHT-EMITTING DIODE
82854071	Published		7/31/2009		13/260064	US	BEAM DIRECTION SENSOR

PATENT
REEL: 038498 FRAME: 0727

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82931446	Granted	8678600	3/19/2010	3/25/2014	13/387010	US	OPTICAL STAR COUPLER
83099529	Granted	9082745	4/30/2010	7/14/2015	13/640290	US	CIRCUIT MODULE
83242125	Granted	8821033	10/29/2010	9/2/2014	13/881087	US	OPTICAL CONNECTOR
83254989	Granted	8805189	5/20/2013	41863	13/898111	US	Two-phase Optical Communication Methods And Optical Bus Systems For Implementing The Same
83278378	Published		1/21/2011		13/991853	US	WAVEFRONT SYNTHESIZER SYSTEMS
83821222	Published		8/31/2011		14/342098	US	MULTIMODE FIBER FOR MODULATABLE SOURCE
83852065	Published		9/30/2011		14/347366	US	OPTICAL POWER SPLITTER INCLUDING A ZIG-ZAG
83883386	Published		10/28/2011		14/353995	US	DEVICES INCLUDING A DIAMOND LAYER
83930310	Published		12/9/2011		14/357781	US	Optical Connections
83948796	Published		1/10/2012		14/364082	US	OPTICAL CONNECTORS
83959822	Published		1/31/2012		14/371537	US	COMBINATION UNDERFILL-DAM AND ELECTRICAL-INTERCONNECT STRUCTURE FOR AN OPTO-ELECTRONIC ENGINE
83987018	Granted	9130342	2/29/2012	9/8/2015	14/373385	US	UNIDIRECTIONAL RING LASERS
83992351	Allowed		4/11/2012		14/373457	US	ROUTING OPTICAL SIGNALS
84113029	Published		7/30/2012		14/416781	US	COMPACT PHOTONIC PLATFORMS
84121874	Published		1/14/2015		14/596790	US	OPTICAL DEVICES BASED ON NON-PERIODIC SUB-WAVELENGTH GRATINGS
90017936	Application		1/30/2013		14/763577	US	DIRECTIONAL GRATING-BASED BACKLIGHTING
82242926	Application		10/30/2008		12/261405	US	REFINING A CONSTRAINT OF A COMPUTER EXECUTABLE SERVICE
82837277	Published		10/28/2011		13/283981	US	PROVISIONING IAAS SERVICES
82901665	Granted	9158568	1/30/2012	42290	13/360956	US	INPUT/OUTPUT OPERATIONS AT A VIRTUAL BLOCK DEVICE OF A STORAGE SERVER
83184693	Published		7/30/2010		13/812585	US	INFORMATION TECHNOLOGY SERVICE MANAGMENT
84265114	Application		8/7/2015		14/820926	US	CLOUD MODELS BASED ON NETWORK DEFINITION DATA
82168508	Granted	5765024	4/26/1996	6/9/1998	08/639881	US	SYSTEM FOR REQUESTING ACCESS TO DMA CHANNEL HAVING ADDRESS NOT IN DMA REGISTERS BY REPLACING ADDRESS OF DMA REGISTER WITH ADDRESS OF REQUESTED DMA CHANNEL
82168511	Granted	5875351	6/9/1998	2/23/1999	09/094218	US	SYSTEM FOR REQUESTING ACCESS TO DMA CHANNEL HAVING ADDRESS NOT IN DMA REGISTERS BY REPLACING ADDRESS OF DMA REGISTER WITH ADDRESS OF REQUESTED DMA CHANNEL
82267835	Granted	6128194	8/5/1997	10/3/2000	08/906026	US	PC CARD WITH ELECTROMAGNETICAND THERMAL MANAGEMENT
84152843	Application		2/4/2015		14/613843	US	ENDPOINT POLICY CHANGE
82002872	Granted	6854065	7/30/2001	2/8/2005	09/918767	US	Loadshedding Uninterruptible Power Supply

PATENT
REEL: 038498 FRAME: 0728

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82026104	Granted	5793628	4/30/1997	8/11/1998	08/846445	US	MULTI-PHASE PULSE-WIDTH-MODULATION POWER CONVERTER
82093649	Granted	7049796	1/17/2003	5/23/2006	10/346971	US	Hot Swap Power Delivery Circuit
82098959	Granted	7437258	6/26/2003	39735	10/606713	US	Use Of I2C Programmable Clock Generator To Enable Frequency Variation Under BMC Control
82103579	Granted	7653827	2/11/2004	1/26/2010	10/777917	US	Power Distribution System Having Redundant Mixed Sources And Method
82127804	Granted	5675480	5/29/1996	10/7/1997	08/654863	US	MICROPROCESSOR CONTROL OF PARALLEL POWER SUPPLY SYSTEMS
82137167	Granted	6011679	9/30/1998	36529	09/163705	US	METHODS AND APPARATUS FOR CONTROLLING A POWER SUPPLY WITH IMPROVED TECHNIQUES FOR PROVIDING PROTECTION LIMITS
82172132	Granted	7102357	3/22/2004	9/5/2006	10/805942	US	Determination Of Worst Case Voltage In A Power Supply Loop
82174751	Granted	7379303	10/22/2003	39595	10/690789	US	Computing Device Module
82181744	Granted	7382624	10/22/2004	39602	10/971375	US	Power Supply Including Multiple AC Receptacles
82182431	Granted	7602625	1/26/2007	40099	11/627618	US	SYSTEMS AND METHODS FOR SEPARATION OF A FRONT END RECTIFIER POWER SYSTEM
82182929	Granted	7412614	4/29/2004	39672	10/836018	US	Power Management Using A Pre-determined Thermal Characteristic Of A Memory Module
82199909	Granted	7514816	5/19/2005	39910	11/133122	US	Output Current Threshold Adjustment For A Power Supply
82207091	Granted	7400067	10/31/2005	7/15/2008	11/264244	US	Operation Of A Redundant Power Supply Without Isolation Devices
82227629	Granted	7692910	3/29/2007	4/6/2010	11/729646	US	FAILURE DETECTION IN A VOLTAGE REGULATOR
82250732	Granted	7939967	6/25/2009	5/10/2011	12/491773	US	MULTIPLE POWER SUPPLY CONTROL
82251227	Granted	8312300	7/31/2009	11/13/2012	12/533890	US	Limiting Power In Redundant Power Supply Systems (as amended)
82260470	Granted	8533528	12/16/2009	9/10/2013	12/639801	US	Fault Tolerant Power Sequencer
82844854	Granted	9098276	9/21/2011	8/4/2015	13/237994	US	REDUNDANT POWER SUPPLY SYSTEMS AND METHODS
82891343	Granted	9116676	6/23/2009	8/25/2015	13/320947	US	Power Distribution To Computer System
82891366	Published		6/25/2009		13/320657	US	Systems And Methods For Delivering Power
83140720	Published		10/26/2010		13/808132	US	BACKUP POWER SUPPLY SYSTEMS AND METHODS
83747182	Allowed		7/20/2011		14/127950	US	POWER SUPPLY SYSTEM WITH DYNAMIC FILTERING
83996161	Application		4/20/2012		14/376134	US	OVERVOLTAGE PROTECTION SYSTEMS AND METHOD
84306422	Application		2/28/2013		14/764571	US	THREE-PHASE PARALLEL POWER CONVERTER LOAD ADJUSTMENT
81992138	Granted	6643128	7/13/2001	11/4/2003	09/904928	US	Method And System For Controlling A Cooling Fan Within A Computer System
81993389	Granted	7577862	3/30/2005	8/18/2009	11/095826	US	Self Adjusting Clocks In Computer Systems That Adjust In Response To Changes In Their Environment

PATENT
REEL: 038498 FRAME: 0729

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82005371	Granted	7096926	4/22/2004	8/29/2006	10/831059	US	Thermal Pouch Interface
82024040	Granted	6133631	5/30/1997	10/17/2000	08/866898	US	Semiconductor Package Lid With Internal Heat Pipe
82133669	Granted	6349035	9/29/2000	2/19/2002	09/675282	US	METHOD AND APPARATUS FOR TOOLESS MATING OF LIQUID COOLED COLD PLATE WITH TAPERED INTERPOSER HEAT SINK
82179869	Granted	7054721	1/15/2004	5/30/2006	10/759781	US	COMPUTER FAN EFFICIENCY FEEDBACK SYSTEM AND METHOD
82182869	Granted	7184268	1/10/2005	2/27/2007	11/033083	US	DYNAMICALLY ADAPTABLE ELECTRONICS COOLING FAN
82235993	Granted	8475246	9/25/2008	7/2/2013	12/237946	US	Airflow Damper That Accommodates A Device
82237745	Granted	7817430	6/12/2008	10/19/2010	12/138189	US	Airflow Adjustment In An Electronic Module Enclosure
82238246	Granted	8140196	5/14/2008	3/20/2012	12/153124	US	Method Of Controlling Temperature Of A Computer System
82238927	Granted	8144458	6/13/2008	3/27/2012	12/138622	US	Component Layout In An Enclosure
82238933	Granted	8117012	6/16/2008	2/14/2012	12/213146	US	Method For Determining Cooling Requirements Of A Computer System Enclosure
82853095	Published		1/26/2010		13/258994	US	Heat Sink With Multiple Vapor Chambers
83854687	Published		10/28/2011		14/350069	US	Fan Impeller with Multiple Blades Shaped and Disposed to Provide High Air-Power Efficiency
83995723	Published		2/9/2012		14/376124	US	HEAT DISSIPATING SYSTEM
83995740	Published		3/12/2012		14/376138	US	LIQUID TEMPERATURE CONTROL COOLING
84141854	Published		1/23/2015		14/604096	US	FLEXIBLE REDUNDANT COOLING FOR COMPUTER SYSTEMS
82275641	Published		2/25/2011		13/035680	US	DASHBOARD OBJECT VALIDATION
82048760	Granted	6236537	5/18/1999	5/22/2001	09/313889	US	Wear Resistant Magnetic Write Head
81957548	Granted	5748936	5/30/1996	5/5/1998	08/655655	US	METHOD AND SYSTEM FOR SUPPORTING SPECULATIVE EXECUTION USING A SPECULATIVE LOOK-ASIDE TABLE
81974156	Granted	6961796	7/26/2001	11/1/2005	09/915510	US	EXTENDABLE BUS INTERFACE
81974780	Granted	6829700	12/29/2000	12/7/2004	09/751327	US	Circuit And Method For Supporting Misaligned Accesses In The Presence Of Speculative Load Instructions
81981650	Granted	7236915	8/9/2001	6/26/2007	09/927156	US	TECHNIQUE AND INTERFACE FOR COMPUTER SYSTEM RESOURCE ASSIGNMENT
81986702	Granted	6525936	4/30/2001	2/25/2003	09/845545	US	AIR JET COOLING ARRANGEMENT FOR ELECTRONIC SYSTEMS
81986708	Granted	6926078	9/30/2003	8/9/2005	10/673149	US	Multi-Load Thermal Regulating System With Multiple Serial Evaporators
81989453	Granted	6931571	11/20/2001	8/16/2005	09/991575	US	Method And Apparatus For Handling Transient Memory Errors
81989456	Granted	7020800	1/24/2002	3/28/2006	10/057124	US	System And Method For Memory Failure Recovery Using Lockstep Processes
82079483	Granted	9009004	1/31/2002	4/14/2015	10/066051	US	Generating Interconnect Fabric Requirements

PATENT
REEL: 038498 FRAME: 0730

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82082729	Granted	6868682	1/16/2003	3/22/2005	10/345723	US	Agent Based Control Method And System For Energy Management
82088342	Granted	7228381	11/2/2004	6/5/2007	10/980649	US	STORAGE SYSTEM USING FAST STORAGE DEVICES FOR STORING REDUNDANT DATA
82090781	Granted	7400622	7/29/2003	7/15/2008	10/629474	US	METHOD AND APPARATUS FOR ALLOCATING A TRANSPORT INDENTIFIER FOR A NETWORK DATA CONNECTION
82093403	Granted	8315975	12/9/2002	11/20/2012	10/315583	US	Symbolic Wide-area File System And Method
82100084	Granted	7170745	4/30/2003	1/30/2007	10/425624	US	Electronics Rack Having An Angled Panel
82105697	Granted	6982570	10/30/2003	1/3/2006	10/698271	US	Reconfigurable Device
82120310	Granted	6816977	12/3/2001	11/9/2004	10/004718	US	POWER REDUCTION IN COMPUTING DEVICES USING MICRO-SLEEP INTERVALS
82136228	Granted	6148396	11/26/1997	11/14/2000	08/980170	US	APPARATUS FOR SAMPLING PATH HISTORY IN A PROCESSOR PIPELINE
82136357	Granted	6145056	6/8/1998	36837	09/093222	US	METHOD AND APPARATUS FOR CACHING THE RESULTS OF FUNCTION APPLICATIONS WITH DYNAMIC, FINE-GRAINED DEPENDENCIES
82170566	Granted	7051946	5/29/2003	5/30/2006	10/446854	US	AIR RE-CIRCULATION INDEX
82175189	Granted	7127625	9/4/2003	10/24/2006	10/654473	US	Application Management Based On Power Consumption
82176497	Granted	8117092	7/9/2003	40953	10/614856	US	Inventory Management Of Components
82176500	Granted	7194337	10/31/2003	3/20/2007	10/697692	US	Agent-based Operation Of A Robotic Device
82178993	Granted	7236896	9/30/2003	39259	10/673134	US	LOAD MANAGEMENT IN A POWER SYSTEM
82181996	Granted	8145731	12/17/2003	3/27/2012	10/738273	US	System And Method For Determining How Many Servers Of At Least One Server Configuration To Be Included At A Service Providers Site For Supporting An Expected Workload
82183367	Granted	7155318	11/5/2004	12/26/2006	10/981487	US	Air Conditioning Unit Control To Reduce Moisture Varying Operations
82184363	Granted	7266716	10/23/2003	9/4/2007	10/693743	US	METHOD AND RECOVERY OF DATA USING ERASURE CODED DATA FROM STRIPE BLOCKS
82185614	Granted	7877747	2/20/2004	1/25/2011	10/784065	US	Flexible Operating System Operable As Either Native Or As Virtualized
82185800	Granted	8365181	7/12/2004	41303	10/889598	US	Method And System For Guiding Scheduling Decisions In Clusters Of Computers Using Dynamic Job Profiling
82188488	Granted	7197433	4/9/2004	39168	10/820786	US	Workload Placement Among Data Centers Based On Thermal Efficiency
82194107	Granted	8364829	9/24/2004	41303	10/950025	US	System And Method For Ascribing Resource Consumption To Activity In A Causal Path Of A Node Distributed Computing System
82197662	Granted	7347058	10/21/2004	39532	10/970889	US	VENT FOR A DATA CENTER COOLING SYSTEM

PATENT
REEL: 038498 FRAME: 0731

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82197722	Granted	7584021	2/21/2007	40057	11/708831	US	Energy Efficient CRAC Unit Operation Using Heat Transfer Levels
82198166	Granted	7447920	8/31/2004	39756	10/929448	US	Workload Placement Based On Thermal Considerations
82204964	Granted	8626918	5/16/2005	41646	11/129987	US	Workload Allocation Based Upon Heat Re-circulation Causes
82206152	Granted	7779424	3/2/2005	8/17/2010	11/070674	US	System And Method For Attributing To A Corresponding Virtual Machine CPU Usage Of An Isolated Driver Domain In Which A Shared Resource's Device Driver Resides
82206155	Granted	7720771	6/24/2005	40316	11/165810	US	Method Of Dividing Past Computing Instances Into Predictable And Unpredictable Sets And Method Of Predicting Computing Value
82208588	Granted	8230059	11/8/2005	41114	11/270137	US	Method Of Monitoring Resource Usage In Computing Environment
82208774	Granted	8732368	2/17/2005	41779	11/061959	US	Conjoined-core Chip Multiprocessor Control System
82212644	Granted	7349828	2/15/2006	39532	11/354446	US	Estimating An Electronic Device Condition
82212647	Granted	7647516	9/22/2005	40190	11/232526	US	Power Consumption Management Among Compute Nodes
82214828	Granted	8903888	10/27/2006	41975	11/588683	US	Retrieving Data Of A Virtual Machine Based On Demand To Migrate The Virtual Machine Between Physical Machines
82214831	Granted	9092250	10/27/2006	42213	11/588691	US	Selecting One Of Plural Layouts Of Virtual Machines On Physical Machines
82215146	Granted	8990270	8/3/2006	42087	11/498344	US	Protocol Virtualization For A Network File System
82223384	Granted	7872502	7/12/2006	40561	11/484961	US	Defect-and-failure-tolerant Demultiplexer Using Series Replication And Error-control Encoding
82224512	Granted	7877167	12/26/2006	1/25/2011	11/645400	US	Reducing Vibration In An Electronic System
82225445	Granted	8683000	10/27/2006	3/25/2014	11/553976	US	Virtual Network Interface System With Memory Management
82229003	Granted	8249841	1/29/2007	8/21/2012	11/699402	US	Computerized Tool For Assessing Conditions In A Room
82229189	Granted	7615857	2/14/2007	40127	11/706742	US	Modular Three-dimensional Chip Multiprocessor
82229192	Granted	7811865	10/7/2009	10/12/2010	12/575070	US	METHOD OF FORMING A PACKAGED CHIP MULTIPROCESSOR
82229813	Granted	7685323	7/31/2007	3/23/2010	11/830954	US	Automatic Configuration Of Devices In A Network
82230125	Granted	8185913	7/31/2007	5/22/2012	11/888343	US	Manageability Platform In An Unified System
82234061	Granted	8028743	10/10/2008	10/4/2011	12/249568	US	Passive Cooling In Response To Ambient Environmental Properties
82235057	Granted	8335434	10/23/2008	12/18/2012	12/682918	US	All Optical Fast Distributed Arbitration In A Computer System Device
82239869	Granted	8281151	10/1/2008	10/2/2012	12/243134	US	Auditor Assisted Extraction And Verification Of Client Data Returned From A Storage Provided While Hiding Client Data From The Auditor
82241303	Granted	8626889	2/22/2008	1/7/2014	12/864206	US	Detecting Anomalies In A Sensor Networked Environment

PATENT
REEL: 038498 FRAME: 0732

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82242866	Granted	8533478	10/24/2008	9/10/2013	12/258273	US	System For And Method Of Writing And Reading Redundant Data
82244612	Granted	8145455	9/30/2008	3/27/2012	12/241874	US	Predicting Resource Usage Of An Application In A Virtual Environment
82244615	Granted	8131519	9/30/2008	3/6/2012	12/241913	US	Improving Accuracy In A Prediction Of Resource Usage Of An Application In A Virual Environment
82246610	Granted	9009061	4/27/2009	4/14/2015	12/430303	US	COOLING RESOURCE CAPACITY ALLOCATION BASED ON OPTIMIZATION OF COST FUNCTION WITH LAGRANGE MULTIPLIERS (as amended)
82247486	Granted	8255522	3/6/2009	8/28/2012	12/399488	US	Event Detection From Attributes Read By Entities
82248605	Granted	8990801	1/30/2009	3/24/2015	12/362876	US	Server Switch Integration In A Virtualized System
82249292	Granted	8355828	3/13/2009	1/15/2013	12/404019	US	Determining Optimal Settings For Resource Actuators
82249478	Granted	8907462	2/5/2009	12/9/2014	12/366234	US	Integrated Circuit Package
82250981	Granted	8589370	7/16/2009	11/19/2013	13/382094	US	Acronym Extraction
82258475	Granted	8856247	8/18/2009	10/7/2014	13/258466	US	Communicating Electronic Mail
82258910	Granted	8335749	1/28/2010	12/18/2012	12/695788	US	GENERATING A SET OF ATOMS
82259030	Granted	8620843	1/29/2010	12/31/2013	12/697198	US	PATTERN RECOGNITION USING ACTIVE MEDIA
82259531	Granted	8447569	9/15/2009	5/21/2013	12/560278	US	Determining Sustainability Of A Data Center
82259654	Published		1/14/2010		12/687361	US	SCRUBBING PROCEDURE FOR A DATA STORAGE SYSTEM
82261157	Granted	8627143	7/12/2010	41646	12/834603	US	Dynamically Modeling And Selecting A Checkpoint Scheme Based Upon An Application Workload
82261466	Granted	8727843	7/2/2010	41779	12/829715	US	Self-powered Fluid Control Apparatus
82261781	Granted	8441620	4/5/2010	41408	12/754027	US	DETERMINING DISTANCE BETWEEN NODES
82263341	Granted	8392628	7/16/2010	41338	12/838256	US	Sharing Memory Spaces For Access By Hardware And Software In A Virtual Machine Environment
82264214	Published		10/29/2010		12/916292	US	GENERATING A RESOURCE MANAGEMENT PLAN FOR AN INFRASTRUCTURE
82275824	Granted	8725868	5/18/2011	5/13/2014	13/110539	US	INTERACTIVE SERVICE MANAGEMENT
82573379	Published		6/17/2008		12/999615	US	Infrastructure System Management Based Upon Evaluated Reliability
82595729	Published		6/17/2011		13/162946	US	METHOD AND SYSTEM OF ORGANIZING A HETEROGENEOUS MEMORY ARCHITECTURE
82618414	Granted	8375012	8/10/2011	2/12/2013	13/206759	US	Computer Indexes with Multiple Representations
82635852	Granted	8561418	1/31/2011	10/22/2013	13/018082	US	Refrigeration System With Parallel Evaporators And Variable Speed Compressor
82670296	Granted	9053438	7/24/2011	6/9/2015	13/189531	US	ENERGY CONSUMPTION ANALYSIS USING NODE SIMILARITY
82692039	Granted	8938169	10/31/2008	1/20/2015	13/126747	US	Prioritized Optical Arbritration Systems And Methods
82753556	Granted	9146867	10/31/2011	9/29/2015	13/285735	US	METHODS AND APPARATUS TO ACCESS MEMORY USING RUNTIME CHARACTERISTICS (as amended)

PATENT
REEL: 038498 FRAME: 0733

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82840838	Published		3/13/2009		13/256380	US	Determining Status Assignments That Optimize Entity Utilization And Resource Power Consumption
82852385	Granted	8600108	1/25/2010	12/3/2013	13/258495	US	Data Processing System And Method
82853132	Published		2/25/2010		13/259249	US	Optimization Method And Apparatus
82906179	Published		1/9/2012		13/346052	US	System And Method For Determining How Many Servers Of At Least One Server Configuration To Be Included At A Service Providers Site For Supporting An Expected Workload
82925927	Granted	8938589	1/28/2010	42024	13/386396	US	Interface Methods And Apparatus For Memory Devices
82929800	Granted	8924645	3/7/2011	42003	13/387718	US	DATA STORAGE APPARATUS AND METHODS
82981808	Published		6/18/2012		13/525820	US	DETERMINING AN ALLOCATION OF RESOURCES TO A PROGRAM HAVING CONCURRENT JOBS
82996730	Published		7/31/2012		13/563153	US	DETERMINING A NUMBER OF STORAGE DEVICES TO BACKUP OBJECTS IN VIEW OF QUALITY OF SERVICE CONSIDERATIONS
83108878	Granted	9053024	11/30/2012	42164	13/690353	US	TRANSACTIONS AND FAILURE
83140949	Granted	9152469	1/28/2013	10/6/2015	13/752229	US	OPTIMIZING EXECUTION AND RESOURCE USAGE IN LARGE SCALE COMPUTING
83206041	Published		5/24/2013		13/902366	US	MULTI-LEVEL CACHE TRACKING TABLE
83209848	Published		4/30/2013		13/874272	US	POWER INFRASTRUCTURE SIZING AND WORKLOAD MANAGEMENT
83209894	Allowed		5/30/2013		13/905235	US	PERSISTENT MEMORY GARBAGE COLLECTION
83680936	Published		3/16/2011		14/005193	US	SYSTEMS AND METHODS FOR FINE GRANULARITY MEMORY SPARING
83789137	Published		9/14/2011		14/343010	US	IMPARTING DURABILITY TO A TRANSACTIONAL MEMORY SYSTEM
84028830	Published		3/2/2012		14/381854	US	SHIFTABLE MEMORY DEFRAGMENTATION
84077675	Published		5/31/2012		14/396327	US	LOCAL ERROR DETECTION AND GLOBAL ERROR CORRECTION
84080855	Published		4/30/2012		14/396321	US	Determining Virtual Machine Placement
84118250	Published		6/28/2012		14/408512	US	Multi-Level Cell Memory
84137065	Published		7/31/2012		14/417233	US	SYSTEMS AND METHODS FOR CONTROLLING ACCESS TO A SHARED DATA STRUCTURE WITH READER-WRITER LOCKS USING MULTIPLE SUB-LOCKS
84201018	Published		9/28/2012		14/431187	US	System and Method for Dynamically Selecting Between Memory Error Detection and Error Correction
84223036	Application		4/22/2015		14/437684	US	Selective Error Correcting Code and Memory Access Granularity Switching

PATENT
REEL: 038498 FRAME: 0734

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0735

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84289568	Application		6/18/2015		14/743424	US	Selecting One Of Plural Layouts Of Virtual Machines On Physical Machines
84304135	Application		1/9/2013		14/759658	US	Characterizing Risks in Resource Distribution Systems
82049567	Granted	6484275	11/26/1999	11/19/2002	09/449793	US	System And Method For Interfacing Data With A Test Access Port Of A Processor
82050506	Granted	6518156	4/25/2000	2/11/2003	09/558955	US	Configurable Nanoscale Crossbar Electronic Circuits Made By Electrochemical Reaction
82051316	Granted	6276769	4/30/1999	8/21/2001	09/302380	US	INNER WINDOW FOR A BEZEL OR HOUSING ASSEMBLY
82055057	Granted	6671802	4/13/2000	12/30/2003	09/549140	US	PERFORMANCE OPTIMIZATION OF COMPUTER SYSTEM BY DYNAMICALLY AND IMMEDIATELY UPDATING A CONFIGURATION SETTING BASED ON DETECTED CHANGE IN PREFERRED USE
82058678	Granted	6662250	2/25/2000	12/9/2003	09/512786	US	OPTIMIZED ROUTING STRATEGY FOR MULTIPLE SYNCHRONOUS BUS GROUPS
82058996	Granted	6636928	2/18/2000	10/21/2003	09/507205	US	WRITE POSTING WITH GLOBAL ORDERING IN MULTI-PATH SYSTEMS
82067237	Granted	6438691	3/27/1997	8/20/2002	09/155596	US	Transmitting Messages Over A Network
82071539	Granted	5764761	5/7/1996	6/9/1998	08/646165	US	Electronic Assembly With Integrated Circuit Devices Including Lock Circuitry
82080095	Granted	7302020	5/20/2002	11/27/2007	10/151572	US	Encoded Multi-access Bus System And Method
82080344	Granted	7363459	10/31/2002	4/22/2008	10/284844	US	System And Method Of Optimizing Memory Usage With Data Lifetimes
82082534	Granted	6717215	6/21/2002	4/6/2004	10/177240	US	MEMORY STRUCTURES
82082846	Granted	7349917	10/1/2002	3/25/2008	10/262742	US	Hierarchical Categorization Method And System With Automatic Local Selection Of Classifiers
82083221	Granted	6646341	2/20/2002	11/11/2003	10/080010	US	HEAT SINK APPARATUS UTILIZING THE HEAT SINK SHROUD TO DISSIPATE HEAT
82085714	Granted	6809570	1/21/2003	10/26/2004	10/347778	US	Clock Gater Circuit
82085900	Granted	7313101	12/20/2002	12/25/2007	10/327335	US	Need-based Filtering For Rapid Selection Of Devices In A Tree Topology Network
82088336	Granted	6810361	6/19/2002	10/26/2004	10/176423	US	Estimating Utilization Of An Electronic System Component
82089713	Granted	6791184	7/23/2002	9/14/2004	10/202416	US	SUPPORT ASSEMBLY FOR AN INTEGRATED CIRCUIT PACKAGE HAVING SOLDER COLUMNS
82090145	Granted	7222121	11/21/2002	5/22/2007	10/302182	US	PLATFORM AND METHOD FOR MONITORING AND ANALYZING DATA
82094144	Granted	7212960	2/13/2003	5/1/2007	10/365808	US	Computer Program Product And Method Of Simulating Circuits Using A Balanced, Lossy, Transmission Line Circuit Model
82095581	Granted	6819272	11/6/2002	11/16/2004	10/289752	US	System, Method And Computer Readable Medium For Compressing A Data Sequence For Partial Decompressing

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82095956	Granted	6747872	2/28/2003	6/8/2004	10/375003	US	Pressure Control Of Cooling Fluid Within A Plenum
82098641	Granted	7493226	6/26/2003	2/17/2009	10/606714	US	Method And Construct For Enabling Programmable, Integrated System Margin Testing
82098887	Granted	7581187	8/7/2003	8/25/2009	10/636082	US	Reuseable High Level Graphical User Interface Template
82100327	Granted	7365574	8/19/2005	4/29/2008	11/207635	US	General Purpose Delay Logic
82101572	Granted	7424397	8/6/2003	9/9/2008	10/635083	US	General Purpose Performance Counter
82101695	Granted	7313731	11/3/2003	12/25/2007	10/700289	US	Systems And Methods For Identifying Erroneous Transactions
82102382	Granted	6717443	11/4/2002	4/6/2004	10/287308	US	Method And Apparatus For Mitigating The Hysteresis Effect In A Sensing Circuit
82103255	Granted	7281171	1/14/2003	10/9/2007	10/341846	US	System And Method Of Checking A Computer System For Proper Operation
82103258	Granted	7299331	1/21/2003	11/20/2007	10/348181	US	METHOD AND APPARATUS FOR ADDING MAIN MEMORY IN COMPUTER SYSTEMS OPERATING WITH MIRRORED MAIN MEMORY
82103942	Granted	6940288	6/4/2003	9/6/2005	10/453595	US	Apparatus And Method For Monitoring And Predicting Failures In System Interconnect
82104011	Granted	6879270	8/20/2003	4/12/2005	10/644282	US	Data Compression In Multiprocessor Computers
82105319	Granted	7401269	5/10/2003	7/15/2008	10/435147	US	Systems And Methods For Scripting Data Errors To Facilitate Verification Of Error Detection Or Correction Code Functionality
82106567	Granted	7184933	2/28/2003	2/27/2007	10/376533	US	Performance Estimation Tool For Data Storage Systems
82110374	Granted	6115826	9/15/1998	9/5/2000	09/153056	US	INTERVAL -TIMING FACILITY USING OVERBUILT HIERARCHICAL TIMING WHEELS
82110752	Granted	6671704	3/11/1999	12/30/2003	09/267032	US	METHOD AND APPARATUS FOR HANDLING FAILURES OF RESOURCE MANAGERS IN A CLUSTERED ENVIRONMENT
82116554	Granted	6625610	1/20/2000	9/23/2003	09/488045	US	METHOD AND APPARATUS FOR ACCESSING TRANSACTION SERVICES USING OBJECT LINKING AND EMBEDDING
82117553	Granted	6711695	1/26/2001	3/23/2004	09/770590	US	PECL VOLTAGE DIMM WITH REMOTE MULTI-MODULE ETCH SKEW COMPENSATION
82117616	Granted	6874103	11/13/2001	3/29/2005	10/013748	US	ADAPTER-BASED RECOVERY SERVER OPTION
82118051	Granted	6832282	7/1/2003	12/14/2004	10/611569	US	SYSTEM AND METHOD FOR PROVIDING FORWARD PROGRESS AND AVOIDING STARVATION AND LIVELOCK IN A MULTIPROCESSOR COMPUTER SYSTEM
82118243	Granted	6931626	1/17/2001	8/16/2005	09/764526	US	METHOD AND APPARATUS FOR VERSIONING STATICALLY BOUND FILES
82118681	Granted	7287107	1/4/2002	10/23/2007	10/037502	US	METHOD AND APPARATUS FOR PASSIVE PCI THROTTLING IN A REMOTE SERVER MANAGEMENT CONTROLLER
82120055	Granted	6633486	11/28/2001	10/14/2003	09/995887	US	LOW PROFILE LATCH ACTIVATOR

PATENT
REEL: 038498 FRAME: 0736

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82120112	Granted	6772231	6/1/2001	8/3/2004	09/872971	US	STRUCTURE AND PROCESS FOR DISTRIBUTING SCSI LUN SEMANTICS ACROSS PARALLEL DISTRIBUTED COMPONENTS
82120493	Granted	6657867	12/14/2001	12/2/2003	10/017102	US	HINGED DOOR FOR ACCESS TO ADD-IN CARDS
82121924	Granted	6754074	9/9/2002	6/22/2004	10/238010	US	MULTIPURPOSE SERVER HANDLE
82122047	Granted	6717806	6/25/2002	4/6/2004	10/178990	US	COMPONENT ALIGNMENT AND RETENTION MECHANISM
82127231	Granted	6185628	1/26/1999	2/6/2001	09/237636	US	CONTROLLERLESS MODEM WITH GENERAL PURPOSE COMPUTER EXECTING MODEM CONTROLLER CODE AND VIRTUALIZED UART COMMUNICATING DATA TO/FROM MODEM CONTROLLER CODE
82127234	Granted	6799225	2/6/2001	9/28/2004	09/778511	US	CONTROLLERLESS MODEM
82128293	Granted	6199133	7/21/1999	3/6/2001	08/624176	US	MANAGEMENT COMMUNICATION BUS FOR NETWORKING DEVICES
82129727	Granted	5933158	9/9/1997	8/3/1999	08/926426	US	USE OF A LINK BIT TO FETCH ENTIRES OF A GRAPHIC ADDRESS REMAPPING TABLE
82130354	Granted	5878237	7/11/1997	3/2/1999	08/893849	US	APPARATUS, METHOD AND SYSTEM FOR A COMPUTER CPU AND MEMORY TO PCI BRIDGE HAVING A PLURALITY OF PHYSICAL PCI BUSES
82130357	Granted	5923860	6/25/1997	7/13/1999	08/882090	US	APPARATUS, METHOD AND SYSTEM FOR REMOTE PERIPHERAL COMPONENT INTERCONNECT BUS USING ACCELERATED GRAPHICS PORT LOGIC CIRCUITS
82130855	Granted	6243756	5/14/1998	6/5/2001	09/078550	US	NETWORK DEVICE WITH UNIFIED MANAGEMENT
82133288	Granted	6795894	8/8/2000	9/21/2004	09/634055	US	FAST DISK CACHE WRITING SYSTEM
82133348	Granted	6618821	1/12/2000	37873	09/481954	US	FAULT TOLERANT NETWORK SERVER HAVING MULTIPLE SLIDEABLY-MOUNTED PROCESSING ELEMENTS SHARING A REDUNDANT ARRAY OF INDEPENDENT DISKS THROUGH SCSI ISOLATORS
82133414	Granted	6581130	4/4/2000	6/17/2003	09/542420	US	DYNAMIC REMAPPING OF ADDRESS REGISTERS FOR ADDRESS TRANSLATION BETWEEN MULTIPLE BUSSES
82133723	Granted	6636929	4/6/2000	10/21/2003	09/544573	US	USB VIRTUAL DEVICES
82135223	Granted	5805803	5/13/1997	9/8/1998	08/855025	US	SECURE WEB TUNNEL
82135907	Granted	5886862	11/26/1997	3/23/1999	08/979376	US	CROSS-REFERENCED ELECTROSTATIC DISCHARGE PROTECTION SYSTEMS AND METHODS FOR POWER SUPPLIES
82135910	Granted	5999386	12/2/1998	36501	09/203417	US	CROSS-REFERENCED ELECTROSTATIC DISCHARGE PROTECTION SYSTEMS AND METHODS FOR POWER SUPPLIES
82135970	Granted	6647508	6/10/1998	11/11/2003	09/095543	US	MULTIPROCESSOR COMPUTER ARCHITECTURE WITH MULTIPLE OPERATING SYSTEM INSTANCES AND SOFTWARE CONTROLLED RESOURCE ALLOCATION

PATENT
REEL: 038498 FRAME: 0737

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82136288	Granted	6233645	11/2/1998	37026	09/184623	US	DYNAMICALLY DISABLING SPECULATIVE PREFETCH WHEN HIGH PRIORITY DEMAND FETCH OPPORTUNITY USE IS HIGH
82164695	Granted	5917147	1/30/1996	36340	08/593101	US	CLIP-ON NON-SNAG GROUNDING FINGER ARRAY
82165064	Granted	6199095	1/29/1996	3/6/2001	08/593590	US	SYSTEM AND METHOD FOR ACHIEVING OBJECT METHOD TRANSPARENCY IN A MULTI- CODE EXECUTION ENVIRONMENT
82165130	Granted	5873127	5/3/1996	2/16/1999	08/646734	US	UNIVERSAL PTE BACKLINKS FOR PAGE TABLE ACCESSES
82166255	Granted	6654902	4/11/2000	11/25/2003	09/546806	US	PERSISTENT RESERVATION IO BARRIERS
82166318	Granted	6636948	4/13/2001	10/21/2003	09/834551	US	METHOD AND SYSTEM FOR A PROCESSOR TO GAIN ASSURED OWNERSHIP OF AN UP-TO-DATE COPY OF DATA
82175867	Granted	7296199	1/20/2004	11/13/2007	10/760736	US	Systems And Methods For Defining And Utilizing Attributes Of A Processor Resource
82178990	Granted	7353498	4/29/2004	39539	10/836013	US	MULTI-PROCESS DEBUGGER
82179110	Granted	7403885	11/5/2004	7/22/2008	10/982659	US	Voltage Supply Noise Analysis
82179425	Granted	7280371	1/16/2004	39364	10/758982	US	MULTISTAGE MOUNTING PRINTED CIRCUIT BOARD SYSTEM AND METHOD
82179674	Granted	7434201	6/21/2004	39728	10/872708	US	Method And Apparatus Providing For Extendable Interaction Between Firmware And Operating Systems On Digital Devices
82180796	Granted	7398212	4/22/2004	7/8/2008	10/831082	US	System And Method For Quality Of Service Management Within A Call Handling System
82182047	Granted	7380107	1/13/2004	5/27/2008	10/756640	US	MULTI-PROCESSOR SYSTEM UTILIZING CONCURRENT SPECULATIVE SOURCE REQUEST AND SYSTEM SOURCE REQUEST IN RESPONSE TO CACHE MISS
82182923	Granted	7380144	3/30/2004	39595	10/812486	US	Enabling And Disabling Of Powering-off Of Computer System
82191350	Granted	7620984	10/6/2004	40134	10/959698	US	Method Of Managing Computer System
82191596	Granted	7286349	11/16/2004	10/23/2007	10/989924	US	VENTILATED CASING FOR AN ELECTRONIC DEVICE
82199777	Granted	7437587	1/21/2005	10/14/2008	11/040756	US	METHOD AND SYSTEM FOR UPDATING A VALUE OF A SLOW REGISTER TO A VALUE OF A FAST REGISTER
82200530	Granted	7734622	3/25/2005	40337	11/090409	US	Media-driven Browsing
82211144	Granted	7289868	8/22/2005	39385	11/209134	US	System And Method For Calculating A Shift Value Between Pattern Instances
82219073	Granted	7592679	10/19/2006	40078	11/583648	US	Sensor And Method For Making The Same
82226933	Granted	8046768	7/31/2007	40841	11/888773	US	Apparatus And Method For Detecting Resource Consumption And Preventing Workload Starvation
82247972	Application		1/26/2009		12/360104	US	A Structure Supporting Growth Of A Nanowire
82251287	Granted	7769050	4/25/2008	40393	12/109474	US	System And Method For Interference Mitigation For Wireless Communication

PATENT
REEL: 038498 FRAME: 0738

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82251782	Granted	6832202	8/29/1997	38335	08/921130	US	Method and System of Routing Requests for Authorized Approval
82251908	Granted	6275844	2/3/1997	37117	08/794611	US	Automatically Maintaining Applications In A Computer System Using A Check-in Time
82252595	Granted	5848425	7/1/1996	36137	08/674392	US	System and Method for Displaying Alphanumeric Data in a Three Dimensional Grid
82252598	Granted	5805893	3/1/1996	36046	08/609692	US	Assembly Language Program Converter
82253468	Granted	6871067	10/15/2001	38433	09/977806	US	Method and System for Communicating Telematics Messages
82255841	Granted	7680590	12/2/2003	40253	10/726278	US	BOUNDARY DETECTION ALGORITHM FOR EMBEDDED DEVICES
82259027	Granted	8149578	10/31/2009	41002	12/610314	US	AIRFLOW RESTRICTOR DOOR
82267145	Granted	6006330	9/16/1994	36515	08/307472	US	Security Device For Ring Network
82267451	Granted	6658537	11/29/2000	12/2/2003	09/075307	US	DMA Driven Processor Cache
82267457	Granted	6233613	8/18/1997	5/15/2001	08/914294	US	High Impedance Probe For Monitoring Fast Ethernet LAN Links
82267580	Granted	6157635	2/13/1998	12/5/2000	09/023174	US	INTEGRATED REMOTE DATA ACCESS AND AUDIO/VISUAL CONFERENCE GATEWAY
82268831	Granted	6246690	3/19/1998	6/12/2001	09/044771	US	Method And Device For Controlling Data Flow In A Computer Data Network
82269011	Granted	6360258	8/31/1998	3/19/2002	09/143194	US	Network Management Software Library Allowing A Sending And retrieval Of Multiple SNMP Objects
82269698	Granted	6643271	4/30/1999	11/4/2003	09/303320	US	ADJUSTABLE GAIN TRANSMIT CANCELLATION IN A FULL DUPLEX MODEM DATA ACCESS ARRANGEMENT (DAA)
82269827	Granted	6697485	11/10/1998	2/24/2004	09/189964	US	DATA SIGNAL ATTENUATOR AND SYSTEMS AND METHODS FOR USING SAME
82269887	Granted	6608812	1/15/1999	8/19/2003	09/232105	US	Trunk Arrangement In A Computer Network With Intra Trunk Switch Connections
82269890	Granted	6754173	6/2/2003	6/22/2004	10/452648	US	Trunk Arrangement In A Computer Network With Intra Trunk Switch Connections
82270016	Granted	6636505	5/28/1999	10/21/2003	09/322515	US	SERVICE SELECTION PROCESS BETWEEN HOME LAN DEVICE AND ADSL MODEM INTERFACE
82270079	Granted	6661880	6/12/2001	12/9/2003	09/879754	US	SYSTEM AND METHOD FOR EMBEDDING DIGITAL INFORMATION IN A DIAL TONE SIGNAL
82270325	Granted	6055236	3/17/1999	4/25/2000	09/271025	US	METHOD AND SYSTEM FOR LOCATING NETWORK SERVICES WITH DISTRIBUTED NETWORK ADDRESS TRANSLATION
82270454	Granted	6674810	5/27/1999	1/6/2004	09/321523	US	METHOD AND APPARATUS FOR REDUCING PEAK-TO-AVERAGE POWER RATIO IN A DISCRETE MULTI-TONE SIGNAL

PATENT
REEL: 038498 FRAME: 0739

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82270514	Granted	6717914	5/27/1999	4/6/2004	09/322120	US	System For Probing Switched Virtual Circuits In A Connection Oriented Network
82270574	Granted	6650712	7/27/1999	11/18/2003	09/361699	US	LOW COMPLEXITY METHOD AND APPARATUS FOR FSK SIGNAL RECEPTION
82270577	Granted	6757908	5/28/1999	6/29/2004	09/322833	US	Graphical Representation Of Impairment Or Other Conditions In A Data-Over-Cable System
82270697	Granted	6691161	11/22/1999	2/10/2004	09/444554	US	PROGRAM METHOD AND APPARATUS PROVIDING ELEMENTS FOR INTERROGATING DEVICES IN A NETWORK
82271009	Granted	6732249	6/9/2000	5/4/2004	09/590892	US	Host Computer Virtual Memory Within A Network Interface Adapter
82271012	Granted	6842790	4/30/2004	1/11/2005	10/836852	US	Host Computer Virtual Memory Within A Network Interface Adapter
82271639	Granted	6914897	2/29/2000	7/5/2005	09/516269	US	System and Method for Accessing Radio Programs Using a Data Network Telephone in a Network Based Telecommunication System
82271951	Granted	6690721	6/21/2000	2/10/2004	09/598618	US	METHOD FOR ASYMMETRIC DIGITAL SUBSCRIBER LINE MODEM RECOVERY FROM INSUFFICIENT TRANSMIT POWER
82272071	Granted	6281425	4/4/2000	8/28/2001	09/542226	US	Apparatus and Method of Recharging A Handheld Computing Device Using Solar Power
82272077	Granted	6731950	4/24/2000	5/4/2004	09/556541	US	Cellular-Based Telephone Connection System
82272320	Granted	6757279	9/14/2000	6/29/2004	09/662159	US	Method For Synchronising Databases in Stacked Network Units
82272326	Granted	6731633	4/25/2000	5/4/2004	09/556788	US	Network Unit Including Address Hashing
82272389	Granted	6822957	11/7/2000	11/23/2004	09/707708	US	Distributed Network Address Translation for a Network Telephony System
82272509	Granted	6857027	11/14/2000	2/15/2005	09/712610	US	Intelligent Network Topology and Configuration Verification Using A Method of Loop Detection
82272695	Granted	6273735	10/25/2000	8/14/2001	09/696044	US	Rotating turret side-entry retractable jack
82272701	Granted	6847635	6/20/2000	1/25/2005	09/597522	US	METHOD TO TRANSMIT SILENCE COMPRESSED VOICE OVER IP EFFICIENTLY IN DOCSIS CABLE NETWORKS
82272758	Granted	6856616	11/30/2000	2/15/2005	09/728833	US	SYSTEM AND METHOD FOR PROVIDING SERVICE PROVIDER CONFIGURATIONS FOR TELEPHONES USING A CENTRAL SERVER IN A DATA NETWORK TELEPHONY SYSTEM
82272950	Granted	6675234	12/11/2000	1/6/2004	09/734796	US	METHOD OF DETECTING TCP/IP BINDINGS OF INSTALLED NETWORK INTERFACE CARDS PRESENT IN A COMPUTER SYSTEM
82273259	Granted	6612874	6/19/2001	9/2/2003	09/884543	US	Rotating Connector Adapter With Strain Relief
82274069	Granted	6807266	8/30/2002	10/19/2004	10/232149	US	Method and Apparatus for Provisioning a Soft Switch

PATENT
REEL: 038498 FRAME: 0740

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82275449	Granted	5855494	5/5/1997	1/5/1999	08/851723	US	Apparatus And Method For Electrically Connecting A Plurality OF Electronic Modules
82651947	Granted	8422649	2/23/2011	4/16/2013	13/032798	US	Digital Telephone Data And Control Signal Transmission System
81974333	Granted	6907380	12/1/2003	6/14/2005	10/726254	US	COMPUTER IMPLEMENTED SCALABLE, INCREMENTAL AND PARALLEL CLUSTERING BASED ON WEIGHTED DIVIDE AND CONQUER
81986384	Granted	7127716	2/13/2002	10/24/2006	10/074799	US	Method Of Load Balancing A Distributed Workflow Management System
81988007	Granted	6823323	4/26/2001	11/23/2004	09/844202	US	Automatic Classification Method And Apparatus
81993563	Granted	7093242	11/19/2001	8/15/2006	09/993229	US	Dynamic Class Interposition
82004177	Granted	6823362	10/16/2001	11/23/2004	09/981129	US	Effectively And Efficiently Updating Content Files Among Duplicate Content Servers
82089086	Granted	7624035	2/5/2003	11/24/2009	10/360451	US	Extracting An Implied Value Of A Component Associated With A Plurality Of Product Packages
82166186	Granted	7346604	10/15/1999	3/18/2008	09/418418	US	METHOD FOR RANKING HYPERTEXT SEARCH RESULTS BY ANALYSIS OF HYPERLINKS FROM EXPERT DOCUMENTS AND KEYWORD SCOPE
82182797	Granted	8572233	7/15/2004	10/29/2013	10/891989	US	Method And System For Site Path Evaluation Using Web Session Clustering
82188101	Granted	7971191	6/10/2004	6/28/2011	10/865464	US	System And Method For Analyzing A Process
82189100	Published		12/17/2004		11/016119	US	Methods And Systems That Calculate A Projected Utility Of Information Technology Recovery Plans Based On Contractual Agreements
82189103	Granted	7865582	8/11/2004	1/4/2011	10/915823	US	System And Method For Assigning An Application Component To A Computing Resource
82190102	Granted	7697438	5/12/2004	4/13/2010	10/844902	US	Method Of Routing Packet
82190540	Granted	7135977	1/4/2005	11/14/2006	11/029846	US	METHOD AND SYSTEM FOR TRACKING IDENTIFICATION DEVICES
82191287	Granted	7991779	4/25/2005	8/2/2011	11/114681	US	Method And Apparatus For Populating An Index Table
82194224	Granted	8165972	4/22/2005	4/24/2012	11/113251	US	Determining A Feature Related To An Indication Of A Concept Using A Classifer
82200401	Granted	7325006	7/30/2004	1/29/2008	10/903008	US	System And Method For Category Organization
82202711	Granted	7698111	3/9/2005	4/13/2010	11/076131	US	METHOD AND APPARATUS FOR COMPUTATIONAL ANALYSIS
82202714	Granted	8543359	2/24/2010	9/24/2013	12/711762	US	A Method And Apparatus For Computational Analysis
82206395	Granted	7836111	4/29/2005	11/16/2010	11/119037	US	Detecting Change In Data
82212080	Granted	7702683	9/18/2006	4/20/2010	11/522656	US	Estimating Similarity Between Two Collections Of Information
82214009	Application		12/29/2006		11/647715	US	Visual Content Query For Multi Dimensional Datasets

PATENT
REEL: 038498 FRAME: 0741

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82215452	Granted	7680641	6/9/2006	3/16/2010	11/450706	US	IDENTIFYING A MINIMUM CUT AND/OR A MAXIMUM FLOW USING BALANCING OF VERTEX EXCESSES
82216133	Granted	7502767	7/21/2006	3/10/2009	11/490781	US	Computing A Count Of Cases In A Class
82217258	Granted	8396737	2/21/2006	3/12/2013	11/358376	US	Website Analysis Combining Quantitative And Qualitative Data
82219259	Application		7/19/2006		11/488967	US	Providing A Forecasting Model
82224437	Granted	7756799	10/27/2006	7/13/2010	11/588694	US	Feature Selection Based On Partial Ordered Set Of Classifiers
82224440	Granted	7797323	10/11/2006	9/14/2010	11/546235	US	Producing Representative Hashes For Segments Of A File
82226684	Granted	7912955	4/24/2007	3/22/2011	11/789409	US	Model-based Provisioning Of Resources
82226687	Granted	8825610	7/27/2007	9/2/2014	11/829792	US	System Management Based On Goals Relevant To A Current State Of A Managed System
82231307	Granted	7577550	4/30/2007	8/18/2009	11/742534	US	System And Method For Detecting Performance Anomalies In A Computing System
82231367	Granted	7831594	4/30/2007	11/9/2010	11/799141	US	Estimating The Static Execution Time Of A Database Query
82234799	Granted	9064119	10/1/2008	6/23/2015	12/242998	US	Information Scanning Across Multiple Devices
82235111	Granted	8022952	7/31/2007	9/20/2011	11/888118	US	Generating A Visualization To Show Mining Results Prodced From Selected Data Items And Attribute(s) In A Selected Focus Area And Other Portions Of A Data Set
82235237	Granted	8856123	7/20/2007	10/7/2014	11/780803	US	Document Clasification
82235240	Granted	8046294	7/30/2007	10/25/2011	11/830698	US	Bidding In Online Auctions
82245977	Published		10/15/2008		12/287921	US	Virtual Redeemable Offers
82246289	Published		1/28/2009		12/361455	US	Optimization Of Query Processing With Top Operations
82246292	Granted	8768938	6/25/2009	7/1/2014	12/491965	US	Histogram Processing By Trend And Pattern Removal
82248599	Granted	8224811	2/2/2009	7/17/2012	12/364113	US	Workload Management Using Robustness Mapping
82249286	Published		3/24/2009		12/409550	US	Populating A Service Registry With Web Content
82249595	Granted	8375182	2/10/2009	2/12/2013	12/368784	US	System And Method For Segmenting A Data Stream
82249664	Published		3/24/2009		12/409561	US	Transforming A Description Of Services For Web Services
82250600	Granted	8108400	6/27/2009	1/31/2012	12/493189	US	Database Segment Searching
82257839	Published		8/27/2009		12/548429	US	Predicting Email Responses
82258460	Published		8/26/2009		12/461844	US	Energy Based Wavelet Thresholding
82258466	Granted	8400458	9/9/2009	3/19/2013	12/556401	US	Method And System For Blocking Data On A GPU
82258901	Granted	8296342	8/31/2009	10/23/2012	12/551402	US	Fingerprinting A Database
82259585	Published		11/13/2009		12/618151	US	Method And System For Processing Web Activity Data
82259588	Granted	8355997	11/13/2009	1/15/2013	12/618159	US	Method And System For Developing A Classification Tool
82259591	Published		11/13/2009		12/618170	US	Method And System For Segmenting Query Urls
82259651	Published		3/12/2010		12/723146	US	METHOD AND SYSTEM FOR PROVIDING WEBSITE CONTENT
82260590	Published		2/10/2010		12/703574	US	Processing A Data Stream
82261022	Published		5/30/2010		12/790844	US	Predictive Performance Of Collaborative Filtering Model

PATENT
REEL: 038498 FRAME: 0742

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82261025	Published		1/27/2010		12/695145	US	Software Application Testing
82261082	Published		5/11/2010		12/777425	US	DETERMINING MULTI-PROGRAMMING LEVEL USING DIMINISHING INTERVAL SEARCH
82262270	Granted	8730242	5/17/2010	5/20/2014	12/800526	US	PERFORMING TIME SLICE-BASED VISUAL PREDICTION
82263332	Published		9/24/2010		12/889805	US	DETERMINING CORRELATIONS BETWEEN SLOW STREAM AND FAST STREAM INFORMATION
82263335	Granted	8661042	10/18/2010	2/25/2014	12/906551	US	Collaborative Filtering With Hashing
82604230	Published		3/23/2011		13/070056	US	COMPARING HISTOGRAMS
82615989	Granted	8892612	3/30/2011	11/18/2014	13/075570	US	Exploitation of Correlation Between Original and Desired Data Sequences During Run Generation
82650994	Published		7/26/2011		13/190567	US	SMOOTHING A TIME SERIES DATA SET WHILE PRESERVING PEAK AND/OR TROUGH DATA POINTS
82660025	Granted	8655800	10/7/2008	41688	13/123095	US	Analyzing Events
82753547	Allowed		9/29/2011		13/248887	US	Anomaly Detection In Streaming Data
82892253	Published		3/13/2012		13/418576	US	SELECTING ENTITIES IN A SAMPLING PROCESS
82900162	Granted	9047495	4/30/2012	6/2/2015	13/460203	US	IDENTIFYING IMPACT OF A TRAFFIC INCIDENT ON A ROAD NETWORK
82929147	Published		3/14/2012		13/420149	US	Identification and Extraction of New Terms in Documents
82929190	Granted	9081854	7/6/2012	7/14/2015	13/543783	US	MULTILABEL CLASSIFICATION BY A HIERARCHY
82961693	Published		7/31/2012		13/563575	US	OPTIMIZED SURGERY SCHEDULING
82963382	Granted	8706203	4/30/2012	4/22/2014	13/459952	US	CLASSIFICATION OF A SIGNAL IN A TIME DOMAIN
82963508	Published		4/26/2012		13/456297	US	SMOOTHED VISUALIZATION HAVING RINGS CONTAINING PIXELS REPRESENTING UNEVENLY SPACED DATA
82964753	Published		9/28/2012		13/629930	US	TRANSLATING TIME-STAMPED EVENTS TO PERFORMANCE INDICATORS
83013827	Published		7/31/2012		13/563176	US	DATABASE RETRIEVAL IN ELASTIC STREAMING ANALYTICS PLATFORM
83037485	Published		10/30/2012		13/664011	US	SYSTEMS AND METHODS FOR MODEL SELECTION
83037551	Published		8/23/2012		13/592747	US	Graphical Visualization Including A Peak Detection Ring
83106310	Published		11/27/2012		13/686490	US	Estimating Unique Entry Counts Using a Counting Bloom Filter
83114199	Granted	8620911	4/29/2010	12/31/2013	13/634764	US	DOCUMENT REGISTRY SYSTEM
83138667	Published		1/31/2013		13/755771	US	SEARCHING THREADS
83209716	Allowed		4/26/2013		13/871924	US	Visual Analytics Using Multivariate Concentric Rings with a Visual Start Time Mechanism
83221558	Published		10/8/2010		13/877395	US	AUTOMATED NEGOTIATION
83668026	Published		6/28/2011		14/003140	US	Capturing Intentions Within Online Text
83784007	Published		7/12/2011		14/131493	US	AUDIO SAMPLE
84000205	Published		3/15/2012		14/384576	US	TWO-LEVEL CHUNKING FOR DATA ANALYTICS

PATENT
REEL: 038498 FRAME: 0743

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84079684	Published		7/30/2012		14/397717	US	GENERATING AND PARTITIONING POLYNOMIALS
84088609	Published		4/23/2012		14/396650	US	Statistical Analysis using a graphics processing unit
81970025	Granted	7206848	9/21/2000	4/17/2007	09/666910	US	Intelligently Classifying And Handling User Requests In A Data Service System
82063553	Granted	8219496	2/22/2002	7/10/2012	10/080479	US	Method Of And Apparatus For Ascertaining The Status Of A Data Processing Environment
82065860	Granted	7779267	9/4/2001	8/17/2010	09/946323	US	Method And Apparatus For Using A Secret In A Distributed Computing System
82069298	Granted	7457951	5/25/2000	11/25/2008	09/979903	US	Data Integrity Monitoring In Trusted Computing Entity
82094390	Granted	7398393	1/28/2004	7/8/2008	10/767868	US	Privacy Management Of Personal Data
82105883	Granted	8051420	10/31/2003	11/1/2011	10/698769	US	Method And System For Governing Access To Continuing Utilities
82187291	Granted	7516326	10/15/2004	4/7/2009	10/965197	US	Authentication System And Method
82194593	Granted	7986778	6/23/2005	7/26/2011	11/166921	US	Cryptographic Method And Apparatus
82198529	Granted	7801302	6/10/2005	9/21/2010	11/150623	US	Cryptographic Method And Apparatus
82203713	Granted	8719914	10/28/2005	5/6/2014	11/718126	US	Virtual Computing Infrastructure
82219379	Granted	8050411	7/17/2006	11/1/2011	11/489750	US	Method Of Managing One-time Pad Data And Device Implementing This Method
82220753	Granted	8332930	7/17/2007	12/11/2012	12/374734	US	SECURE USE OF USER SECRETS ON A COMPUTING PLATFORM
82223942	Granted	8943332	10/31/2006	1/27/2015	11/555278	US	Audit-log Integrity Using Redactable Signatures
82242422	Granted	8332730	10/14/2008	12/11/2012	12/740341	US	Quantum Key Distribution System Using LDPC Codes With A Graph Having A Toroid Structure
82242731	Granted	8627313	3/9/2009	1/7/2014	12/400510	US	Virtual Machine Liveness Check
82243040	Published		5/20/2009		12/469571	US	QKD System Alignment
82243670	Application		10/1/2008		12/243129	US	Managing Collection Of A Payment
82248284	Published		10/30/2008		12/261355	US	MANAGEMENT OF VARIANTS OF MODEL OF SERVICE
82263707	Granted	8850593	5/12/2011	9/30/2014	13/106719	US	DATA MANAGEMENT
82277195	Granted	7650494	7/2/2003	40197	10/613522	US	Method And Apparatus For Use In Relation To Verifying An Association Between Two Parties
82835608	Published		1/20/2012		13/355114	US	INTERCEPTING DATA
82837268	Granted	8868910	2/9/2012	10/21/2014	13/370190	US	ELLIPTIC CURVE CRYPTOGRAPHIC SIGNATURE
82930647	Published		4/30/2012		13/460419	US	Submatch Extraction
83159706	Published		3/21/2013		13/848562	US	ONE PASS SUBMATCH EXTRACTION
83193695	Published		9/30/2010		13/822239	US	Virtual Machines
83810416	Allowed		8/17/2011		14/237953	US	TRACING DATA BLOCK OPERATIONS
84185775	Application		3/6/2015		14/640562	US	Composition of Services
84196704	Application		9/28/2012		14/432202	US	APPLICATION RANDOMIZATION

PATENT
REEL: 038498 FRAME: 0744

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82003994	Granted	7133933	8/28/2002	11/7/2006	10/229677	US	CONTENT SYNCHRONIZATION FRAMEWORKS USING DYNAMIC ATTRIBUTES AND FILE BUNDLES FOR CONNECTED DEVICES
82004930	Granted	6915284	4/18/2002	38538	10/125829	US	System And Method For Automated Message Response, Within A System For Harvesting Community Knowledge
82091147	Application		10/8/2002		10/266437	US	Eliminating Public Knowledge Biases In Small Group Predictions
82120241	Granted	6963869	1/7/2002	38664	10/042028	US	SYSTEM AND METHOD FOR SEARCH, INDEX, PARSING DOCUMENT DATABASE INCLUDING SUBJECT DOCUMENT HAVING NESTED FIELDS ASSOCIATED START AND END META WORDS WHERE EACH META WORD IDENTIFY LOCATION AND NESTING LEVEL
82197158	Granted	9053501	10/31/2004	42164	10/979014	US	Spontaneous Sharing Of Media Asset References
82239983	Granted	8812508	12/14/2007	41870	12/738844	US	Systems And Methods For Extracting Phases From Text
82246598	Granted	8250124	1/29/2009	41142	12/362312	US	ASSIGNING CONTENT TO AN ENTRY IN DIRECTORY
82990953	Published		7/31/2012		13/563651	US	RATING ITEMS BASED ON PERFORMANCE OVER TIME
83087160	Granted	9053458	8/7/2012	42164	13/568391	US	System And Method For Profiling Clients Within A System For Harvesting Community Knowledge
83270274	Published		9/12/2013		14/025044	US	OBTAINING A PRODUCT VIA A REPOSITORY IN AN ORGANIZATION WITH OBTAINMENT UNITS
83598165	Allowed		8/29/2013		14/014122	US	INTEGRATING AND EXTRACTING TOPICS FROM CONTENT OF HETEROGENEOUS SOURCES
83629277	Published		11/21/2013		14/086186	US	ATTACHABLE CONTINGENT SERVICE PRICING
82184168	Granted	8553611	38016	41555	10/769090	US	Systems And Methods For Multi-access Point Transmission Of Data Using A Plurality Of Access Points
82193786	Granted	7643458	5/25/2005	1/5/2010	11/137838	US	Communicating Between Wireless Communities
82263584	Granted	8474000	8/17/2010	6/25/2013	12/858352	US	Managing Upstream Bandwidth
82082906	Granted	8370574	6/13/2006	2/5/2013	11/451810	US	System And Method For Storing Configuration Data Of A Storage Automation Device
82088090	Granted	7334978	6/23/2003	2/26/2008	10/601437	US	Cartridge-handling Apparatus For A Media Storage System
82094456	Granted	7031089	12/17/2003	4/18/2006	10/737956	US	Tape Head Assembly
82095950	Granted	7085101	12/24/1998	8/1/2006	09/220336	US	Magnetic Cartridge With Rotatably-Mounted Multi-Projection Brake Release Member (as Amended)
82105316	Granted	7810653	10/2/2003	10/12/2010	10/677709	US	Apparatus And Method For Mounting A Device To A Rack System
82130165	Granted	6141312	4/4/2000	10/31/2000	08/939984	US	OPTICAL TAPE DRIVE THAT PERFORMS DIRECT READ AFTER WRITE OPERATIONS
82176806	Granted	7505261	3/18/2004	3/17/2009	10/804318	US	Electrical-optical Signal Conversion For Automated Storage Systems
82178177	Granted	7061767	2/10/2004	6/13/2006	10/776704	US	Data Systems, Apparatuses And/or Methods

PATENT
REEL: 038498 FRAME: 0745

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82188413	Granted	7359132	1/12/2004	4/15/2008	10/754617	US	EQUALIZATION PREAMBLE REGION IN DIGITAL DATA STORAGE (DDS) FORMAT
82189598	Granted	7529060	2/2/2004	5/5/2009	10/770747	US	Read And Write Head Element Arrangement
82191041	Granted	7167332	4/28/2005	1/23/2007	11/117174	US	METHOD AND APPARATUS FOR RECORDING DATA ONTO A RECORDING MEDIUM INCLUDING WARNING OF THE APPROACH TO AN END OF MEDIUM POSITION
82197152	Granted	8116028	10/14/2005	2/14/2012	11/250856	US	Multiple Cartridge Loading Mechanism For DAT160
82211393	Granted	7941596	10/26/2005	5/10/2011	11/259223	US	Locating Media By Characteristics In Storage Apparatus
82219817	Granted	7962763	7/25/2006	6/14/2011	11/493912	US	Data Transfer Device
82232240	Published		6/27/2007		11/769485	US	Drive Resources In Storage Library Behind Virtual Library
82240736	Granted	8488266	10/29/2008	7/16/2013	12/260590	US	Adjustment Of Tape Reel Height
82264205	Granted	8432640	12/15/2010	4/30/2013	12/968602	US	TAPE DRIVE HAVING A FLANGELESS ROLLER
82829608	Granted	8570678	11/18/2011	10/29/2013	13/299602	US	Determining Tape Head Condition
82832359	Granted	8553353	12/9/2011	10/8/2013	13/315982	US	NEUTRALIZATION OF STATIC CHARGE ON MAGNETIC TAPE
82838144	Granted	8611039	4/29/2009	12/17/2013	13/260174	US	Arrangement And Processing Of Longitudinal Position Information On A Data Storage Medium
82901676	Granted	9135124	4/30/2012	9/15/2015	13/459911	US	Sequence Indicator For Command Communicated To A Sequential Access Storage Device
82961968	Granted	8566850	4/11/2012	10/22/2013	13/444480	US	MULTIMEDIA DRIVE
83951217	Granted	8655977	11/26/2012	2/18/2014	13/685539	US	System And Method For Inquiry Caching
83952528	Granted	8982509	4/27/2012	3/17/2015	14/373275	US	ELECTRICALLY ISOLATED TAPE GUIDE
82237922	Granted	7111197	9/20/2002	9/19/2006	10/251626	US	SYSTEM AND METHOD FOR JOURNAL RECOVERY FOR MULTINODE ENVIRONMENTS
82237925	Granted	7467330	8/4/2006	12/16/2008	11/499907	US	System And Method For Journal Recovery For Multinode Environments
82237988	Granted	7240057	9/20/2002	7/3/2007	10/251894	US	System And Method For Implementing Journaling In A Multi-node Environment
82245542	Granted	8874627	10/30/2008	10/28/2014	12/261071	US	Enumerating Metadata In File System Directories
82261583	Granted	7406484	4/29/2003	7/29/2008	10/425550	US	Storage Allocation In A Distributed Segmented File System
83205302	Published		4/19/2013		13/866732	US	AUTOMATIC WORM-RETENTION STATE TRANSITIONS
81976460	Granted	6778659	2/23/2001	8/17/2004	09/792857	US	Customer Service Routing System And Method
81980141	Granted	7058624	6/20/2001	6/6/2006	09/885902	US	System And Method For Optimizing Search Results
81998876	Granted	6952689	2/21/2003	10/4/2005	10/372475	US	Automating Expert Knowledge With Analyzer Harness
82055810	Granted	6390695	8/8/2000	5/21/2002	09/634263	US	Imaging Device Testing With Thermographic Sheet Material
82092518	Granted	7168003	8/7/2002	1/23/2007	10/213986	US	Method And Apparatus For Automating Printer And Printer Driver Diagnostics And Repair
82092521	Granted	8488143	2/28/2003	7/16/2013	10/377438	US	Method And Apparatus For Detecting Printer Internet Protocol Addresses
82106003	Granted	7016808	11/3/2003	3/21/2006	10/700099	US	Analyzing And Servicing Imaging Devices

PATENT
REEL: 038498 FRAME: 0746

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82172744	Granted	8725844	11/5/2003	5/13/2014	10/701869	US	Method And System For Adjusting The Relative Value Of System Configuration Recommendations
82191284	Granted	7765538	10/29/2004	7/27/2010	10/977694	US	METHOD AND APPARATUS FOR DETERMINING WHICH PROGRAM PATCHES TO RECOMMEND FOR INSTALLATION
82203146	Granted	7634671	7/26/2006	12/15/2009	11/492963	US	DETERMINING POWER CONSUMPTION IN IT NETWORKS
82216631	Published		5/9/2007		11/746066	US	Method And Apparatus For Assigning Rack Space
82247228	Granted	7633181	6/1/2006	40162	11/421516	US	DC-BASED DATA CENTER POWER ARCHITECTURE
82249907	Published		10/30/2008		12/261250	US	DATA CENTER AND DATA CENTER DESIGN
82159634	Granted	5918029	9/8/1997	6/29/1999	08/999899	US	BUS INTERFACE SLICING MECHANISM ALLOWING FOR A CONTROL/DATA-PATH SLICE
82164941	Granted	5793998	4/17/1996	8/11/1998	08/633988	US	METHOD AND APPARATUS FOR INTERCONNECTION OF MULTIPLE MODULES
82165751	Granted	5860002	7/12/1996	1/12/1999	08/678891	US	System For Assigning Boot Strap Processor In Symmetric Multiprocessor Computer With Watchdog Reassignment
82169120	Granted	8683139	10/31/2006	3/25/2014	11/554827	US	Cache And Method For Cache Bypass Functionality
82172306	Granted	7415700	10/14/2003	39679	10/684842	US	Runtime Quality Verification Of Execution Units
82175177	Granted	7539832	8/23/2004	5/26/2009	10/923905	US	Option Rom Code Acquisition
82178672	Granted	6982586	3/22/2004	38720	10/805863	US	Systems And Methods For Clock Generation Using Hot-Swappable Oscillators
82178867	Granted	7307220	1/12/2005	39427	11/034072	US	Circuit Board For Cable Termination
82180301	Granted	7380174	9/28/2004	39595	10/952463	US	VARIABLE WRITING THROUGH A FIXED PROGRAMMING INTERFACE
82180421	Granted	7962696	1/15/2004	40708	10/758368	US	System And Method For Updating Owner Predictors
82180610	Granted	7277292	4/28/2004	10/2/2007	10/834517	US	EXPANDABLE BRACING APPARATUS AND METHOD
82180733	Granted	7092253	4/1/2004	8/15/2006	10/816696	US	Back Plane And Mid-plane Assemblies And Related Systems And Methods
82180982	Granted	8924653	10/31/2006	12/30/2014	11/554672	US	Transactional Cache Memory System
82181174	Granted	7027309	2/20/2004	4/11/2006	10/783146	US	Engaging/Disengaging Mechanism
82181735	Granted	7568063	2/2/2006	7/28/2009	11/346041	US	SYSTEM AND METHOD FOR A DISTRIBUTED CROSSBAR NETWORK USING A PLURALITY OF CROSSBARS
82182044	Granted	8301844	1/13/2004	10/30/2012	10/756534	US	Consistency Evaluation Of Program Execution Across At Least One Memory Barrier
82182668	Granted	7344384	10/25/2004	3/18/2008	10/972688	US	Bolster Plate Assembly For Processor Module Assembly
82186352	Granted	7953900	10/19/2004	5/31/2011	10/969756	US	SYSTEM AND METHOD FOR DISCOVERING I/O BUS CAPABILITIES ON A COMPUTER SYSTEM VIA ACPI
82190660	Granted	7392172	4/28/2005	6/24/2008	11/116564	US	Providing Virtual Device Access Via Firmware
82192040	Granted	7652889	10/25/2005	1/26/2010	11/258665	US	INFORMATION TECHNOLOGY (IT) EQUIPMENT POSITION LOCATING SYSTEM USING JUMPER CONNECTIONS
82197281	Granted	7385824	7/29/2005	6/10/2008	11/192736	US	PROCESSOR MODULE WITH RIGIDLY COUPLED PROCESSOR AND VOLTAGE-REGULATOR HEAT SINKS

PATENT
REEL: 038498 FRAME: 0747

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82197284	Granted	7383691	1/26/2005	6/10/2008	11/043317	US	Modular Networked Sensor Assembly
82197533	Granted	8677034	4/28/2006	3/18/2014	11/413824	US	System For Controlling I/O Devices In A Multi-partition Computer System
82202276	Granted	7544072	10/29/2007	6/9/2009	11/926274	US	Retractable Protection Apparatus For Electronic Device Pins
82209770	Granted	D540806	8/3/2005	39189	29/235641	US	Computer Having A Front Bezel
82210265	Granted	D560466	3/24/2006	1/29/2008	29/256798	US	Computer Release Latch
82212386	Granted	7417864	5/16/2006	8/26/2008	11/435903	US	Gear Driven Socket Activation Mechanism
82213889	Granted	7298619	5/2/2006	11/20/2007	11/416561	US	Cable Management Arm With Integrated Heat Exchanger
82213952	Granted	7600079	10/27/2006	10/6/2009	11/553813	US	Performing A Memory Write Of A Data Unit Without Changing Ownership Of The Data Unit
82216637	Granted	7809025	9/29/2006	10/5/2010	11/540244	US	System And Method For Distributing Clock Signals
82217819	Granted	7540746	4/6/2006	6/2/2009	11/399069	US	Electrical Encoding Of Cable Types And Configurations
82219946	Granted	D577723	6/30/2006	9/30/2008	29/262396	US	Single Handed U-shaped Handle For Computer Controller
82224623	Granted	7656657	1/22/2007	2/2/2010	11/656070	US	System And Method For Tool-less Mounting Of A Device With A Chassis
82224626	Granted	8880582	3/30/2007	11/4/2014	11/731277	US	USER ACCESS TO A PARTIONABLE SERVER
82226438	Granted	7814301	4/11/2007	10/12/2010	11/786125	US	CLOCK ARCHITECTURE FOR MULTI-PROCESSOR SYSTEMS
82227182	Granted	7684209	7/23/2007	3/23/2010	11/880528	US	Printed Circuit Board Engagement Assembly
82228868	Granted	7697305	4/27/2007	4/13/2010	11/741256	US	APPARATUS AND METHOD FOR ENHANCING CONDUCTIVITY
82231427	Published		4/27/2007		11/741673	US	GRANULATED HARDWARE RESOURCE PROTECTION IN AN ELECTRONIC SYSTEM
82234493	Granted	7823004	8/1/2007	10/26/2010	11/832237	US	Clock Source Selection For Modular Computer System As A Function Of Modulo Difference
82249100	Published		1/23/2009		12/358436	US	MANAGING WORKLOAD DISTRIBUTION AMONG COMPUTER SYSTEMS BASED ON INTERSECTION OF THROUGHPUT AND LATENCY MODELS (as amended)
82259966	Granted	8335879	4/29/2010	12/18/2012	12/770132	US	Node Differentiation In Multi-Node Electronic Systems
82262897	Granted	8363373	7/28/2010	1/29/2013	12/844852	US	ENCLOSURE WITH AN E-FUSE CONNECTED TO MULTIPLE BLADE COMPUTERS
82264211	Granted	8522077	10/27/2010	8/27/2013	12/913560	US	POWER SUPPLY GRID SWITCH
82576948	Granted	D656940	1/31/2011	4/3/2012	29/384497	US	CRADLE FOR PORTABLE SERVER MONITOR
82675551	Granted	8564946	1/8/2009	10/22/2013	13/139342	US	Computer Including Hot-pluggable Disk Storage Drives That Are Mounted In An In-line Arrangement
82855499	Granted	8784540	6/11/2009	7/22/2014	13/263807	US	Systems And Methods Of Dust Mitigation
82901553	Granted	8797732	3/5/2012	8/5/2014	13/411760	US	SERVER BACKPLANE
82947564	Granted	8656236	6/20/2012	2/18/2014	13/527940	US	Remote Boundary Scanning
83049207	Granted	D699718	9/20/2012	2/18/2014	29/432783	US	COVER FOR A COMPUTING DEVICE WITH A FRONT FAN
83747814	Application		1/13/2014		14/153303	US	DEMARCATION DEVICE

PATENT
REEL: 038498 FRAME: 0748

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83862753	Published		10/7/2011		14/349070	US	MAPPING PERSISTENT STORAGE
84044330	Application		10/30/2014		29/507766	US	SLED FOR A CARRIER
84068881	Published		4/26/2012		14/396728	US	SERVER ADAPTER
84080537	Published		7/31/2012		14/397069	US	RECEIVING INPUT POWER MEASUREMENTS TO MANAGE A RECTIFIER
84104759	Application		8/17/2012		14/399949	US	CONNECTION INCLUDING FLANGE IN COOPERATION WITH RESILIENT MEMBER TO ENGAGE AND DISENGAGE REMOVABLE PRINTED CIRCUIT ASSEMBLY
84192582	Application		9/28/2012		14/432207	US	COOLING ASSEMBLY
84192682	Application		10/31/2012		14/690200	US	MODULAR RACK SYSTEM
84210830	Application		9/28/2012		14/432193	US	TEMPERATURE REGULATION OF A CPU
84242426	Application		11/19/2012		14/440851	US	ELECTRICAL CONNECTORS FOR POWER SUPPLIES
90001571	Application		7/23/2015		29/533983	US	Multi-Sectional Door for a FlexRack
90035268	Acknowledged					US	Apollo 4200 HDD Tray Release Latch Design
81971150	Granted	6813275	4/21/2000	11/2/2004	09/556052	US	Method And Apparatus For Preventing Underflow And Overflow Across An Asynchronous Channel
81971399	Granted	6697929	2/14/2000	2/24/2004	09/504004	US	Scannable Zero-catcher And One-catcher Circuits For Reduced Clock Loading And Power Dissipation
82000679	Granted	6789167	3/6/2002	38237	10/092668	US	Method And Apparatus For Multi-Core Processor Integrated Circuit Having Functional Elements Configurable As Core Elements And As System Device Elements
82000742	Granted	6665227	10/24/2001	12/16/2003	10/045529	US	METHOD AND APPARATUS FOR REDUCING AVERAGE POWER IN RAMS BY DYNAMICALLY CHANGING THE BIAS ON PFETS CONTAINED IN MEMORY CELLS
82003742	Granted	7523455	5/3/2002	4/21/2009	10/139074	US	METHOD AND SYSTEM FOR APPLICATION MANAGED CONTEXT SWITCHING
82013480	Granted	5892698	4/4/1996	4/6/1999	08/628178	US	2's Complement Floating-Point Multiply Accumulate Unit
82014104	Granted	5764085	7/31/1997	6/9/1998	08/904244	US	Method And Apparatus For Sharing A FET Between A Plurality Of Operationally Exclusive Logic Gates
82014602	Granted	5761490	5/28/1996	6/2/1998	08/654440	US	Changing The Meaning Of A Pre-Decode Bit In A Cache Memory Depending On Branch Prediction Mode
82014608	Granted	5765220	6/18/1996	6/9/1998	08/664604	US	APPARATUS AND METHOD TO REDUCE INSTRUCTION ADDRESS STORAGE IN A SUPER- SCALER PROCESSOR
82015106	Granted	5761474	5/24/1996	6/2/1998	08/655330	US	Operand Dependency Tracking System And Method For A Processor That Executes Instructions Out Of Order
82015853	Granted	5663902	7/18/1996	9/2/1997	08/683485	US	System And Method For Disabling Static Current Paths In Fuse Logic
82020533	Granted	5794012	10/9/1996	8/11/1998	08/728338	US	VERIFICATION OF STRONGLY ORDERED MEMORY ACCESSES IN A FUNCTIONAL MODEL OF AN OUT-OF ORDER COMPUTER SYSTEM

PATENT
REEL: 038498 FRAME: 0749

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82020539	Granted	5815688	10/9/1996	36067	08/728088	US	VERIFICATION OF ACCESSES IN A FUNCTIONAL MODEL OF A SPECULATIVE OUT-OF-ORDER COMPUTER SYSTEM
82024595	Granted	6157266	2/12/1998	12/5/2000	09/022464	US	Delay Elements Arranged For A Signal Controlled Oscillator
82028462	Granted	6246721	9/22/1997	6/12/2001	08/935012	US	Termination Structure Based On The Cancellation Of The Reflected Wave
82031339	Granted	6775752	2/21/2000	38209	09/510288	US	System And Method For Efficiently Updating A Fully Associative Array
82031399	Granted	6820190	2/2/2000	38307	09/496844	US	METHOD AND COMPUTER SYSTEM FOR DECOMPOSING MACROINSTRUCTIONS INTO MICROINSTRUCTIONS AND FORCING THE PARALLEL ISSUE OF AT LEAST TWO MICROINSTRUCTIONS
82036706	Granted	6170021	10/19/1998	1/2/2001	09/175802	US	SERVER COMPUTER I/O REDIRECTION TOOL FOR REMOTE CONSOLING
82043762	Granted	6061222	8/28/1998	5/9/2000	09/141549	US	METHOD AND APPARATUS FOR REDUCING NOISE IN INTEGRATED CIRCUIT CHIPS
82049195	Granted	6323714	2/3/2000	11/27/2001	09/497094	US	System And Method For Deskewing Synchronous Clocks In A Very Large Scale Integrated Circuit
82088084	Granted	9146738	10/20/2008	9/29/2015	12/254687	US	Interleaving Bits Of Multiple Instruction Results In A Single Destination Register
82097579	Granted	7818646	11/12/2003	10/19/2010	10/712902	US	Expectation Based Event Verification
82105382	Granted	6786760	4/21/2003	38237	10/420577	US	Method And System For Sensing IC Package Orientation In Sockets
82117679	Granted	6662319	8/31/2000	12/9/2003	09/652314	US	SPECIAL ENCODING OF KNOWN BAD DATA
82117682	Granted	7100096	9/30/2003	38958	10/675133	US	SPECIAL ENCODING OF KNOWN BAD DATA
82129103	Granted	6285406	3/28/1997	37138	08/829437	US	POWER MANAGEMENT SCHEMES FOR APPARATUS WITH CONVERGED FUNCTIONALITIES
82130912	Granted	5834856	8/15/1997	36109	08/912877	US	COMPUTER SYSTEM COMPRISING A METHOD AND APPARATUS FOR PERIODIC TESTING OF REDUNDANT DEVICES
82131350	Granted	6370657	11/19/1998	37355	09/196264	US	HOT PROCESSOR SWAP IN A MULTIPROCESSOR PERSONAL COMPUTER SYSTEM
82131605	Granted	6216216	10/7/1998	36991	09/167768	US	METHOD AND APPARATUS FOR PROVIDING PROCESSOR PARTITIONING ON A MULTIPROCESSOR MACHINE
82131662	Granted	6742066	3/27/2002	38132	10/108106	US	METHOD FOR CONTROLLING REMOTE CONSOLE FUNCTIONALITY ASSIST LOGIC
82131665	Granted	7447818	11/18/2003	39756	10/716144	US	SYSTEM AND METHOD FOR CONTROLLING REMOTE CONSOLE FUNCTIONALITY ASSIST LOGIC
82131731	Granted	6182236	8/26/1998	1/30/2001	09/140146	US	CIRCUIT AND METHOD EMPLOYING FEEDBACK FOR DRIVING A CLOCKING SIGNAL TO COMPENSATE FOR LOAD-INDUCED SKEW

PATENT
REEL: 038498 FRAME: 0750

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0751

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82133726	Granted	6757725	4/6/2000	6/29/2004	09/544574	US	SHARING AN ETHERNET NIC BETWEEN TWO SUB-SYSTEMS
82137032	Granted	6107839	2/1/1999	8/22/2000	09/241003	US	HIGH INPUT IMPEDANCE, STROBED CMOS DIFFERENTIAL SENSE AMPLIFIER WITH DOUBLE FIRE EVALUATE
82171247	Granted	7237144	4/6/2004	6/26/2007	10/818994	US	Off-chip Lockstep Checking
82181612	Granted	7228472	1/11/2005	6/5/2007	11/032928	US	System And Method To Control Data Capture
82184231	Granted	7624319	12/23/2004	11/24/2009	11/022079	US	Performance Monitoring System
82193288	Granted	7660937	6/28/2006	2/9/2010	11/477060	US	Emulating A Usb Host Controller
82196282	Granted	8392901	10/28/2005	3/5/2013	11/262200	US	Replacing A ROM Image In A Computer's ROM
82220756	Granted	8031819	10/27/2006	40820	11/588459	US	Systems And Methods For Synchronizing An Input Signal
82233425	Granted	7671634	7/30/2007	3/2/2010	11/830126	US	Redundant Clock Switch Circuit
82233740	Granted	7967626	12/4/2009	6/28/2011	12/631056	US	TAMPER-EVIDENT CONNECTOR
82235552	Granted	8738658	4/23/2008	5/27/2014	12/108466	US	Method For Using Paths In A Directory For Locating Objects
82237862	Published		2/15/2008		12/867185	US	Changing Power States Of Data-handling Devices To Meet Redundancy Criterion
82239107	Granted	8417967	4/2/2008	4/9/2013	12/935715	US	STORAGE DEVICE DATA ENCRYPTION USING A BINARY LARGE OBJECT (BLOB)
82559530	Granted	8782289	6/10/2008	7/15/2014	12/996996	US	Presenting Multi-Function Devices Behind A Switch Hierarchy As A Single Function Device
82664940	Granted	8661279	7/19/2011	2/25/2014	13/185799	US	POWER CAPPING USING C-STATES
82672099	Granted	8792486	8/31/2011	41849	13/223253	US	Packet routing within server device enclosure
82892356	Granted	9058155	6/19/2009	42171	13/375138	US	ENCLOSURE POWER CONTROLLER PROVIDING PLURALITY OF POWER CONTROL SIGNALS TO PLURALITY OF REMOVABLE COMPUTE NODES BASED ON A DUTY CYCLE OF EACH POWER CONTROL SIGNAL (AS AMENDED)
82911812	Published		4/3/2012		13/438357	US	MANAGING A SET OF RESOURCES
82961736	Granted	9036629	4/27/2012	42143	13/458053	US	Switch Module
83977191	Published		2/24/2012		14/366927	US	WEAR-LEVELING CORES OF A MULTI-CORE PROCESSOR
84059581	Published		4/26/2012		14/387618	US	SELF-BIASED DELAY LOCKED LOOP WITH DELAY LINEARIZATION
84220840	Published		5/8/2015		14/707621	US	Enclosure Power Controller
84289247	Application		7/29/2015		14/812460	US	Power Capping Feedback Normalization
81973646	Granted	6668294	3/17/2001	12/23/2003	09/810964	US	DATA CORRUPTION AVOIDANCE ON A BACKPLANE BUS ADAPTED TO RECEIVE BUS CONTROLLER CARDS OF DIFFERENT TYPES
81973649	Granted	7043586	11/19/2003	5/9/2006	10/716856	US	Data Corruption Avoidance On A Backplane Bus Adapted To Receive Bus Controller Cards Of Different Types
81990572	Granted	7500069	9/17/2001	3/3/2009	09/954352	US	System And Method For Providing Secure Access To Network Logical Storage Partitions

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81990629	Granted	7340572	3/6/2002	39511	10/094827	US	Method And System For Reliable Remote-mirror Resynchronization In Disk Arrays And Other Mass Storage Devices
81993629	Granted	7330013	11/12/2003	2/12/2008	10/712451	US	APPARATUS AND METHOD FOR CHARGING AND DISCHARGING A BATTERY
82031585	Granted	6532121	10/25/1999	3/11/2003	09/426831	US	Compression Algorithm With Embedded Meta-Data For Partial Record Operation Augmented With Expansion Joints
82031588	Granted	7062702	3/14/2001	6/13/2006	09/808710	US	Efficient Parity Operations
82062491	Granted	6934881	4/27/2001	8/23/2005	09/843148	US	MEMORY INCLUDING PORTION STORING A COPY OF PRIMARY OPERATING SYSTEM AND METHOD OF OPERATING COMPUTER INCLUDING THE MEMORY
82069355	Granted	6931509	12/15/2003	8/16/2005	10/734624	US	Address Mapping In Solid State Storage Device
82086653	Granted	6977927	9/18/2000	12/20/2005	09/664500	US	Method And System Of Allocating Storage Resources In A Storage Area Network
82086713	Granted	6804819	9/18/2000	10/12/2004	09/665583	US	Method, System, And Computer Program Product For A Data Propagation Platform And Applications Of Same
82089524	Granted	7293048	10/29/2003	11/6/2007	10/697820	US	SYSTEM FOR PRESERVING LOGICAL OBJECT INTEGRITY WITHIN A REMOTE MIRROR CACHE
82091456	Granted	7117309	4/14/2003	10/3/2006	10/414195	US	Method Of Detecting Sequential Workloads To Increase Host Read Throughput
82099325	Granted	7366866	10/30/2003	4/29/2008	10/699318	US	Block Size Allocation In Copy Operations
82102196	Allowed		4/30/2004		10/835991	US	System And Method For Message Routing In A Network
82105070	Granted	8023520	3/27/2003	9/20/2011	10/401236	US	Signaling Packet
82117241	Granted	6643795	3/30/2000	11/4/2003	09/538680	US	CONTROLLER-BASED BI-DIRECTIONAL REMOTE COPY SYSTEM WITH STORAGE SITE FAILOVER CAPABILITY
82117244	Granted	6658540	3/31/2000	12/2/2003	09/540309	US	METHOD FOR TRANSACTION COMMAND ORDERING IN A REMOTE DATA REPLICATION SYSTEM
82117427	Granted	6961347	6/20/2000	11/1/2005	09/597190	US	HIGH-SPEED INTERCONNECTION LINK HAVING AUTOMATED LANE REORDERING
82119680	Granted	6978345	5/15/2001	12/20/2005	09/855483	US	SELF-MIRRORING HIGH PERFORMANCE DISK DRIVE
82119863	Granted	7720928	6/1/2001	5/18/2010	09/872962	US	Centralized Fine-grained Enhancements For Distributed Table Driven I/O Mapping
82119926	Granted	6928513	3/26/2002	8/9/2005	10/106814	US	System And Method For Managing Data Logging Memory In A Storage Area Network
82119929	Granted	7542986	3/26/2002	6/2/2009	10/106905	US	System And Method For Maintaining Order For A Replicated Multi-unit I/O Stream
82120118	Granted	7051122	7/9/2004	5/23/2006	10/888156	US	Structure And Process For Distributing SCSI LUN Semantics Across Parallel Distributed Components
82120550	Granted	7124247	11/2/2004	10/17/2006	10/979298	US	Quantification Of A Virtual Disk Allocation Pattern In A Virtualized Storage Pool

PATENT
REEL: 038498 FRAME: 0752

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82124738	Granted	5809285	12/21/1995	9/15/1998	08/576555	US	COMPUTER SYSTEM HAVING A VIRTUAL DRIVE ARRAY CONTROLLER
82134845	Granted	6188973	3/29/1999	2/13/2001	09/280399	US	AUTOMATIC MAPPING, MONITORING, AND CONTROL OF COMPUTER ROOM COMPONENTS
82134848	Granted	5790782	11/15/1996	8/4/1998	08/746739	US	AUTOMATIC DISK DRIVE SHELF ADDRESS ASSIGNMENT AND ERROR DETECTION METHOD AND APPARATUS
82163819	Granted	5826001	10/13/1995	10/20/1998	08/542670	US	RECONSTRUCTING DATA BLOCKS IN A RAID ARRAY DATA STORAGE SYSTEM HAVING STORAGE DEVICE METADATA AND RAID SET METADATA
82165193	Granted	5933592	10/13/1995	8/3/1999	08/542933	US	PROMOTING DEVICE LEVEL ERROR TO RAIDSET LEVEL ERROR TO RESTORE REDUNDACY IN A RAID ARRAY DATA STORAGE SYSTEM
82165943	Granted	6463532	2/23/1999	10/8/2002	09/255897	US	SYSTEM AND METHOD FOR EFFECTUATING DISTRIBUTED CONSENSUS AMONG MEMBERS OF A PROCESSOR SET IN A MULTIPROCESSOR COMPUTING SYSTEM THROUGH THE USE OF SHARED STORAGE RESOURCES
82167752	Granted	7817583	4/28/2003	10/19/2010	10/425690	US	METHOD FOR VERIFYING A STORAGE AREA NETWORK CONFIGURATION
82173185	Granted	7152077	5/16/2003	39070	10/440531	US	SYSTEM FOR REDUNDANT STORAGE OF DATA
82179926	Granted	8493839	11/20/2003	41478	10/717730	US	Method And System Of Teamed Network Adapters With Offloaded Connections
82190477	Granted	8006056	1/30/2004	8/23/2011	10/769659	US	Storage System Including Capability To Move A Virtual Storage Device Group Without Moving Data
82194782	Granted	8059539	12/29/2004	11/15/2011	11/027170	US	Link Throughput Enhancer
82198589	Granted	7555644	7/21/2006	6/30/2009	11/459030	US	SYSTEM AND METHOD FOR OPERATING SYSTEM IMAGE PROVISIONING IN A UTILITY COMPUTING ENVIRONMENT
82204337	Granted	8214844	4/29/2005	7/3/2012	11/118895	US	Systems And Methods For Adjusting Service Queue Capacity
82205144	Granted	8127088	1/27/2005	2/28/2012	11/044962	US	Intelligent Cache Management
82206956	Granted	7426633	5/12/2005	9/16/2008	11/127650	US	System And Method For Reflashing Disk Drive Firmware
82211702	Granted	7809919	7/26/2006	10/5/2010	11/493154	US	Automatic Data Block Misalignment Detection And Correction In A Computer System Utilizing A Hard Disk Subsystem
82214762	Published		11/30/2005		11/289554	US	A Method Or Apparatus For Processing Data In A System Management Application Program
82218320	Granted	7546485	8/15/2006	6/9/2009	11/505097	US	Method And System For Efficient Journal-based Resynchronization
82220882	Granted	8650271	7/31/2008	2/11/2014	12/183063	US	Cluster Management System And Method
82225124	Granted	7856489	5/24/2007	12/21/2010	11/805592	US	Simplify Server Replacement
82229804	Published		7/16/2008		12/174405	US	Terminal And Method For Receiving Data In A Network
82240610	Granted	8891233	3/10/2008	11/18/2014	12/921712	US	Cable Management Module

PATENT
REEL: 038498 FRAME: 0753

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82242170	Granted	8020035	9/30/2008	9/13/2011	12/242022	US	Expander Circuit For A Solid State Persistent Storage Device That Provides A Plurality Of Interfaces To Corresponding Storage Controllers
82248722	Granted	8184982	12/20/2008	5/22/2012	12/340700	US	Data Reporting Systems And Methods
82249787	Published		4/15/2009		12/424076	US	PROVIDING INFORMATION RELATING TO USAGE OF A SIMULATED SNAPSHOT
82250099	Granted	8261018	7/11/2009	41156	12/501410	US	Managing Data Storage Systems
82250720	Granted	8335891	7/14/2009	12/18/2012	12/502485	US	METHOD AND SYSTEM FOR CONFIGURING A STORAGE ARRAY
82259150	Granted	8482429	3/8/2010	7/9/2013	12/719330	US	Sensing Environmental Conditions Using RFID
82259213	Published		1/11/2010		12/685471	US	Network Physical Layer Security
82262150	Granted	8694699	6/4/2010	4/8/2014	12/794594	US	PATH SELECTION FOR APPLICATION COMMANDS
82265270	Granted	8726261	4/6/2011	5/13/2014	13/081132	US	ZERO DOWNTIME HARD DISK FIRMWARE UPDATE
82408613	Granted	8966476	5/28/2008	2/24/2015	12/995032	US	Providing Object-level Input/output Requests Between Virtual Machines To Access A Storage Subsystem
82578763	Granted	6658478	8/4/2000	12/2/2003	09/633088	US	Data Storage System
82578777	Granted	7743031	9/4/2003	6/22/2010	10/655951	US	Time and Space Efficient Technique for Creating Virtual Volume Copies
82578840	Granted	7165156	9/4/2003	1/16/2007	10/655961	US	Read-Write Snapshots
82578843	Granted	7590985	7/12/2002	9/15/2009	10/194606	US	Cluster Inter-Process Communication Transport
82578846	Granted	6965957	7/12/2002	11/15/2005	10/194685	US	Automatic Cluster Join Protocol
82578929	Granted	7911222	10/1/2009	3/22/2011	12/571740	US	Mix Mode Driver for Traces of Different Lengths
82618886	Published		3/30/2011		13/076277	US	TRANSCEIVER FOR DIFFERENT VENDOR DEVICES
82662232	Granted	8787021	6/17/2011	7/22/2014	13/163369	US	Memory Cooler
82846408	Granted	8633398	10/25/2011	1/21/2014	13/281110	US	Circuit Board Contact Pads
82853186	Published		1/15/2010		13/259967	US	Storing Data Relating To Cables
82961673	Published		7/25/2012		13/557443	US	ZONING RECORD UPDATE
82961988	Granted	9143432	4/10/2012	9/22/2015	13/443793	US	EXPANDER-TARGETED ZONED BROADCAST
83010661	Granted	8856306	8/27/2012	10/7/2014	13/595693	US	DETERMINING AN ACTIVE ZONE MANAGER BASED ON DISRUPTION PREDICTION METRICS
83014454	Granted	9032071	7/24/2012	5/12/2015	13/556667	US	SYSTEMS AND METHODS FOR REPRESENTING A SAS FABRIC
83119775	Granted	8788724	11/30/2012	7/22/2014	13/690354	US	STORAGE DEVICE TO PROVIDE ACCESS TO STORAGE RESOURCES OVER A DATA STORAGE FABRIC
83137591	Granted	D699721	1/25/2013	2/18/2014	29/444111	US	Hard Drive Carrier
83139400	Published		4/30/2013		13/873416	US	DETERMINING A LOOP SET IDENTIFYING PORTS OF A ROUTING MODULE CONNECTED IN A STORAGE FABRIC LOOP
83206779	Granted	9058295	4/25/2013	6/16/2015	13/870820	US	ENCRYPT DATA OF STORAGE DEVICE

PATENT
REEL: 038498 FRAME: 0754

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83230340	Published		10/28/2010		13/879805	US	ZONING DATA TO A VIRTUAL MACHINE
83793393	Published		10/25/2011		14/235572	US	DRIVE CARRIER LIGHT SOURCE CONTROL
84072047	Published		6/28/2012		14/400787	US	MEMORY MODULE WITH A DUAL-PORT BUFFER
84141201	Application		12/19/2012		14/433671	US	NVRAM PATH SELECTION
84215539	Application		3/28/2013		14/765057	US	ADDRESS RANGE TRANSFER FROM FIRST NODE TO SECOND NODE
84241573	Application		5/8/2015		14/707530	US	ENCRYPT DATA OF STORAGE DEVICE
90054366	Application		9/23/2015		14/863044	US	STORAGE FABRIC ADDRESS BASED DATA BLOCK RETRIEVAL
81952361	Granted	5928346	6/11/1997	7/27/1999	08/873348	US	METHOD FOR ENHANCED PERIPHERAL COMPONENT INTERCONNECT BUS SPLIT DATA TRANSFER
82098827	Granted	7003591	8/20/2003	2/21/2006	10/644291	US	Configurable Mapping Of Devices To Bus Functions
82105256	Granted	7623482	7/23/2003	11/24/2009	10/625291	US	System And Method For Effectuating The Transfer Of Data Blocks Including A Header Block Across A Clock Boundary
82127984	Granted	5809186	7/31/1997	9/15/1998	08/905813	US	DELIVERING MULTIPLE OPTICAL SIGNALS USING LIGHT THAT DOES NOT CARRY THE DATA
82129976	Granted	6222846	4/22/1998	4/24/2001	09/064409	US	METHOD AND SYSTEM FOR EMPLOYING A NON-MASKING INTERRUPT AS AN INPUT-OUTPUT PROCESSOR INTERRUPT
82132724	Granted	6226699	6/25/1998	5/1/2001	09/104845	US	METHOD AND APPARATUS FOR CLOCK SELECTION AND SWITCHING
82132790	Granted	6510522	11/20/1998	37642	09/196849	US	APPARATUS AND METHOD FOR PROVIDING ACCESS SECURITY TO A DEVICE COUPLED UPON A TWO-WIRE BIDIRECTIONAL BUS
82191410	Granted	8176204	6/9/2006	5/8/2012	11/450491	US	System And Method For Multi-Host Sharing Of A Single-Host Device
82191413	Published		10/27/2006		11/553682	US	System And Methods For Multi-host Extension Of A Hierarchical Interconnect Network
82217693	Granted	8922585	10/24/2006	12/30/2014	11/585756	US	Display Controller
82220819	Granted	6985967	7/20/2000	1/10/2006	09/620106	US	Web Server Network System And Method
82238177	Granted	8903989	4/28/2008	12/2/2014	12/937693	US	ADJUSTABLE SERVER-TRANSMISSION RATES OVER FIXED-SPEED BACKPLANE CONNECTIONS WITHIN A MULTI-SERVER ENCLOSURE
82241609	Granted	9037768	4/28/2008	5/19/2015	12/937685	US	VIRTUAL-INTERRUPT-MODE INTERFACE AND METHOD FOR VIRTUALIZING AN INTERRUPT MODE
82672010	Granted	8930742	12/16/2008	1/6/2015	13/133372	US	CLOCK SIGNALS FOR DYNAMIC RECONFIGURATION OF COMMUNICATION LINK BUNDLES
82816581	Granted	8798126	10/31/2011	8/5/2014	13/285526	US	Receiver Calibration Using Offset-Data Error Rates
82892396	Granted	8745238	7/17/2009	6/3/2014	13/375197	US	Virtual Hot Inserting Functions In A Shared I/O Environment
83153071	Published		3/27/2013		13/851750	US	SERVER NODE
83976192	Published		1/31/2012		14/366316	US	CONNECTOR DETECTION

PATENT
REEL: 038498 FRAME: 0755

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83980646	Published		3/8/2012		14/368354	US	DIAGNOSTIC MODULE
84004539	Published		8/13/2014		14/459077	US	METHODS AND SYSTEMS FOR AN INTERPOSER BOARD
84026946	Published		4/25/2012		14/379554	US	OPERATING VERTICAL-CAVITY SURFACE-EMITTING LASERS
90057801	Application		9/18/2015		14/858601	US	OPERATING VERTICAL-CAVITY SURFACE-EMITTING LASERS
82062986	Granted	7065575	11/20/2000	6/20/2006	09/715045	US	Cooperative Networking Method And System
82244795	Allowed		9/5/2008		12/205685	US	System And Method For Installing Authentication Credentials On A Network Device
82250225	Granted	9154583	10/30/2009	10/6/2015	12/609990	US	Methods And Devices For Implementing Network Policy Mechanisms
82250594	Granted	8612524	10/28/2009	12/17/2013	12/607889	US	CESSATION OF SENDING NETWORK STATUS MESSAGES TO A SERVER
82261274	Granted	8442552	4/23/2010	5/14/2013	12/766520	US	METHOD AND SYSTEM FOR RADIO FREQUENCY COVERAGE PREDICTION IN A MULTI-LEVEL WIRELESS NETWORK
84047158	Published		3/30/2012		14/387544	US	DEFINING A PERIMETER TO MONITOR A WIRELESS DEVICE FOR A VIOLATION OF THE PERIMETER
82061927	Granted	6567661	3/7/2001	5/20/2003	09/800682	US	DISTRIBUTED TELEMETRY METHOD AND SYSTEM
82068236	Granted	6587453	12/17/1998	7/1/2003	09/213749	US	METHOD OF COMMUNICATING FIRST AND SECOND DATA TYPES
82135475	Granted	6195777	11/6/1997	2/27/2001	08/965608	US	LOSS RESILIENT CODE WITH DOUBLE HEAVY TAILED SERIES OF REDUNDANT LAYERS
82182980	Granted	7436969	9/2/2004	10/14/2008	10/934200	US	Method And System For Optimizing Denoising Parameters Using Compressibility
82222439	Granted	8321538	9/24/2007	11/27/2012	11/903601	US	Autonomous Network Device Configuration Method
82266521	Granted	6031873	9/6/1996	2/29/2000	08/709184	US	Nested Shell Mapping
82266827	Granted	5875176	5/2/1997	2/23/1999	08/850906	US	Network Adaptor Driver With Destination Based Ordering
82266833	Granted	6925078	2/19/1999	8/2/2005	09/253418	US	Network Adaptor Driver With Destination Based Ordering
82267388	Granted	6005846	5/7/1997	12/21/1999	08/852656	US	APPARATUS FOR AN IMPROVED ISDN TERMINAL ADAPTER HAVING AUTOMATIC SPID CONFIGURATION AND METHODS FOR USE THEREIN
82267391	Granted	6031848	5/7/1997	2/29/2000	08/852658	US	Apparatus For An Improved ISDN Terminal Adapter Having Baud Rate Unblocking And Methods for use Therein
82268081	Granted	6161201	2/26/1998	12/12/2000	09/031102	US	Method And Apparatus For Concurrent Interaction With A Modem Having An Open Connection
82268138	Granted	6266367	5/28/1998	7/24/2001	09/086395	US	Combined Echo Canceller And Time Domain Equalizer
82268141	Granted	6233237	2/2/1998	5/15/2001	09/017221	US	METHOD AND PROTOCOL FOR CONNECTING DATA CALLS USING R2 SIGNALING
82268516	Granted	6201817	5/28/1998	3/13/2001	09/086390	US	Memory Based Buffering For A UART Or A Parallel UART Like Interface
82269074	Granted	6243785	5/20/1998	6/5/2001	09/082417	US	Hardware Assisted Polling For Software Drivers

PATENT
REEL: 038498 FRAME: 0756

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82269641	Granted	6347347	12/17/1999	2/12/2002	09/465910	US	MULTCAST DIRECT MEMORY ACCESS STORING SELECTED ONES OF DATA SEGMENTS INTO A FIRST-IN-FIRST-OUT BUFFER AND A MEMORY SIMULTANEOUSLY WHEN ENABLED BY A PROCESSOR
82270637	Granted	6208616	10/1/1997	3/27/2001	08/942169	US	System For Detecting Errors In A Network
82270640	Granted	6052733	10/1/1997	4/18/2000	08/940302	US	Method Of Detecting Errors In A Network
82271201	Granted	7016675	9/27/1999	3/21/2006	09/406321	US	System And Method For Controlling Telephone Service Using A Wireless Personal Information Device
82271828	Granted	D454861	1/20/2000	3/26/2002	29/117243	US	Antenna
82272197	Granted	7512685	11/30/2000	3/31/2009	09/727982	US	METHOD AND SYSTEM FOR IMPLEMENTING WIRELESS DATA TRANSFERS BETWEEN A SELECTED GROUP OF MOBILE COMPUTING DEVICES
82273007	Granted	6914952	1/19/2001	7/5/2005	09/766241	US	Superframe Alignment To A Pre-existing ADSL Data Exchange
82273010	Granted	7277517	11/15/2002	10/2/2007	10/298130	US	Method For Achieving Symbol Alignment To A Pre-existing ADSL Data Exchange
82273757	Granted	6915448	4/24/2002	7/5/2005	10/128352	US	Storage Disk Failover and Replacement System
82274012	Granted	7298834	11/22/2002	11/20/2007	10/302241	US	System and Method for Large Capacity Conference Calls
82274195	Granted	7532618	5/2/2005	5/12/2009	11/120445	US	Performing Operations On IP Telephony Devices From A Remote Client
82274198	Granted	8515388	4/3/2009	8/20/2013	12/417925	US	Performing Operations On IP Telephony Devices From A Remote Client
82274324	Granted	7417988	6/30/2003	8/26/2008	10/610521	US	METHOD AND SYSTEM FOR NETWORK BASED CALL-PICKUP
82274450	Application		5/26/2004		10/854038	US	Automatic Redirection Of Fax Calls To A Messaging System
82274636	Published		10/27/2005		11/260785	US	A System And Method For Receiving A User Message At A Packet-network Telephone
82274948	Granted	8416766	6/2/2009	4/9/2013	12/476482	US	Method For Implementing Distributed Voice Functions Into Software Applications
82275443	Granted	6219697	5/2/1997	4/17/2001	08/850406	US	METHOD AND APPARATUS FOR OPERATING THE INTERNET PROTOCOL OVER A HIGH-SPEED SERIAL BUS
82613118	Granted	8676968	8/9/2011	3/18/2014	13/206218	US	Determining Information About A Computing System
81990257	Granted	7107609	7/20/2001	9/12/2006	09/908602	US	Stateful Packet Forwarding In A Firewall Cluster
81998501	Granted	7466668	8/24/2001	12/16/2008	09/939418	US	Reduced Pin-count System Interface For Gigabit Ethernet Physical Layer Devices
82001120	Granted	7346672	3/12/2002	3/18/2008	10/098941	US	Automatic TFTP Firmware Download
82018349	Granted	5859959	4/29/1996	1/12/1999	08/639605	US	Computer Network With Devices/Paths Having Redundant Links
82030337	Granted	6108310	9/12/1997	8/22/2000	08/928062	US	Display Of Network Traffic Attributes Based On Frequency Distribution

PATENT
REEL: 038498 FRAME: 0757

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82035896	Granted	6865160	1/11/1999	3/8/2005	09/228087	US	Broadcast Tree Determination In Load Balancing Switch Protocols
82088024	Granted	6880056	3/28/2002	4/12/2005	10/109258	US	Memory Array And Method With Simultaneous Read/Write Capability
82088027	Granted	8397020	4/11/2005	3/12/2013	11/105088	US	Memory Array And Method With Simultaneous Read/write Capability
82088273	Granted	7103045	3/5/2002	9/5/2006	10/091691	US	SYSTEM AND METHOD FOR FORWARDING PACKETS
82088276	Granted	6954812	3/5/2002	10/11/2005	10/091768	US	TWO-STAGE ROUND ROBIN ARBITRATION SYSTEM
82088399	Granted	7570642	3/5/2002	8/4/2009	10/092155	US	Method And Apparatus For Computing, Storing, And Multiplexing Modified Bytes In A Packet Router
82097639	Granted	7483537	2/10/2003	1/27/2009	10/364219	US	SELECTING CACHED RSA KEYS IN RESPONSE TO RSA KEY REQUESTS
82097642	Granted	8290153	12/19/2008	10/16/2012	12/340490	US	Selecting Cached Rsa-keys In Response To RSA Key Requests
82102259	Application		3/15/2004		10/801434	US	Communication Protocol
82179803	Granted	8209537	3/30/2004	6/26/2012	10/812607	US	Secure Information Distribution Between Nodes (network Devices)
82180799	Granted	7623518	4/8/2004	11/24/2009	10/822048	US	Dynamic Access Control Lists
82186544	Granted	7403474	1/27/2004	39651	10/765655	US	Redundant Router Set Up
82204835	Granted	8327031	2/8/2005	12/4/2012	11/054646	US	Support Chip For Handling Network Chips On A Network Device
82204838	Granted	7894426	2/4/2005	2/22/2011	11/051422	US	Conduit Port For Network Chips
82205519	Granted	7594158	8/26/2005	40078	11/213367	US	Parity Error Checking And Compare Using Shared Logic Circuitry In A Ternary Content Addressable Memory
82205522	Granted	8473832	8/19/2009	41450	12/543695	US	Parity Error Checking And Compare Using Shared Logic Circuitry In A Ternary Content Addressable Memory
82205525	Granted	7757152	8/18/2005	40372	11/207357	US	DATA CORRUPTION SCRUBBING FOR CONTENT ADDRESSABLE MEMORY AND TERNARY CONTENT ADDRESSABLE MEMORY
82206206	Granted	7596741	4/11/2005	9/29/2009	11/102973	US	Packet Protection For Header Modification
82208582	Granted	7506372	5/3/2005	3/17/2009	11/120861	US	Method And Apparatus For Controlling Connection Rate Of Network Hosts
82214138	Granted	8693375	10/17/2006	4/8/2014	11/581815	US	Automated Multiple-instance Spanning Tree Reconfiguration
82218005	Granted	7684410	10/31/2006	3/23/2010	11/590050	US	VLAN Aware Trunks
82218008	Granted	7796613	10/31/2006	9/14/2010	11/590309	US	Detection Of Mismatched VLAN Tags
82218134	Granted	8203970	10/16/2006	6/19/2012	11/581974	US	Method And Apparatus For Selecting Spanning Tree Root
82218317	Granted	8660964	6/30/2006	2/25/2014	11/477863	US	Secure Device Licensing
82218635	Granted	8611254	10/31/2006	12/17/2013	11/590120	US	Systems And Methods For Configuring A Network For Multicasting

PATENT
REEL: 038498 FRAME: 0758

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82219316	Granted	8614954	10/26/2006	41632	11/553108	US	Network Path Identification
82220945	Granted	7515428	10/31/2006	4/7/2009	11/590144	US	Design For Automatic Positioning Of Power Supply Module Handle
82225748	Granted	8131841	7/1/2008	3/6/2012	12/165668	US	Method And Apparatus For Detecting Predefined Signatures In Packet Payload
82225874	Granted	8089960	1/31/2007	1/3/2012	11/669813	US	HIGHLY FLEXIBLE AND EFFICIENT MAC TO PHY INTERFACE
82228118	Granted	8453198	12/27/2007	5/28/2013	11/965262	US	Policy Based, Delegated Limited Network Access Management
82228499	Granted	7873054	9/12/2007	40561	11/853841	US	Pattern Matching In A Network Flow Across Multiple Packets
82229432	Granted	7860026	3/7/2007	40540	11/714940	US	NETWORK SWITCH DEPLOYMENT
82229621	Granted	8910275	2/14/2007	41982	11/705963	US	NETWORK MONITIORING
82230059	Granted	7895430	7/24/2007	40596	11/880913	US	On-chip Logic Analyzer Using Compression
82230119	Granted	7706267	3/6/2007	40295	11/714596	US	NETWORK SERVICE MONITORING
82230122	Granted	8121030	3/9/2010	40960	12/720015	US	NETWORK SERVICE MONITORING
82230680	Granted	7570640	4/9/2007	40029	11/784664	US	Locating Original Port Information
82231241	Granted	7852653	6/4/2007	40526	11/810124	US	Content Addressable Memory
82240544	Granted	7808982	6/3/2008	40456	12/156684	US	METHOD FOR VERIFYING SHARED STATE SYNCHRONIZATION OF REDUNDANT MODULES IN A HIGH AVAILABILITY NETWORK SWITCH
82240547	Granted	7917801	12/4/2008	40631	12/328624	US	Systems And Methods For Managing Network Communications
82245476	Granted	9077628	5/15/2008	42192	12/152552	US	Network Device And Method Of Operating The Same
82247042	Granted	9112879	5/12/2009	8/18/2015	12/464303	US	Location Determined Network Access
82247291	Granted	8964763	2/9/2010	2/24/2015	12/703168	US	INTER-ROUTER COMMUNICATION METHOD AND MODULE
82247474	Granted	8891358	10/6/2009	11/18/2014	12/574474	US	Method For Application Broadcast Forwarding For Routers Running Redundancy Protocols
82249913	Granted	8417954	2/11/2009	4/9/2013	12/369537	US	Installation Image Including Digital Signature
82250162	Granted	8983938	2/6/2009	3/17/2015	12/367081	US	Selecting A Command File
82250222	Published		10/30/2009		12/610018	US	Methods And Devices For Implementing Configuaration Synchronization
82251344	Granted	8018900	12/28/2006	9/13/2011	11/646904	US	Seamless Roaming Across Wireless Subnets Using Source Address Forwarding
82259711	Granted	8537859	2/26/2010	9/17/2013	12/714215	US	REASSEMBLY OF MINI-PACKETS IN A BUFFER
82264643	Granted	8353718	12/17/2010	1/15/2013	12/971090	US	HANDLE ASSEMBLY FOR ELECTRICAL CONNECTION WITH A GROUNDING MECHANISM
82264766	Granted	8157593	12/16/2010	4/17/2012	12/969611	US	Panel with aperture for receiving a connector module and EMI shield comprising elongate members of conductive material

PATENT
REEL: 038498 FRAME: 0759

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82265078	Granted	8654652	5/30/2011	2/18/2014	13/118496	US	SYSTEM FOR MANAGING THE SIZE OF A HARDWARE ROUTING TABLE
82266452	Granted	5754790	5/1/1996	35934	08/641506	US	Apparatus And Method For Selecting Improved Routing Paths In An Autonomous System Of Computer Networks
82266515	Granted	5949786	10/2/1996	9/7/1999	08/724742	US	Stochastic Circuit Identification In A Multi-protocol Network Switch
82266578	Granted	6018763	5/28/1997	36550	08/858182	US	High Performance shared Memory For A Bridge Router Supporting cache Coherency
82266581	Granted	5968176	5/29/1997	36452	08/865482	US	Multilayer Firewall System
82266701	Granted	5966382	5/30/1997	36445	08/866566	US	Network Communications Using Sine Waves
82266707	Granted	6151323	1/15/1998	36851	09/007800	US	Method of supporting unknown addresses in an interface for data transmission in an asynchronous transfer mode
82266767	Granted	6252532	2/26/1998	37068	09/031368	US	Programmable Compensation and Frequency Equalization For Network Systems
82266770	Granted	5892922	2/28/1997	36256	08/808021	US	Virtual Local Area Network Memory Access System
82267076	Granted	6028862	5/8/1997	36578	08/853326	US	Fast Path Networking
82267265	Granted	6101554	6/15/1998	8/8/2000	08/973177	US	APPARTAUS FOR CONTROLLING DATA FLOW USING LOOKUP TABLES TO LINKG INCOMING PACKETS DIRECTLY TO OUTPUT PORTS
82267577	Granted	6009274	6/24/1997	12/28/1999	08/881517	US	Method And Apparatus For Automatically Updating Software Components On End Systems Over A Network
82267640	Granted	6169744	1/7/1998	1/2/2001	09/003844	US	METHOD AND PROTOCOL FOR A MEDIUM ACCESS CONTROL LAYER FOR LOCAL AREA NETWORKS WITH MULTIPLE-PRIORITY TRAFFIC
82267643	Granted	6937610	10/6/2000	38594	09/680910	US	METHOD AND PROTOCOL FOR A MEDIUM ACCESS CONTROL LAYER FOR LOCAL AREA NETWORKS WITH MULTIPLE-PRIORITY TRAFFIC
82267706	Granted	6226769	2/3/1999	5/1/2001	09/243955	US	Forward Error Correction System For Packet Based Real Time Media
82268012	Granted	6000042	8/25/1997	36501	08/918013	US	Fault Detection On A Dual Supply System For A Universal Serial Bus System
82268015	Granted	6170062	12/6/1999	36893	09/455586	US	Fault Detection On A Dual Supply System For A Universal Serial Bus System
82268144	Granted	6166917	1/7/1998	36886	09/003627	US	Techniques Of Assembling Modular Electronic Equipment
82268201	Granted	5983282	3/11/1998	36473	09/038435	US	METHOD AND SYSTEM FOR COMPUTER NETWORK ACCESS USING COOPERATING NON-DEDICATED REMOTE ACCESS SERVER
82268204	Granted	6108350	3/9/1998	36760	09/038711	US	Method and Apparatus For Detecting The Protocol Used By An End Station And Negotiating A Protocol Used By The Endpoint

PATENT
REEL: 038498 FRAME: 0760

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82268207	Granted	5978951	9/11/1997	11/2/1999	08/927336	US	HIGH SPEED CACHE MANAGEMENT UNIT FOR USE IN A BRIDGE/ROUTER
82268264	Granted	6094659	9/26/1997	7/25/2000	08/938851	US	WEB SERVER FOR USE IN A LAN MODEM
82268387	Granted	6145010	7/14/1998	11/7/2000	09/114975	US	METHOD AND APPARATUS FOR BANDWIDTH CONTROL IN AN OVER SUBSCRIBED COMPUTER NETWORK SWITCH
82268453	Granted	5978852	1/6/1998	11/2/1999	09/003230	US	A LAN SWITCH INTERFACE FOR PROVIDING ARBITRATION BETWEEN DIFFERENT SIMULTANEOUS MEMORY AACCESS REQUESTS
82268765	Granted	6141344	3/19/1998	10/31/2000	09/044293	US	COHERENCE MECHANISM FOR DISTRIBUTED ADDRESS CACHE IN A NETWORK SWITCH
82268768	Granted	6262984	5/12/1998	7/17/2001	09/076687	US	Method Of Preventing Overlapping Branches In Point To Multipoint Calls In PNNI Networks
82268825	Granted	6269099	7/1/1998	7/31/2001	09/108935	US	Protocol And Method For Peer Network Device Discovery
82268828	Granted	6092108	3/19/1998	7/18/2000	09/044804	US	Dynamic Threshold Packet Filtering Of Application Processor Frames
82268888	Granted	6049258	5/11/1998	4/11/2000	09/075373	US	Isolation And Signal Filter Transformer
82269014	Granted	6223149	5/28/1998	4/24/2001	09/085918	US	NON-DISTRIBUTED LAN EMULATION SERVER REDUNDANCY METHOD
82269200	Granted	6167567	5/5/1998	12/26/2000	09/073054	US	TECHNIQUE FOR AUTOMATICALLY UPDATING SOFTWARE STORED ON A CLIENT COMPUTER IN A NETWORKED CLIENT-SERVER ENVIRONMENT
82269326	Granted	6159037	11/5/1998	12/12/2000	09/187175	US	Illuminated Connector
82269386	Granted	5903615	5/29/1998	5/11/1999	09/087626	US	Low Complexity Frequency Estimator And Interference Cancellation Method And Device
82269392	Granted	6201809	5/28/1998	3/13/2001	09/086245	US	PORT REDUNDANCY AND BACKPRESSURE TRANSLATION TABLE APPARATUS
82269761	Granted	6327662	9/30/1998	12/4/2001	09/164209	US	IMPROVED SECURITY THROUGH THE USE OF TOKENS AND AUTOMATICALLY DOWNLOADED APPLETS
82269767	Granted	6912589	3/30/1999	6/28/2005	09/281726	US	System and Method for Efficiently Handling Multicast Packets By Ignoring VLAN Context
82270013	Granted	6397260	3/8/1999	5/28/2002	09/264473	US	Automatic Load Sharing For Network Routers
82270139	Granted	6609197	4/22/1999	8/19/2003	09/296192	US	Method And System For Secure Emergency Access To Network Devices
82270202	Granted	6704282	6/30/1999	3/9/2004	09/345662	US	VPN Tunnel Redirection
82270511	Granted	6724723	5/26/1999	4/20/2004	09/320169	US	Method Of Providing A Signaling Qualification Function In A Connection Oriented Network
82270703	Granted	6704292	11/22/1999	3/9/2004	09/447090	US	Use Of Remote Poll To Facilitate Determining Network Topology
82270886	Granted	6766367	2/8/2000	7/20/2004	09/500405	US	Method and Apparatus For Fetching Sparsely Indexed MIB Tables In Managed Network Systems

PATENT
REEL: 038498 FRAME: 0761

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82271321	Granted	7283525	1/17/2001	10/16/2007	09/760721	US	MULTI-PORT NETWORK COMMUNICATION DEVICE WITH SELECTIVE MAC ADDRESS FILTERING
82271390	Granted	7139250	4/30/2003	11/21/2006	10/426183	US	Advanced Ethernet Auto Negotiation
82271450	Granted	6419506	1/20/2000	7/16/2002	09/488668	US	Combination Miniature Cable Connector And Antenna
82271822	Granted	6778664	3/14/2000	8/17/2004	09/525201	US	Line Current Protection Circuit And Method For Linear And Nonlinear Hold Circuit
82271888	Granted	7257739	8/8/2001	8/14/2007	09/924955	US	Diagnosis of Link Failures in a Network
82272137	Granted	6882622	8/2/2000	4/19/2005	09/630955	US	Flow control System for Network Devices
82272446	Granted	6801950	9/25/2000	10/5/2004	09/668339	US	STACKABLE NETWORK UNIT INCLUDING REGISTER FOR IDENTIFYING TRUNK CONNECTION STATUS OF STACKED UNITS
82272449	Granted	6396169	2/29/2000	5/28/2002	09/515791	US	Intelligent Power Supply Control For Electronic Systems Requiring Multiple Voltages
82272452	Granted	6651178	2/29/2000	11/18/2003	09/515562	US	Communication Module Having Power Supply Requirement Identification
82272572	Granted	6704016	5/8/2000	3/9/2004	09/566828	US	Method And Apparatus For The Graphical Presentation Of Selected Data
82272824	Granted	7062569	1/19/2001	6/13/2006	09/764412	US	CASCADE CONTROL ARCHITECTURE AND OPERATION FOR PACKET-BASED COMMUNICATION SYSTEMS
82273319	Granted	7385939	7/2/2001	39609	09/897525	US	Network Management Apparatus and Method for Determining the Topology of a Network
82273325	Granted	7673035	7/2/2001	40239	09/897518	US	Apparatus and Method for Processing Data Relating to Events on a Network
82273571	Granted	7194004	1/28/2002	39161	10/060112	US	Method for managing network access
82273634	Granted	6996110	8/31/2001	2/7/2006	09/943971	US	Distributed MPLS Architecture
82273883	Granted	7283555	6/25/2002	10/16/2007	10/179440	US	Method and Apparatus for Determining a Polling Interval in a Network Management System
82273946	Granted	7167441	2/8/2002	1/23/2007	10/067965	US	CASCADE CONTROL SYSTEM FOR NETWORKS UNITS
82274381	Granted	8274975	1/12/2009	9/25/2012	12/352207	US	SYSTEM AND METHOD FOR AUTOMATICALLY MANAGING A NETWORK PORT BASED ON A CALENDAR FUNCTION
82274387	Granted	7702903	8/8/2005	4/20/2010	11/199951	US	LICENSE RE-ALLOCATION SYSTEM AND METHOD
82274444	Granted	8943241	9/9/2004	42031	10/938292	US	A Communication Device Ingress Information Management System And Method
82274507	Granted	7975048	8/18/2009	7/5/2011	12/543069	US	Network Including Snooping
82274573	Granted	7802094	2/22/2005	40442	11/064225	US	REDUCTION OF FALSE POSITIVE DETECTION OF SIGNATURE MATCHES IN INTRUSION DETECTION SYSTEMS
82651054	Granted	8611351	2/14/2011	12/17/2013	13/026803	US	Marked Packet Forwarding
82743829	Granted	8055768	5/27/2011	40855	13/118010	US	Network Service Provisioning Using DHCP Snooping
82772027	Published		1/30/2009		13/146148	US	Dynamically Applying A Control Policy To A Network

PATENT
REEL: 038498 FRAME: 0762

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82834978	Granted	8291060	9/20/2011	10/16/2012	13/237660	US	PROVIDING INFORMATION CORRESPONDING TO A DATA GROUP IDENTIFIER FOR A NETWORK INTERCONNECT DEVICE
82852256	Granted	8275818	10/4/2011	9/25/2012	13/252776	US	Positionally dependent pattern checking in character strings using deterministic finite automata
82858619	Allowed		1/31/2012		13/362159	US	CONFIGURATION FILE COMPATIBILITY
82961653	Allowed		6/15/2012		13/524670	US	SWITCH IDENTIFICATION
82962529	Published		7/31/2012		13/563156	US	Selection of one of first and second link between first and second network devices
82963614	Granted	8948177	7/30/2012	2/3/2015	13/561610	US	POLICY BASED ROUTING
82963628	Granted	9031065	4/23/2012	5/12/2015	13/453373	US	SWITCH HAVING DEDICATED STACKING LINK
82964587	Granted	8879392	4/26/2012	41947	13/456715	US	BGP SECURITY UPDATE INTERCEPTS
83014912	Granted	9071596	7/30/2012	42185	13/562190	US	SECURELY ESTABLISHING A COMMUNICATION CHANNEL BETWEEN A SWITCH AND A NETWORK-BASED APPLICATION USING A UNIQUE IDENTIFIER FOR THE NETWORK-BASED APPLICATION
83030661	Granted	9043618	6/15/2012	42150	13/524215	US	DRAWING POWER OVER NETWORK CABLE
83037491	Granted	9036665	1/23/2013	42143	13/747758	US	SYSTEM AND METHOD FOR REAL-TIME DETECTION, IDENTIFICATION AND REPORTING OF MAC-SYNC FAILURES IN DISTRIBUTED TRUNKING
83112384	Granted	8817664	9/14/2012	8/26/2014	13/619542	US	NETWORK EDGE SWITCH CONFIGURATION BASED ON CONNECTION PROFILE
83132945	Granted	8675652	11/16/2012	3/18/2014	13/679483	US	Packet Processing With Adjusted Access Control List
83138375	Published		4/25/2013		13/870650	US	Heat Sink
83139769	Granted	9007924	1/29/2013	42108	13/753064	US	Balancing Load Distributions of Loopback Ports
83160190	Granted	8904514	4/12/2010	41975	13/640399	US	IMPLEMENTING A HOST SECURITY SERVICE BY DELEGATING ENFORCEMENT TO A NETWORK DEVICE
83205969	Granted	9143419	8/13/2013	42269	13/966010	US	Measuring Flow Activity On An Openflow Enabled Network Device
83222079	Granted	9148360	11/1/2010	9/29/2015	13/876898	US	MANAGING MAC MOVES WITH SECURE PORT GROUPS
83733353	Published		8/15/2011		14/124299	US	SYSTEMS, DEVICES, AND METHODS FOR TRAFFIC MANAGEMENT
83771601	Published		8/9/2011		14/127595	US	COUNT VALUES TO DETECT DISCONNECTED CIRCUIT
83991386	Published		1/31/2012		14/372517	US	DETERMINATION OF SPOOFING OF A UNIQUE MACHINE IDENTIFIER
84017566	Published		3/26/2012		14/377926	US	FRAME PASSING BASED ON ETHERTYPE
84077517	Application		7/30/2012		14/391820	US	PROVIDER BRIDGED NETWORK COMMUNICATION
84089462	Application		7/10/2012		14/397433	US	HOME NETWORK INFORMATION
84168254	Published		8/21/2012		14/422345	US	CONGESTION NOTIFICATION IN A NETWORK
84184524	Published		9/27/2012		14/426414	US	TRANSMIT SPECIFIC TRAFFIC ALONG BLOCKED LINK

PATENT
REEL: 038498 FRAME: 0763

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90017100	Application		1/30/2013		14/763757	US	Sending Traffic Policies
90056287	Application		3/15/2013		14/776759	US	EMULATE VLANS USING MACSEC
90056994	Application		6/14/2013		14/777436	US	LOOP-FREE HYBRID NETWORK
82265765	Granted	5835855	6/12/1996	36109	08/660965	US	ANTENNA SCANNING SYSTEM WITH LOW FREQUENCY DITHERING
82267766	Granted	6144464	2/5/2000	11/7/2000	08/927693	US	METHOD AND SYSTEM FOR MODIFICATION OF FAX DATA RATE OVER WIRLESS CHANNELS
82267769	Granted	6038430	12/10/1997	3/14/2000	08/987982	US	Method And Apparatus For Improving Transmission Of Data In A wireless Network
82269950	Granted	6778519	3/19/1999	8/17/2004	09/273301	US	Wireless Multiple Function PC Card
82272263	Granted	6545643	9/8/2000	4/8/2003	09/658140	US	Extendable Planar Diversity Antenna
82273139	Granted	6920172	1/2/2001	7/19/2005	09/750783	US	Dual Purpose Spread Spectrum Radio Receivers With Controlled Frequency Rejection
82273196	Granted	6826154	5/24/2001	11/30/2004	09/865110	US	Method And Apparatus For Seamless Mobility Between Different Access Technologies
82274132	Granted	7130625	7/1/2002	10/31/2006	10/186957	US	System And Method For A Universal Wireless Access Gateway
82275317	Granted	6266017	11/16/1999	7/24/2001	08/865553	US	Retractable Antenna System
82275320	Granted	6618013	7/23/2001	9/9/2003	09/911166	US	RETRACTABLE ANTENNA ASSEMBLY
82275380	Granted	6219732	1/10/1997	4/17/2001	08/782046	US	Apparatus And Method For Wireless Communication Between A Host and A Selectively Removable Module Electrically Connected To The host
82690141	Published		6/29/2011		13/172545	US	UNSOLICITED BROADCAST PACKET TRANSMISSION THROUGH CLOSE-BY COMMUNICATION PROTOCOL
82908111	Granted	8396076	12/22/2011	3/12/2013	13/335606	US	System And Method For Roaming Between Wireless Networks
83421815	Published		6/28/2011		14/114453	US	METHOD OF ASSOCIATING A CLIENT WITH AN ACCESS POINT IN A WIRELESS LOCAL AREA NETWORK
83991360	Published		1/27/2012		14/372510	US	INTELLIGENT EDGE DEVICE
84297073	Application		7/27/2015		14/810352	US	MULTICAST ROUTING
82061675	Granted	6865598	6/8/2001	3/8/2005	09/875950	US	Utilization Of Unused Disk Space On Networked Computers
82233305	Granted	8332404	10/24/2008	12/11/2012	12/257659	US	DATA PROCESSING APPARATUS AND METHOD OF PROCESSING DATA
82250408	Granted	8001273	3/16/2009	40771	12/404842	US	PARALLEL PROCESSING OF INPUT DATA TO LOCATE LANDMARKS FOR CHUNKS
82251221	Published		7/22/2010		12/841898	US	Data Deduplication Apparatus And Method For Storing Data Received In A Data Stream From A Data Store
82678505	Granted	8904128	6/8/2011	12/2/2014	13/155566	US	PROCESSING A REQUEST TO RESTORE DEDUPLICATED DATA
82944092	Published		2/7/2012		13/367567	US	COMMUNICATING CHUNKS BETWEEN DEVICES

PATENT
REEL: 038498 FRAME: 0764

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83782550	Published		11/4/2011		14/235006	US	Fault Processing in a System
83952382	Published		5/1/2012		14/395491	US	DETERMINING SEGMENT BOUNDARIES FOR DEDUPLICATION
83973132	Published		4/24/2012		14/373360	US	Determining A Schedule For A Job To Replicate An Object Stored On A Storage Appliance
84215513	Application		4/30/2013		14/765183	US	GROUPING CHUNKS OF DATA INTO A COMPRESSION REGION
81970091	Granted	6695242	6/29/2000	2/24/2004	09/606862	US	LEADER PIN SEAT FOR TAPE CARTRIDGE
81970094	Granted	6874721	4/3/2003	38447	10/406516	US	Leader Pin Seat For Tape Cartridges
81976832	Granted	6768604	6/14/2001	7/27/2004	09/883020	US	Method For Reduction Of Off-track Errors In Data Storage Tape Systems
81978710	Granted	7447761	10/5/2000	11/4/2008	09/679691	US	Device Detection System And Method
81994811	Granted	6804877	4/29/2003	10/19/2004	10/425256	US	Devices And Methods For Retaining Data Media In A Media Storage Device
81995060	Granted	6848114	8/23/2001	1/25/2005	09/935911	US	Bulk Access System For A Data Storage System
82004993	Granted	6980884	7/16/2002	12/27/2005	10/197916	US	Intrusion Monitors For Media Storage Systems
82006865	Granted	7045763	6/28/2002	5/16/2006	10/186458	US	Object-recognition Lock
82026401	Granted	5936816	7/17/1997	36382	08/896848	US	Integrated Cleaning And Leader Tape
82028279	Granted	6111719	3/6/1998	36767	09/036350	US	Linear Speed Measurement Independent Of Lateral Position In Linear Tape Systems
82029089	Granted	5813622	11/12/1997	9/29/1998	08/968060	US	Tape Cartridge Reel Lock
82032644	Granted	6246642	4/13/1999	6/12/2001	09/290926	US	Automated Optical Detection System And Method
82039391	Granted	6231291	3/18/1999	37026	09/271550	US	Method And Apparatus For Exchanging Data Cartridges In A Jukebox Data Storage System
82040576	Granted	6226252	11/6/1998	5/1/2001	09/188401	US	PICKER SHIPPING LOCK MECHANISM FOR DATA STORAGE SYSTEM
82047131	Granted	6538842	5/23/2000	37705	09/577215	US	Positioning System For Removable Data Storage Cartridges
82052873	Granted	6269411	8/12/1999	37103	09/372821	US	System For Enabling Stacking Of Autochanger Modules
82063865	Granted	7194636	4/11/2002	3/20/2007	10/120140	US	Data Authentication
82067675	Granted	6295177	10/30/1998	37159	09/182308	US	METHOD OF AND APPARATUS FOR ARRANGING DATA RECEIVED IN A DATA TRANSFER FROM A DATA SOURCE
82067732	Granted	6268973	10/30/1998	7/31/2001	09/182306	US	GENERATING APPENDABLE POINTS IN ENCODED DATA
82189037	Granted	7840902	10/26/2005	40505	11/260511	US	METHOD AND AN APPARATUS FOR AUTOMATIC CREATION OF SECURE CONNECTIONS BETWEEN SEGMENTED RESOURCE FARMS IN A UTILITY COMPUTING ENVIRONMENT
82202153	Granted	8474031	6/28/2005	41450	11/917346	US	Access Control Method And Apparatus
82215572	Granted	7970143	8/5/2005	40722	11/996972	US	System, Method And Apparatus To Obtain A Key For Encryption/decryption/data Recovery From An Enterprise Cryptography Key Management System

PATENT
REEL: 038498 FRAME: 0765

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82251974	Granted	6578029	6/6/2002	37782	10/164511	US	System and Method for Selectively Defining Access to Application Features
82252907	Granted	5884312	2/28/1997	36235	08/810498	US	System and Method for Securely Accessing Information from Disparate Data Sources Through a Network
82254656	Granted	8473321	9/25/2002	41450	10/256227	US	METHOD AND APPARATUS FOR ASSOCIATING PRIVILEGES WITH PEOPLE IN AN ORGANIZATION
82255652	Granted	8321946	12/5/2003	41240	10/729398	US	METHOD AND SYSTEM FOR PREVENTING IDENTITY THEFT IN ELECTRONIC COMMUNICATIONS
82257338	Granted	9043589	11/14/2007	42150	11/940018	US	SYSTEM AND METHOD FOR SAFEGUARD AND PROCESSING CONFIDENTIAL INFORMATION
82257464	Granted	8099770	1/30/2008	1/17/2012	12/022952	US	APPARATUS, AND AN ASSOCIATED METHODOLOGY, FOR FACILITATING AUTHENTICATION USING A DIGITAL MUSIC AUTHENTICATION TOKEN
82095458	Granted	7590937	10/3/2002	9/15/2009	10/264975	US	GRAPHICAL USER INTERFACE FOR PROCUREMENT RISK MANAGEMENT SYSTEM
82098389	Granted	7100273	3/3/2003	9/5/2006	10/378241	US	Interconnect Validation Instruments
82128983	Granted	5791753	8/29/1996	8/11/1998	08/705402	US	COMPUTER COMPONENT HANDLE ASSEMBLY
82132226	Granted	6772192	2/29/2000	8/3/2004	09/515567	US	SOFTWARE DOWNLOAD AND DISTRIBUTION VIA IMAGE BUILDING AND MULTICAST
82901636	Granted	8419447	8/31/2009	4/16/2013	13/375308	US	SURFACE-MOUNT TECHNOLOGY (SMT) DEVICE CONNECTOR
83725261	Published		6/27/2011		14/125739	US	TEMPERATURE BAND OPERATION LOGGING
83929408	Published		10/31/2011		14/352326	US	REMOTE SOFTWARE DEPLOYMENT ACROSS A NETWORK
84141284	Application		1/21/2013		14/435171	US	PALLETIZED LOAD REACTANT REGULATION HEATING
82078349	Granted	6886035	5/13/2002	4/26/2005	10/145423	US	DYNAMIC LOAD BALANCING OF A NETWORK OF CLIENT AND SERVER COMPUTERS
82104944	Granted	7340450	3/15/2004	3/4/2008	10/800038	US	Date Search System And Search Method Using A Global Unique Identifier
82227683	Granted	8874517	1/31/2007	10/28/2014	11/700805	US	SUMMARIZING FILE SYSTEM OPERATIONS WITH A FILE SYSTEM JOURNAL
82245725	Granted	8650272	9/26/2008	41681	12/238779	US	Distributed Transaction Processing System Having Resource Managers That Collaborate To Decide Whether To Commit Or Abort A Transaction In Response To Failure Of A Transaction Manager
82277819	Granted	7263519	1/20/2004	8/28/2007	10/760918	US	Process For Searching A Repository Of Resources
82651157	Allowed		8/18/2011		13/212371	US	TRANSITIVE CLOSURE SECURITY
82722209	Granted	8392439	5/31/2011	3/5/2013	13/149295	US	Single Repository Manifestation Of A Multi-Repository System
82962469	Published		4/26/2012		13/456946	US	STORING DATA IN CONTAINERS

PATENT
REEL: 038498 FRAME: 0766

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83002048	Granted	8447864	5/8/2012	41415	13/466457	US	Distributed Differential Store With Non-distributed Objects And Compression-enhancing Data-object Routing
84141161	Published		10/31/2012		14/418727	US	CATALOGING BACKUP DATA
84170498	Application		6/11/2015		14/736504	US	QUERY PLAN DETERMINATION
82034456	Granted	6055538	12/22/1997	36641	08/995676	US	Methods And System For Using Web Browser To Search Large Collections Of Documents
82034462	Granted	6292802	36655	37152	09/567861	US	Methods And System For Using Web Browser To Search Large Collections Of Documents
82069919	Granted	7562066	11/15/2001	7/14/2009	10/380264	US	Method Of Vector Analysis For A Document
82097891	Granted	6892207	1/24/2003	5/10/2005	10/350358	US	Method Of Updating Data In A Compressed Data Structure
82207460	Granted	8832072	5/25/2006	9/9/2014	11/440118	US	Client And Method For Database
82216886	Granted	7827161	3/12/2007	11/2/2010	11/716993	US	Document Retrieval
82245044	Granted	8898142	1/29/2009	11/25/2014	12/322164	US	RISK-PREMIUM-BASED DATABASE-QUERY OPTIMIZATION
82249658	Published		6/1/2009		12/475707	US	METHOD AND SYSTEM FOR PERFORMING TESTING ON A DATABASE SYSTEM
82259024	Published		10/21/2009		12/603020	US	System And Method For Aggregating Data
82262522	Published		10/11/2010		12/901897	US	OPTIMIZING A QUERY
82263143	Published		7/8/2010		12/832574	US	Systems And Methods For Database Query Translation
82264271	Granted	8533193	11/17/2010	41527	12/948549	US	MANAGING LOG ENTRIES
82264391	Granted	9129035	10/5/2010	9/8/2015	12/898530	US	SYSTEMS, METHODS, AND APPARATUS FOR ACCESSING OBJECT REPRESENTATIONS OF DATA SETS
82275758	Published		1/6/2011		12/985833	US	SYSTEMS AND METHODS FOR SEARCHING A SEARCH SPACE OF A QUERY
82756375	Published		9/22/2011		13/240582	US	USER DEFINED FUNCTION CLASSIFICATION IN ANALYTICAL DATA PROCESSING SYSTEMS
83012742	Published		5/31/2012		13/485246	US	USER DEFINED FUNCTIONS FOR DATA LOADING
84156163	Published		8/29/2012		14/424193	US	Querying Structured And Unstructured Databases
81997436	Granted	7693932	1/15/2002	40274	10/047629	US	System And Method For Locating A Resource Locator Associated With A Resource Of Interest
82055621	Granted	6834303	11/13/2000	38342	09/711785	US	METHOD AND APPARATUS AUTO-DISCOVERING COMPONENTS OF DISTRIBUTED SERVICES
82194656	Granted	8275757	6/14/2005	41177	11/153861	US	Apparatus And Method For Process Monitoring
82226246	Granted	8195487	10/16/2007	6/5/2012	11/872861	US	Computer Networks
82260146	Published		5/26/2010		12/787593	US	VIRTUAL TOPOLOGICAL QUERIES
82263149	Published		7/29/2010		12/846696	US	SELECTING A PROJECT PORTFOLIO
82675568	Published		10/13/2008		13/123595	US	Trend Determination And Identification
82909007	Granted	9020978	3/7/2012	42122	13/413790	US	MERGING AND IGNORING CONFIGURATION ITEMS
82964570	Published		4/16/2012		13/448173	US	LIVE TOPOLOGICAL QUERY
83265986	Published		12/11/2010		13/991468	US	COMPUTER NETWORK NODE DISCOVERY
83769065	Published		6/24/2011		14/127205	US	IDENTITY BASED AUTOMATED FORM FILLING

PATENT
REEL: 038498 FRAME: 0767

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84110945	Published		12/3/2014		14/559053	US	COMPARING PROJECTS
84172831	Application		4/30/2015		14/700537	US	SERVICE PROVIDER DEPENDENCY MAPPING
81967715	Granted	7062557	7/10/2000	38881	09/613007	US	WEB SERVER REQUEST CLASSIFICATION SYSTEM THAT CLASSIFIES REQUESTS BASED ON USERS BEHAVIORS AND EXPECTATIONS
81982826	Granted	7003564	1/17/2001	38769	09/764563	US	Method And Apparatus For Customizably Calculating And Displaying Health Of A Computer Network
81982892	Granted	6658367	3/28/2001	37957	09/818730	US	System For Time-Bucketing Of Baselined Data Collector Data
81993128	Granted	7003578	4/26/2001	38769	09/842130	US	Method And System For Controlling A Policy-Based Network
81998621	Granted	7293106	5/28/2002	39392	10/154912	US	Method Of Finding A Path Between Two Nodes In A Network
82001618	Granted	7484209	8/12/2003	39840	10/640626	US	Instrumenting Java Code By Modifying Bytecodes
82001621	Granted	7496903	37845	39868	10/640623	US	Synthesizing Application Response Measurement (ARM) Instrumentation
82032212	Granted	6061723	10/8/1997	5/9/2000	08/947219	US	Network Management Event Correlation In Environments Containing Inoperative Network Elements
82055438	Granted	7051094	8/30/2000	5/23/2006	09/651519	US	Decentralized Management Of Composite Digital Services
82060055	Granted	7099938	3/23/2001	8/29/2006	09/816940	US	METHOD, COMUPTER SYSTEM, AND COMPUTER PROGRAM PRODUCT FOR MONITORING SERVICES OF AN INFORMATION TECHNOLOGY ENVIRONMENT
82091585	Granted	7478398	10/31/2002	1/13/2009	10/284367	US	MANAGEMENT APPARATUS AND METHOD FOR DATA COLLECTION INCLUDING ACCUMULATING MESSAGES AND DETERMINING MESSAGE HANDLERS FOR PROCESSING THE ACCUMULATED MESSAGES
82097450	Granted	7499984	3/23/2004	3/3/2009	10/806431	US	Status-message Mapping
82098761	Granted	6889169	1/31/2003	5/3/2005	10/356409	US	Collection Of Session-Related Information Using An Extendable Sampling Period
82101758	Granted	7398512	12/2/2003	7/8/2008	10/724728	US	Method, System, And Software For Mapping And Displaying Process Objects At Different Levels Of Abstraction
82177115	Granted	8045560	8/28/2009	10/25/2011	12/461929	US	Method And System For Managing A Network Having Multiple Domains
82178927	Granted	7564796	9/30/2004	7/21/2009	10/953280	US	Method And System For Managing A Network Slowdown
82183859	Granted	7962916	4/5/2005	6/14/2011	11/098830	US	METHOD OF DISTRIBUTING LOAD AMONGST TWO OR MORE COMPUTER SYSTEM RESOURCES
82189352	Published		7/4/2005		11/993021	US	Device Management Across Firewall Architecture
82189787	Granted	7643434	9/30/2004	1/5/2010	10/953281	US	Method And System For Managing Network Nodes Which Communicate Via Connectivity Services Of A Service Provider

PATENT
REEL: 038498 FRAME: 0768

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82195598	Granted	8572234	11/30/2004	10/29/2013	10/998819	US	MPLS VPN Fault Management Using IGP Monitoring System
82199216	Granted	7936694	3/30/2007	5/3/2011	11/729864	US	SNIFFING-BASED NETWORK MONITORING
82218443	Granted	8359378	11/24/2005	1/22/2013	12/094740	US	NETWORK SYSTEM AND METHOD OF ADMINISTRATING NETWORKS
82222064	Granted	7058545	9/16/2002	6/6/2006	10/244816	US	Software Application Domain And Storage Domain Characterization Process And Method
82227437	Granted	8526325	1/31/2007	9/3/2013	11/701311	US	Detecting And Identifying Connectivity In A Network
82228493	Granted	8762355	1/23/2008	6/24/2014	12/018514	US	Generating Configuration Files
82233617	Granted	6738813	9/11/2000	5/18/2004	09/659476	US	SYSTEM AND METHOD FOR MONITORING PERFORMANCE OF A SERVER SYSTEM USING OTHERWISE UNUSED PROCESSING CAPACITY OF USER COMPUTING DEVICES
82235423	Published		1/31/2008		12/864834	US	Automated Application Dependency Mapping
82235678	Granted	8180723	9/27/2008	41044	12/239747	US	ROOT CAUSE ANALYSIS IN A SYSTEM HAVING A PLURALITY OF INTER-RELATED ELEMENTS
82238048	Granted	8302168	10/30/2008	10/30/2012	12/261913	US	Push Artifact Binding For Communication In A Federated Identity System
82248596	Granted	8176000	5/19/2009	5/8/2012	12/468676	US	METHODS AND APPARATUS FOR DISCOVERING TRAFFIC ON A NETWORK
82259402	Granted	8254274	1/13/2010	8/28/2012	12/686400	US	Method For Providing Network Information
82263083	Granted	8352777	10/4/2010	41282	12/897224	US	REPLAYING CAPTURED NETWORK TRAFFIC
82263146	Granted	8667334	8/27/2010	3/4/2014	12/870418	US	PROBLEM ISOLATION IN A VIRTUAL ENVIRONMENT
82264082	Published		9/15/2010		12/882239	US	Analyzing Network Activity By Presenting Topology Information With Application Traffic Quantity
82275635	Published		1/27/2011		13/015356	US	IDENTIFYING REMOTE MACHINE OPERATING SYSTEM
82663334	Granted	8402177	6/29/2011	3/19/2013	13/171782	US	INFERRING HOST STORAGE TOPOLOGY
82848987	Granted	9015372	3/30/2012	4/21/2015	13/436169	US	MANAGING DATA PATHS BETWEEN COMPUTER APPLICATIONS AND DATA STORAGE DEVICES
82852880	Published		10/26/2009		13/384739	US	Automatic Redundant Logical Connections
83098424	Granted	8929225	12/7/2012	1/6/2015	13/707696	US	CUSTOMER EDGE DEVICE PROBLEM IDENTIFICATION
83098567	Published		2/28/2013		13/780751	US	DATA PARTIONING BASED ON END USER BEHAVIOR
83098610	Published		12/6/2012		13/706847	US	RANKING AND SCHEDULING OF MONITORING TASKS
83138146	Granted	9087089	6/9/2010	7/21/2015	13/700620	US	DETERMINING SIMILARITY SCORES OF ANOMALIES
83170718	Published		6/29/2012		13/813646	US	RULE-BASED AUTOMATED TEST DATA GENERATION
83184701	Granted	9015474	7/30/2010	4/21/2015	13/812590	US	SYSTEMS AND METHODS FOR CREDENTIALING
83209089	Published		4/30/2013		13/873790	US	STOCHASTIC BASED DETERMINATION
83209553	Published		12/20/2010		13/884570	US	METHOD OF PROVISIONING ADDITIONAL STORAGE TO COMPUTER APPLICATIONS
83768667	Published		12/5/2013		14/098188	US	IDENTIFYING A COMMON ACTION FLOW
83789795	Published		7/29/2011		14/234640	US	MIGRATING VIRTUAL MACHINES
83822590	Application		4/30/2014		14/266336	US	DATA STORE QUERY PREDICTION

PATENT
REEL: 038498 FRAME: 0769

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84031420	Application		11/3/2014		14/531029	US	USER ACTION DURATION
84117623	Published		6/29/2012		14/406609	US	PERSONALIZING SHARED COLLABORATION CONTENT
84295410	Application		1/3/2013		14/655772	US	IDENTIFYING AN ANALYSIS REPORTING MESSAGE IN NETWORK TRAFFIC
82098767	Granted	8069075	3/5/2003	11/29/2011	10/378872	US	Method And System For Evaluating Performance Of A Website Using A Customer Segment Agent To Interact With The Website According To A Behavior Model
82232681	Granted	6549944	7/6/2000	4/15/2003	09/610909	US	USE OF SERVER ACCESS LOGS TO GENERATE SCRIPTS AND SCENARIOS FOR EXERCISING AND EVALUATING PERFORMANCE OF WEB SITES
82233179	Granted	6560564	7/8/2002	5/6/2003	10/192816	US	SYSTEM AND METHODS FOR LOAD TESTING A TRANSACTIONAL SERVER OVER A WIDE AREA NETWORK
82233239	Granted	6694288	8/6/2002	2/17/2004	10/214421	US	SYSTEM AND METHOD FOR AUTOMATED ANALYSIS OF LOAD TESTING RESULTS
82233245	Granted	6898556	9/26/2003	5/24/2005	10/672445	US	SOFTWARE SYSTEM AND METHODS FOR ANALYZING THE PERFORMANCE OF A SERVER
82236488	Granted	8266599	9/30/2008	9/11/2012	12/241730	US	Output From Changed Object On Application
82245605	Granted	8516451	9/30/2008	8/20/2013	12/241622	US	System And Method For Creating Virtual Callback Objects
82247603	Published		10/24/2008		12/258044	US	Software Test Management System And Method With Facilitated Reuse Of Test Components
82260023	Granted	8756571	5/7/2010	6/17/2014	12/776043	US	NATURAL LANGUAGE TEXT INSTRUCTIONS
82264334	Granted	9043440	12/16/2010	5/26/2015	12/970764	US	AUTOMATIC WSDL DOWNLOAD OF CLIENT EMULATION FOR A TESTING TOOL
82275632	Granted	8819631	1/13/2011	8/26/2014	13/006204	US	SYSTEM AND METHOD FOR SELF DEPENDENT WEB AUTOMATION
82749033	Granted	8745600	7/21/2011	6/3/2014	13/187898	US	INSERTING TEST SCRIPTS
82964550	Published		4/30/2012		13/459356	US	DYNAMIC DATA FOR PRODUCING A SCRIPT
82964819	Granted	8850407	5/23/2012	9/30/2014	13/478875	US	TEST SCRIPT GENERATION
82964922	Published		5/30/2012		13/483755	US	LOAD TEST CAPACITY PLANNING
82976953	Granted	9026853	7/31/2012	5/5/2015	13/563635	US	ENHANCING TEST SCRIPTS
83185162	Published		8/17/2010		13/812600	US	PROVIDING AUTOMATION CODE CONTAINING A REPRESENTATION OF ALTERNATIVE INTERPRETATIONS OF A USER ACTION
84030845	Application		11/26/2014		14/554418	US	RESOLUTION OF DATA INCONSISTENCIES
84073063	Published		7/31/2012		14/397213	US	CONSTRUCTING TEST-CENTRIC MODEL OF APPLICATION
84124069	Published		12/30/2014		14/585805	US	IDENTIFYING DYNAMIC CONTENT IN RESPONSES
84139618	Application		10/31/2012		14/415632	US	EXECUTABLE SOFTWARE SPECIFICATION GENERATION

PATENT
REEL: 038498 FRAME: 0770

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90037867	To Be Filed					US	End-to-end solution that includes novel real user coverage and usage quality scores, automatic prioritized recommendations to enhance the tests, development and plan, with an easy to understand visualization based on production sessions.
81977459	Granted	7181618	1/12/2001	2/20/2007	09/760404	US	System And Method For Recovering A Security Profile Of A Computer System
82061615	Granted	7340601	12/7/2000	3/4/2008	09/732948	US	Electronic Certificate
82193282	Granted	7512965	7/7/2000	3/31/2009	09/611463	US	Computer System Security Service
82193285	Granted	7757271	1/15/2008	7/13/2010	12/014612	US	Computer System Security Service
82244351	Granted	7765597	8/1/2006	7/27/2010	11/461766	US	Integrated Crawling And Auditing Of Web Applications And Web Content
82581651	Published		3/8/2011		13/042649	US	CONTROLLING ACCESS TO A COMPUTER SYSTEM
82842034	Granted	8739280	9/29/2011	5/27/2014	13/248948	US	CONTEXT-SENSITIVE TAINT ANALYSIS
83680346	Allowed		9/30/2013		14/041365	US	DETERMINE ANOMALIES IN WEB APPLICATION CODE BASED ON AUTHORIZATION CHECKS
84079538	Application		7/26/2012		14/397988	US	APPLICATION SECURITY TESTING
84182220	Application		9/28/2012		14/431996	US	APPLICATION SECURITY TESTING
81967409	Granted	7702687	6/1/2005	4/20/2010	11/141839	US	Method And System Of Typing Resources In A Distributed System
82102256	Granted	8132124	3/13/2003	3/6/2012	10/387614	US	Method And System For Representing Web Service Activity Through A User Interface
82234736	Granted	7925636	6/8/2007	4/12/2011	11/808318	US	Repository System And Method
82234739	Granted	7765188	6/8/2007	7/27/2010	11/808319	US	Taxonomy Editor
82242857	Published		10/30/2008		12/261989	US	SEPARATION OF CONCERNS BETWEEN INFORMATION TECHNOLOGY SERVICES MODELS
82249349	Allowed		2/11/2009		12/369203	US	Creating Searchable Revisions Of A Resource In A Repository
82250906	Allowed		7/31/2009		12/533660	US	System And Method For Deploying Software Into A Computing Environment
82257404	Published		5/16/2008		12/122425	US	SYSTEM AND METHOD FOR THE ELECTRONIC DESIGN OF COLLABORATIVE AND VALIDATED ARCHITECTURES
82262333	Granted	9037843	3/10/2010	5/19/2015	12/721133	US	MANAGING A TARGET COMPUTING DEVICE (amended)
82263833	Granted	8458699	11/18/2010	6/4/2013	12/949476	US	METHODS, SYSTEMS, AND APPARATUS TO PRIORITIZE COMPUTING DEVICES FOR VIRTUALIZATION
82581296	Granted	8713183	3/27/2011	4/29/2014	13/072723	US	RESOURCE COMPATABILITY FOR DATA CENTERS
82852316	Granted	8595168	7/28/2009	41604	13/258710	US	INSTANTIATING AN INFORMATION TECHNOLOGY SERVICE IN LIGHT OF MAINTENANCE REQUIREMENTS

PATENT
REEL: 038498 FRAME: 0771

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83138527	Published		1/31/2013		13/756193	US	DYNAMIC PROFITABILITY MANAGEMENT FOR CLOUD SERVICE PROVIDERS
83140877	Granted	9110895	6/30/2010	8/18/2015	13/702863	US	SYSTEM AND METHOD FOR A SERIALIZED DATA SERVICE
83204787	Published		4/25/2013		13/870543	US	MULTILEVEL LOAD BALANCING
83991738	Published		1/29/2012		14/374486	US	BEST-DEAL LIST GENERATION
84099804	Application		11/3/2014		62/074310	US	MARKETPLACE FOR CLOUD SERVICE PROVIDERS
84099810	Application		11/3/2014		62/074316	US	EVOLVING OPENSTACK SERVICE MODEL AND POLICY-BASED FULFILLMENT FOR CLOUD BRIDGE
84118582	Published		7/3/2012		14/406711	US	MANAGING A CLOUD SERVICE
84123202	Published		7/31/2012		14/413563	US	ABSTRACTION MODELS FOR MONITORING OF CLOUD RESOURCES
84198287	Application		11/23/2012		14/429552	US	Dynamic Management Of A Cloud Computing Infrastructure
84262904	Application		8/5/2015		14/818834	US	PROVIDING COMPLIANCE/ MONITORING SERVICE BASED ON CONTENT OF A SERVICE CONTROLLER
84273489	Application		6/11/2015		14/736801	US	Automated Cloud Set Up
90031040	Application		3/15/2013		14/775937	US	Sending Encrypted Data to a Service Provider
90035245	Acknowledged					US	Improve speed, usability, and correctness during installation of the application (and in the future during the application usage) by providing User Assistance.
81995123	Granted	6961716	7/31/2001	11/1/2005	09/919148	US	Network Usage Analysis System And Method For Determining Excess Usage
82046324	Granted	6373932	5/3/1999	4/16/2002	09/303882	US	Configuration Tracking System
82062743	Granted	6988126	10/16/2001	1/17/2006	09/977494	US	CONTACT CENTER SYSTEM AND METHOD FOR SPECIFYING DIFFERENT SERVICE SPECIFIC BEHAVIOURS AND OFFERING RANGE OF CORRESPONDING CUSTOMER SERVICES
82070483	Granted	6879681	7/3/2002	4/12/2005	10/189353	US	MULTI-SERVICE TELECOMMUNICATION SYSTEM AND ASSOCIATED METHODS
82070603	Granted	8391462	6/5/2001	3/5/2013	09/875462	US	A Communication Platform For Providing Computer Telephony Integration Services To Remote Subscribers, And Associated Method
82116932	Granted	6173174	11/23/1999	1/9/2001	09/447516	US	METHOD AND APPARATUS FOR AUTOMATED SSD UPDATES ON AN A-KEY ENTRY IN A MOBILE TELEPHONE SYSTEM
82121678	Granted	7881308	6/18/2002	2/1/2011	10/174276	US	METHOD AND SYSTEM FOR PROVIDING TELECOMMUNICATION SUBSRIBER SERVICES WITHOUT PROVISIONING OR MAINTENANCE
82164878	Granted	5790800	10/13/1995	8/4/1998	08/543096	US	CLIENT APPLICATION PROGRAM MOBILIZER
82168934	Granted	7130615	9/10/2003	10/31/2006	10/660424	US	Software Authentication For Mobile Communication Devices
82170812	Granted	7936738	7/6/2004	5/3/2011	10/536625	US	Fault Tolerant Systems

PATENT
REEL: 038498 FRAME: 0772

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82171184	Granted	7257216	11/3/2003	39308	10/700216	US	Selective Message Discard
82176116	Granted	8589156	7/12/2004	11/19/2013	10/888593	US	Allocation Of Speech Recognition Tasks And Combination Of Results Thereof
82186727	Granted	7860095	7/12/2004	12/28/2010	10/577844	US	Method And Apparatus For Load-balancing
82195973	Granted	7519051	7/12/2005	4/14/2009	11/181031	US	Methods And Related Apparatus For Operating A Gateway To Act As A Conduit For A Structured Transaction
82197845	Granted	8934927	10/14/2005	1/13/2015	11/250926	US	METHOD AND APPARATUS FOR ROUTING SHORT MESSAGES IN MOBILE TELEPHONE NETWORKS
82202087	Granted	8184128	10/27/2004	5/22/2012	11/718228	US	Data Distribution System, And Method Therefor
82211891	Granted	7529813	4/14/2005	5/5/2009	11/107140	US	Multimedia Transfer For Wireless Networks
82217255	Granted	8269815	9/22/2005	9/18/2012	12/067248	US	Dynamic Image Distribution Device And Method Thereof
82219757	Granted	8243718	1/3/2007	8/14/2012	12/087781	US	Communications System And Gateway
82227557	Granted	8223949	3/27/2008	7/17/2012	12/056284	US	A Method, Apparatus And Software For Providing Communications Between A Packet Switched Network And A Public Switched Telephone Network
82249034	Published		4/2/2010		12/753707	US	Method And Apparatus For Network Communications
82257902	Granted	8170528	10/9/2009	5/1/2012	12/576728	US	NETWORK ACCESS CONTROL
82274318	Granted	7330453	5/31/2003	2/12/2008	10/448958	US	SYSTEM AND METHOD FOR INTEGRATING CALL CONTROL AND DATA NETWORK ACCESS COMPONENTS
82274321	Granted	7969956	12/17/2007	6/28/2011	11/957918	US	SYSTEM AND METHOD FOR INTEGRATING CALL CONTROL AND DATA NETWORK ACCESS COMPONENTS
84077689	Published		7/31/2012		14/396139	US	GENERATING SERVICE REQUEST MESSAGE TO OBTAIN WIRELESS SERVICES USING A MINIMAL SET OF SERVICES THAT ARE DESIGNATED BY DEFAULT FOR A ROAMING CONDITION
81970652	Granted	6889199	11/30/2000	5/3/2005	09/728135	US	Method And Apparatus For Encoding And Generating Transaction-Based Stimulus For Simulation Of VLSI Circuits
81974957	Granted	7058853	6/11/2001	6/6/2006	09/879404	US	Highly Available Transaction Processing
82014917	Granted	5758077	8/2/1996	5/26/1998	08/691994	US	Service-Centric Monitoring System And Method For Monitoring Of Distributed Services In A Computing Network
82106564	Granted	8316361	1/9/2003	41233	10/340236	US	Method Of Enabling A User To Update One Or More Low-level Resources Of A Computer System In A User-friendly Manner
82189853	Granted	7586946	10/31/2005	9/8/2009	11/263502	US	Method And Apparatus For Automatically Evaluating And Allocating Resources In A Cell Based System
82196405	Granted	7653934	7/14/2004	1/26/2010	10/892077	US	Role-based Access Control
82257968	Granted	8108712	10/30/2009	40939	12/588857	US	METHOD AND APPARATUS FOR REMOVING A COMPUTER FROM A COMPUTER CLUSTER OBSERVING FAILURE
83213194	Published		10/5/2010		13/822606	US	ACYCLIC GRAPH NAVIGATOR
81956792	Granted	6035399	4/7/1995	3/7/2000	08/422206	US	Checkpoint Object

PATENT
REEL: 038498 FRAME: 0773

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
81983012	Granted	6976270	5/8/2001	12/13/2005	09/850945	US	Process And Component For Inquiring About Security Relationships
81984575	Granted	6871223	4/13/2001	3/22/2005	09/835212	US	System And Method For Agent Reporting In To Server
81987200	Granted	6807627	1/19/2001	10/19/2004	09/765930	US	Preserving The Content Of A First Register Without Affecting The Content Of A Second Register
81987509	Granted	6889244	10/31/2000	5/3/2005	09/703427	US	Method And Apparatus For Passing Messages Using A Fault Tolerant Storage System
81988511	Granted	6859892	4/25/2001	2/22/2005	09/843265	US	Synchronous Breakpoint System And Method
81992945	Granted	7577998	11/16/2001	8/18/2009	09/987911	US	Method Of Detecting Critical File Changes
81998681	Granted	7134050	8/15/2003	11/7/2006	10/641985	US	Method And System For Containing Software Faults
81998687	Granted	7058786	1/17/2002	6/6/2006	10/051773	US	Operating System Data Communication Method And System
82002617	Granted	6996728	4/26/2002	2/7/2006	10/133730	US	MANAGING POWER CONSUMPTION BASED OF UTILIZATION STATISTICS
82004615	Granted	6766497	1/25/2002	7/20/2004	10/057245	US	Method And System For Reproduction In A Genetic Optimization Process
82004738	Granted	7028302	4/24/2002	4/11/2006	10/131669	US	System And Method For Automatically Tuning A Multiprocessor Computer System
82022912	Granted	6119079	4/24/1997	9/12/2000	08/842460	US	Method And Structure For Tokenized Message Logging System
82028156	Granted	6026424	2/23/1998	2/15/2000	09/027691	US	METHOD AND APPARATUS FOR SWITCHING LONG DURATION TASKS FROM SYNCHRONOUS TO ASYNCHRONOUS EXECUTION AND FOR REPORTING TASK RESULTS
82029653	Granted	6199202	1/6/1998	3/6/2001	09/003573	US	METHOD AND APPARATUS FOR THE INTER-OPERATION OF DIFFERING ARCHITECTURAL AND RUN TIME CONVENTIONS
82051502	Granted	6802002	1/14/2000	10/5/2004	09/483189	US	Method And Apparatus For Providing Field Confidentiality In Digital Certificates
82088777	Granted	6804691	3/21/2002	10/12/2004	10/104751	US	METHOD FOR OPTIMIZATION OF MEMORY USAGE FOR A COMPUTER PROGRAM
82090025	Granted	7185271	8/20/2002	2/27/2007	10/225099	US	METHODS AND SYSTEMS FOR IMPLEMENTING AUTO-COMPLETE IN A WEB PAGE
82090583	Granted	7996846	11/27/2006	8/9/2011	11/604248	US	ALLOCATION OF SYSTEM RESOURCES AMONG APPLICATIONS USING PREDEFINED ENTITLEMENT VALUES AND WEIGHT ASSOCIATED WITH EACH OF THE APPLICATIONS (Amended)
82093517	Granted	8332694	9/24/2002	12/11/2012	10/254556	US	A Method For Notificatoin Of An Error In Data Exchanged Between A Client And A Server

PATENT
REEL: 038498 FRAME: 0774

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82097576	Granted	7076488	1/29/2003	7/11/2006	10/354488	US	XML-LDAP Adapters And Methods Therefor
82098323	Granted	7502826	3/27/2003	3/10/2009	10/401233	US	Atomic Operations
82099385	Granted	7373497	1/23/2003	5/13/2008	10/351128	US	METHODS AND APPARATUS FOR RAPIDLY ACTIVATING PREVIOUSLY INACTIVE COMPONENTS IN A COMPUTER SYSTEM
82104572	Granted	7313102	3/17/2003	12/25/2007	10/390492	US	System And Method For Subnet Configuration And Selection
82110560	Granted	6493343	12/30/1998	12/10/2002	09/224114	US	SYSTEM AND METHOD FOR IMPLEMENTING MULTI-PATHING DATA TRANSFERS IN A SYSTEM AREA NETWORK
82110563	Granted	6545981	12/30/1998	4/8/2003	09/224115	US	SYSTEM AND METHOD FOR IMPLEMENTING ERROR DETECTION AND RECOVERY IN A SYSTEM AREA NETWORK
82110566	Granted	6163834	12/30/1998	12/19/2000	09/228069	US	TWO LEVEL ADDRESS TRANSLATION AND MEMORY REGISTRATION SYSTEM AND METHOD
82110815	Granted	6121737	6/4/1999	9/19/2000	09/326119	US	CEILING MOUNTED PROCESSOR SYSTEM
82110872	Granted	6219235	5/19/1999	4/17/2001	09/314610	US	ELECTRONIC ASSEMBLY FOR STANDARD RACK ENCLOSURES
82110878	Granted	7468982	11/7/2002	12/23/2008	10/291865	US	Method And Apparatus For Cluster Interconnection Using Multi-port Nodes And Multiple Routing Fabrics
82116557	Granted	5805920	11/13/1995	9/8/1998	08/556618	US	DIRECT BULK DATA TRANSFERS
82119800	Granted	7343602	12/18/2001	3/11/2008	10/029699	US	SOFTWARE CONTROLLED PRE-EXECUTION IN A MULTITHREADED PROCESSOR
82128980	Granted	5974517	9/17/1996	10/26/1999	08/710360	US	METHOD AND SYSTEM FOR MOUNTING A SYSTEM PARTITION AS A LOGICAL DRIVE WHILE AN OPERATING SYSTEM IS OPERATIONAL BY MODIFYING A PARTITION TABLE
82131599	Granted	7039739	3/14/2002	5/2/2006	10/097472	US	METHOD AND APPARATUS FOR PROVIDING SEAMLESS HOOKING AND INTERCEPTING OF SELECTED KERNEL AND HAL EXPORTED ENTRY POINTS
82136345	Granted	6804766	11/12/1997	10/12/2004	08/968244	US	METHOD FOR MANAGING PAGES OF A DESIGNATED MEMORY OBJECT ACCORDING TO SELECTED MEMORY MAGEMENT POLICIES
82136348	Granted	7337296	10/8/2004	2/26/2008	10/962053	US	Managing Physical Memory In A Virtual Memory Computer
82169747	Granted	7509657	10/28/2003	3/24/2009	10/695210	US	Application Programming Interface For A Virtual Switch
82171556	Granted	8042187	8/25/2003	10/18/2011	10/648531	US	A Security Indication Spanning Tree System And Method
82171562	Granted	7519996	8/25/2003	4/14/2009	10/648555	US	SECURITY INTRUSION MITIGATION SYSTEM AND METHOD
82177862	Granted	7302561	9/25/2003	11/27/2007	10/669207	US	Apparatus And Method For User-defined Tunables
82177865	Granted	7596688	10/31/2007	9/29/2009	11/979257	US	Apparatus And Method For User-defined Tunables
82179365	Granted	7296146	1/12/2004	11/13/2007	10/756597	US	Security Measures In A Partitionable Computing System
82179671	Granted	7426731	3/22/2004	9/16/2008	10/805934	US	Determining Processor Usage By A Thread
82180547	Granted	7672222	1/12/2004	3/2/2010	10/756685	US	Link Failures

PATENT
REEL: 038498 FRAME: 0775

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0776

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82182356	Granted	7650275	1/20/2005	1/19/2010	11/039621	US	External Emulation Hardware
82182986	Granted	7346802	1/30/2004	3/18/2008	10/769371	US	Routing Communications To A Storage Area Network
82184918	Granted	8316048	8/17/2004	11/20/2012	10/920915	US	Method And Apparatus For Managing A Data Structure For Multi-processor Access
82185980	Granted	7426656	1/25/2005	9/16/2008	11/042548	US	METHOD AND SYSTEM EXECUTING USER PROGRAMS ON NON-DETERMINISTIC PROCESSORS
82186979	Granted	7562356	9/22/2004	7/14/2009	10/947676	US	AUTOMATICALLY RESOLVING PATCH DEPENDENCIES FOR A PATCH BUNDLE
82187288	Granted	8407396	7/30/2004	3/26/2013	10/903986	US	Providing Block Data Access For An Operating System Using Solid-State Memory
82188044	Granted	7533230	10/13/2004	5/12/2009	10/964835	US	Transparent Migration Of Files Among Various Types Of Storage Volumes Based On File Access Properties
82193720	Granted	7343370	3/7/2005	3/11/2008	11/074343	US	Plan Generation In Database Query Optimizers Through Specification Of Plan Patterns
82194287	Granted	7353375	10/7/2004	4/1/2008	10/960529	US	Method And Apparatus For Managing Processor Availability Using A Microcode Patch
82199339	Granted	7698510	6/22/2005	4/13/2010	11/159979	US	Systems And Methods For Identifying And Registering A Range Of Virtual Memory
82199651	Published		2/23/2005		11/884790	US	A Method And System For Managing A Common Resource In A Computing System
82200029	Granted	7325107	2/18/2005	1/29/2008	11/061391	US	Implementing Memory Evacuation Using Copy-on-write
82201091	Granted	7328331	1/25/2005	2/5/2008	11/042427	US	Method And System Of Aligning Execution Point Of Duplicate Copies Of A User Program By Copying Memory Stores
82201589	Granted	8271550	10/27/2006	41170	11/553993	US	Memory Piece Categorization
82204085	Granted	8018469	10/27/2005	40799	11/260919	US	System, Device, Method And Utility To Convert Images Retrieved From A Device To A Format Supported By A Device Management Tool
82204526	Granted	8108871	1/13/2005	1/31/2012	11/034685	US	Method For Controlling Resource Utilization And Computer System
82204769	Granted	8144618	1/31/2005	3/27/2012	11/048311	US	Method And Apparatus For Automatic Verification Of A Zone Configuration And Network Access Control Construct For A Plurality Of Network Switches
82205024	Granted	7640332	12/20/2007	40176	12/003182	US	System And Method For Hot Deployment/redeployment In Grid Computing Environment
82205459	Granted	8561050	10/18/2006	10/15/2013	11/582345	US	Method And System For Updating An Application
82209764	Granted	8082547	10/31/2006	40897	11/590584	US	Reallocating Hardware Resources Among Workloads In Accordance With License Rights

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82209767	Granted	8650296	10/31/2006	41681	11/590334	US	Workload Reallocation Involving Inter-server Transfers Of Software License Rights And Intra-server Transfer Of Hardware Resources
82210268	Granted	7594223	6/27/2005	9/22/2009	11/168111	US	Straight-line Post-increment Optimization For Memory Access Instructions
82210580	Granted	7434040	7/25/2005	10/7/2008	11/188614	US	Copying Of Unaligned Data In A Pipelined Operation
82210700	Granted	8266616	5/11/2006	41163	11/433663	US	Computer System Provisioning Using Templates
82212575	Granted	8924590	2/14/2006	12/30/2014	11/353548	US	System And Method For Communicating In A Networked System
82214447	Granted	8453132	6/20/2007	41422	11/812639	US	SYSTEM AND METHOD FOR RECOMPILING CODE BASED ON LOCALITY DOMAIN AND THREAD AFFINITY IN NUMA COMPUTER SYSTEMS
82215320	Granted	7788513	8/29/2006	40421	11/511605	US	Method Of Reducing Power Consumption Of A Computing System By Evacuating Selective Platform Memory Components Thereof
82216013	Granted	7657776	9/20/2006	40211	11/523892	US	Containing Machine Check Events In A Virtual Partition
82216262	Granted	8122264	4/22/2006	40960	11/408377	US	Power-state Change As A Function Of Direction Of Right-to-use Status Change
82217573	Granted	8516218	10/30/2006	41506	11/590459	US	PATTERN-BASED MAPPING FOR STORAGE SPACE MANAGEMENT
82218197	Granted	8205190	1/29/2008	6/19/2012	12/021998	US	Data Processing System And Method
82218941	Granted	8051417	1/30/2007	11/1/2011	11/700744	US	TARGET THREAD SELECTION IN A MULTI-THREADED PROCESS
82219634	Granted	7930486	4/30/2007	4/19/2011	11/799303	US	CACHE CHUNKED LIST CONCRETE DATA TYPE
82219691	Granted	7895329	1/12/2006	2/22/2011	11/332035	US	Protocol Flow Control
82219940	Application		1/31/2007		11/669708	US	MULTI-VARIATE COMPUTER RESOURCE ALLOCATION
82224686	Granted	7895581	1/26/2007	2/22/2011	11/698526	US	PROFILING COLLECTOR FOR COMPUTER SYSTEM
82226375	Granted	7937565	2/21/2008	5/3/2011	12/034741	US	Method And System For Data Speculation On Multicore Systems
82227995	Granted	7673082	5/29/2008	3/2/2010	12/129533	US	Method And System To Determine Device Criticality For Hot-plugging In Computer Configurations
82235300	Granted	8214452	7/30/2007	7/3/2012	11/830029	US	Monitoring Of Windows On Computers
82238798	Granted	8209443	9/18/2008	6/26/2012	12/212851	US	System And Method For Identifying Lost/stale Hardware In A Computing System
82239359	Granted	8126015	6/13/2008	2/28/2012	12/138985	US	Multi-Stream Communication Processing
82240358	Granted	7969894	6/19/2008	6/28/2011	12/141942	US	System And Method For Dead Gateway Detection
82243541	Granted	8312515	12/15/2008	11/13/2012	12/334548	US	Method Of Role Creation
82244600	Granted	8180793	5/2/2009	5/15/2012	12/434623	US	Access To Data Stored In A File System
82244915	Granted	8046608	8/6/2008	10/25/2011	12/186543	US	Method And System For Managing Power Supply To At Least One Device

PATENT
REEL: 038498 FRAME: 0777

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82245728	Granted	8209413	10/31/2008	6/26/2012	12/263245	US	EMERGENCY POWER SETTINGS FOR DATA-CENTER FACILITIES INFRASTRUCTURE EVENT
82247786	Granted	8051382	10/30/2008	11/1/2011	12/261542	US	DISPLAYING RATING INDICATIONS FOR DROP TARGETS IN RESPONSE TO USER DRAGGING OF MOBILE ICON
82247909	Granted	8015423	10/30/2008	9/6/2011	12/261422	US	Temporally Normalized Processor Utilization
82247912	Granted	8527988	7/31/2009	9/3/2013	12/533244	US	Proximity Mapping Of Virtual-machine Threads To Processors
82247915	Granted	8209512	3/16/2009	6/26/2012	12/404935	US	SELECTING A CELL THAT IS A PREFERRED CANDIDATE FOR EXECUTING A PROCESS
82250969	Granted	8769546	1/7/2010	7/1/2014	12/684009	US	Busy-Wait Time For Threads
82258148	Granted	8549123	3/16/2009	41548	12/405175	US	LOGICAL SERVER MANAGEMENT
82259777	Allowed		10/29/2009		12/588845	US	SPECIFICATION AND CONFIGURATION OF MANAGEMENT INTENT
82262207	Granted	8260763	1/15/2010	9/4/2012	12/688007	US	MATCHING SERVICE ENTITIES WITH CANDIDATE RESOURCES
82653945	Granted	8689227	1/30/2009	4/1/2014	13/145544	US	SYSTEM AND METHOD FOR INTEGRATING CAPACITY PLANNING AND WORKLOAD MANAGEMENT
84020626	Published		7/30/2012		14/378430	US	VIRTUAL COMPUTING RESOURCE ORCHESTRATION
84169087	Published		3/3/2015		14/637195	US	Method And System For Estimating Power Consumption For Aggregate System Workload
81923015	Granted	5960450	12/24/1992	9/28/1999	07/997620	US	System And Method For Accessing Data Between A Host Bus And System Memory Buses In Which Each System Memory Bus Has A Data Path Which Is Twice The Width Of The Data Path For The Host Bus
81968654	Granted	6918052	11/3/2003	7/12/2005	10/700218	US	Managing Operations Of A Computer System Having A Plurality Of Partitions
81970904	Granted	7312404	4/25/2006	39441	11/411748	US	Conductive Contamination Reliability Solution For Assembling Substrates
81993881	Granted	7263620	8/7/2001	8/28/2007	09/923976	US	System And Method For Graceful Shutdown Of Host Processor Cards In A Server System
82006175	Granted	6912607	2/6/2002	6/28/2005	10/068029	US	Method And Apparatus For Ascertaining The Status Of Multiple Devices Simultaneously Over A Data Bus
82019036	Granted	5915114	2/14/1997	6/22/1999	08/799950	US	Dynamic Trace Driven Object Code Optimizer
82021349	Granted	5881316	11/12/1996	3/9/1999	08/748226	US	DYNAMIC ALLOCATION OF QUEUE SPACE USING COUNTERS
82083905	Granted	6934784	7/11/2002	8/23/2005	10/194788	US	SYSTEMS AND METHODS FOR MANAGING SYSTEM-MANAGEMENT-EVENT DATA
82084280	Granted	7386712	2/17/2003	6/10/2008	10/369279	US	Firmware Developer User Interface With Break Command Polling
82088402	Granted	6832869	9/5/2002	12/21/2004	10/236491	US	HOOKED SHAFT FASTENING DEVICE

PATENT
REEL: 038498 FRAME: 0778

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82088651	Granted	7389435	8/12/2002	6/17/2008	10/216438	US	System And Method For The Frequency Management Of Computer Systems To Allow Capacity On Demand
82089026	Granted	7406600	7/30/2003	7/29/2008	10/630144	US	ERROR-DETECTABLE LICENSE KEY FRAGMENTATION TO FACILITATE ERRORLESS MANUAL ENTRY
82090397	Granted	6948043	8/12/2002	9/20/2005	10/216435	US	MANAGEMENT OF A MEMORY SUBSYSTEM
82090520	Granted	7065626	7/10/2002	6/20/2006	10/193774	US	Method For Changing Computer System Memory Density
82093328	Granted	7469370	12/23/2002	12/23/2008	10/328805	US	Enabling Multiple Testing Devices
82093766	Granted	7025430	9/10/2002	4/11/2006	10/241304	US	Ball Retainer Forward Locking Assembly
82094147	Granted	7408788	3/5/2003	8/5/2008	10/379652	US	Device And Method For Circuit Board Insertion And Removal
82100261	Granted	7363516	10/3/2003	4/22/2008	10/678657	US	RACK EQUIPMENT MANAGEMENT SYSTEM AND METHOD
82102010	Granted	7325846	5/7/2003	2/5/2008	10/431235	US	Low Profile Mechanical Assist Hood Latch
82102013	Granted	7614672	11/16/2007	11/10/2009	11/941832	US	Low Profile Mechanical Assist Hood Latch
82103693	Granted	7929310	9/20/2010	4/19/2011	12/886362	US	Cell Board Interconnection Architecture
82103948	Granted	6895353	6/4/2003	5/17/2005	10/453610	US	Apparatus And Method For Monitoring High Impedance Failures In Chip Interconnects
82122050	Granted	7023708	12/20/2002	4/4/2006	10/324944	US	Multilevel Cable Support Arm And System And Method Incorporating Same
82128167	Granted	6101322	6/5/1996	8/8/2000	08/658538	US	REMOVAL AND INSERTION OF EXPANSION CARDS IN A COMPUTER SYSTEM
82132163	Granted	6084768	6/15/1998	7/4/2000	09/094817	US	NON-OPERATIONAL SHOCK PROTECTION FOR DISK CARRIERS IN A HIGH DENSITY PACKAGE
82132412	Granted	5966289	8/31/1998	10/12/1999	09/144249	US	ELECTRONIC DEVICE SECUREMENT SYSTEM
82132598	Granted	5973934	6/18/1998	10/26/1999	09/099592	US	PRINTED CIRCUIT BOARD LATCHING MECHANISM
82133102	Granted	6210211	9/3/1999	4/3/2001	09/390257	US	METHOD AND APPARATUS FOR RETAINING AN ELECTRICAL CONNECTOR
82134722	Granted	6226709	3/17/2000	5/1/2001	08/957688	US	MEMORY REFRESH CONTROL SYSTEM
82134971	Granted	6185654	7/17/1998	2/6/2001	09/118985	US	PHANTOM RESOURCE MEMORY ADDRESS MAPPING SYSTEM
82135100	Granted	6134113	8/28/1997	10/17/2000	08/927101	US	ENERGY ABSORBING VISCOELASTIC SPACER FOR REDUCING VIBRATION TO DISK DRIVES
81928574	Granted	5640361	5/1/1996	6/17/1997	08/641659	US	Memory Architecture
82006988	Granted	6807603	2/22/2002	10/19/2004	10/080739	US	System And Method For Input/output Module Virtualization And Memory Interleaving Using Cell Map
82014977	Granted	5761713	3/1/1996	6/2/1998	08/609821	US	ADDRESS AGGREGATION SYSTEM AND METHOD FOR INCREASING THROUGHPUT OF TO A MULTI-BANKED DATA CACHE FROM A PROCESSOR BY CONCURRENTLY FORWARDING AN ADDRESS TO EACH BANK
82018661	Granted	5787041	10/1/1996	7/28/1998	08/724204	US	System And Method For Improving A Random Access Memory (RAM)

PATENT
REEL: 038498 FRAME: 0779

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82024841	Granted	6014732	10/22/1997	1/11/2000	08/955821	US	Cache Memory With Reduced Access Time
82030028	Granted	6092127	5/15/1998	7/18/2000	09/080058	US	DYNAMIC ALLOCATION AND REALLOCATION OF BUFFERS IN LINKS OF CHAINED DMA OPERATIONS BY RECEIVING NOTIFICATION OF BUFFER FULL AND MAINTAINING A QUEUE OF BUFFERS AVAILABLE
82031087	Granted	6647464	2/18/2000	11/11/2003	09/507546	US	System And Method Utilizing Speculative Cache Access For Improved Performance
82100072	Granted	7565504	3/27/2003	7/21/2009	10/401234	US	QUEUE PAIR ACCESS TO A MEMORY WINDOW THROUGH VALIDATION OF A PROTECTION DOMAIN
82117367	Granted	6651138	1/25/2001	11/18/2003	09/770101	US	HOT-PLUG MEMORY CARTRIDGE POWER CONTROL LOGIC
82117493	Granted	6715116	1/25/2001	3/30/2004	09/769958	US	MEMORY DATA VERIFY OPERATION
82117496	Granted	6823424	9/28/2001	11/23/2004	09/966666	US	REBUILD BUS UTILIZATION
82117871	Granted	7370151	10/21/2003	5/6/2008	10/690137	US	METHOD AND SYSTEM FOR ABSORBING DEFECTS IN HIGH PERFORMANCE MICROPROCESSOR WITH A LARGE N-WAY SET ASSOCIATIVE CACHE
82119674	Granted	7620954	8/8/2001	11/17/2009	09/924934	US	Mechanism For Handling Load Lock/store Conditional Primitives In Directory-based Distributed Shared Memory Multiprocessors
82120052	Granted	7155568	9/29/2001	12/26/2006	09/967610	US	TRANSACTION GENERATOR FOR INITIALIZATION, REBUILD, AND VERIFY OF MEMORY
82121861	Granted	8078818	2/25/2005	12/13/2011	11/066038	US	Method And System For Migrating Memory Segments
82127669	Granted	5872941	6/5/1996	2/16/1999	08/659141	US	PROVIDING DATA FROM A BRIDGE TO A REQUESTING DEVICE WHILE THE BRIDGE IS RECEIVING THE DATA
82131041	Granted	7055054	12/16/2002	5/30/2006	10/320188	US	FAIL-OVER OF MULTIPLE MEMORY BLOCKS IN MULTIPLE MEMORY MODULES IN COMPUTER SYSTEM
82132727	Granted	6487621	8/17/1999	11/26/2002	09/375454	US	ARCHITECTURE, SYSTEM AND METHOD FOR ENSURING AN ORDERED TRANSACTION ON AT LEAST ONE OF A PLURALITY OF MULTI-PROCESSOR BUSES THAT EXPERIENCE A HIT-TO-MODIFIED SNOOP CYCLE
82164377	Granted	6047357	1/27/1995	4/4/2000	08/379048	US	HIGH SPEED METHOD FOR MAINTAINING CACHE COHERENCY IN A MULTI-LEVEL, SET ASSOCIATIVE CACHE HIERARCHY
82165562	Granted	6085276	10/24/1997	7/4/2000	08/957751	US	A MULTI-PROCESSOR COMPUTER SYSTEM HAVING A DATA SWITCH WITH SIMULTANEOUS INSERTION BUFFERS FOR ELIMINATING ARBITRATION INTERDEPENDENCIES
82173056	Granted	7694175	2/17/2006	4/6/2010	11/357385	US	Methods And Systems For Conducting Processor Health-checks
82212326	Granted	8009491	11/6/2009	8/30/2011	12/614019	US	Memory Access Strobe Configuration System And Process
82215383	Granted	7941610	4/27/2006	5/10/2011	11/413158	US	COHERENCY DIRECTORY UPDATING IN A MULTIPROCESSOR COMPUTING SYSTEM

PATENT
REEL: 038498 FRAME: 0780

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82220321	Granted	7793043	8/24/2006	9/7/2010	11/509449	US	Buffered Memory Architecture
82229624	Granted	8233380	11/6/2006	7/31/2012	11/557009	US	RDMA QP Simplex Switchless Connection
82250474	Granted	8090910	12/17/2008	1/3/2012	12/337013	US	OPERATION OF AN INPUT/OUTPUT LINK
84174500	Published		10/22/2012		14/424197	US	REFRESHING A GROUP OF MEMORY CELLS IN RESPONSE TO PRESENCE OF POTENTIAL DISTURBANCE
90048312	Acknowledged		4/29/2013			US	NON-VOLATILE MEMORY TO STORE RESETTABLE DATA
82253030	Granted	5918207	5/1/1996	6/29/1999	08/641656	US	Process And System For Predictive Resource Planning
82253969	Granted	7356458	6/27/2002	4/8/2008	10/180462	US	Multi-Language Correspondence/Form Generator
82254095	Published		8/1/2008		12/184677	US	EXECUTING BUSINESS RULES IN A BUSINESS PROCESS
82255094	Granted	7593909	6/5/2003	9/22/2009	10/455780	US	Knowledge Representation Using Reflective Links For Link Analysis Applications
82256342	Published		12/21/2004		11/019144	US	SYSTEM AND METHOD FOR PREDICTIVE PRODUCT REQUIREMENTS ANALYSIS
82257029	Published		4/19/2006		11/379342	US	SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR CONCEPT NETWORK BASED COLLABORATION
82257149	Granted	8386354	9/21/2006	2/26/2013	11/534099	US	DETERMINISTIC PRICING MANAGEMENT OF A PORTFOLIO OF ONE OR MORE APPLICATIONS
82265393	Granted	8996426	3/2/2011	3/31/2015	13/039202	US	Behavior and information model to yield more accurate probability of successful outcome
82834835	Published		12/15/2011		13/327505	US	COMBINATORIAL DOCUMENT MATCHING
82962904	Granted	8639562	4/26/2012	1/28/2014	13/456610	US	COST ENTITY MATCHING
82964650	Published		4/27/2012		13/457570	US	Optimizating Allocations In A Workforce Allocation Plan
83013747	Published		1/22/2013		13/746805	US	CLASSIFYING BASED ON EXTRACTED INFORMATION
83729148	Published		7/31/2011		14/116159	US	SYSTEMS AND METHODS OF KNOWLEDGE TRANSFER
83786443	Published		8/4/2011		14/234673	US	FEDERATION FOR INFORMATION TECHNOLOGY SERVICE MANAGEMENT
84077600	Application		7/31/2012		14/395432	US	SYSTEM ARCHITECTURE GENERATION
82077161	Granted	6286099	7/23/1998	9/4/2001	09/121796	US	DETERMINING POINT OF INTERACTION DEVICE SECURITY PROPERTIES AND ENSURING SECURE TRANSACTIONS IN AN OPEN NETWORKING ENVIRONMENT
82077164	Granted	6163772	6/26/1998	12/19/2000	09/105899	US	Virtual Point Of Sale Processing Using Gateway-Initiated Messages
82077413	Granted	5983208	6/17/1996	11/9/1999	08/671822	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR HANDLING TRANSACTION RESULTS IN A GATEWAY PAYMENT ARCHITECTURE UTILIZING A MULTICHANNEL, EXTENSIBLE, FLEXIBLE ARCHITECTURE

PATENT
REEL: 038498 FRAME: 0781

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82077539	Granted	5931917	9/26/1996	8/3/1999	08/721167	US	SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A GATEWAY SYSTEM ARCHITECTURE WITH SYSTEM ADMINISTRATION INFORMATION ACCESSIBLE FROM A BROWSER
82202591	Granted	7958037	3/23/2005	6/7/2011	11/087791	US	Method And Apparatus For Product Selection
82252094	Granted	6567842	3/11/2002	5/20/2003	10/095924	US	ATM Video Advertising
82252661	Granted	5835899	3/1/1996	11/10/1998	08/609694	US	System And Method For Deriving Financial Responsibility Identification
82252844	Granted	5823781	7/29/1996	10/20/1998	08/681745	US	Electronic Mentor Training System And Method
82253159	Granted	7398234	10/25/2000	7/8/2008	09/696806	US	Method and System for Organizing Vendor Information
82187045	Granted	7703124	3/31/2005	4/20/2010	11/094989	US	System And Method For Implementing A Private Virtual Backbone On A Common Network Infrastructure
82252097	Granted	6236995	1/30/1998	5/22/2001	09/016467	US	Distributed Object System with Deadlock Prevention
82252529	Granted	5918210	6/7/1996	6/29/1999	08/660638	US	BUSINESS QUERY TOOL,USING POLICY OBJECTS TO PROVIDE QUERY RESPONSES
82252535	Granted	5907846	6/7/1996	5/25/1999	08/657580	US	Method and System for Accessing Relational Databases Using Objects
82254590	Granted	8321235	11/27/2002	11/27/2012	10/305175	US	Validating An Electronic Transaction
82255469	Granted	8392894	5/30/2003	3/5/2013	10/448549	US	Method And System For Translating Between Disparate Data Object Models
82255907	Granted	7805713	10/27/2003	9/28/2010	10/694518	US	TRANSACTION PROCESSING ARCHITECTURE
82256465	Granted	7590631	9/2/2004	9/15/2009	10/932941	US	System And Method For Guiding Navigation Through A Hypertext System
82257212	Granted	8255904	12/8/2006	8/28/2012	11/635906	US	SYSTEM AND METHOD FOR GENERATING A DISTRIBUTABLE SOFTWARE PACKAGE
82257341	Granted	7724149	6/11/2007	5/25/2010	11/761211	US	APPARATUS, AND ASSOCIATED METHOD, FOR SELECTING DISTRIBUTION OF PREOCESSING TASKS AT A MULTI-PROCESSOR DATA CENTER
82257401	Granted	8473834	11/8/2007	6/25/2013	11/983304	US	Dynamic Portal Menu And Message System And Method
82257713	Granted	7715429	12/6/2004	5/11/2010	11/003456	US	Interconnect System For Supply Chain Management Of Virtual Private Network Services
83640292	Published		4/7/2011		14/009306	US	METHOD AND APPARATUS FOR MOVING A SOFTWARE OBJECT
82198154	Granted	7590141	10/28/2005	9/15/2009	11/262435	US	Method And Apparatus For An Automatic Network Boot Procedure For A Resource In A Utility Computing Environment
82252469	Granted	6012032	11/30/1995	1/4/2000	08/566416	US	System And Method For Accounting Of Computer Data Storage Utilization
82254902	Granted	8694381	11/27/2002	4/8/2014	10/305419	US	Personal Computer Life Cycle Management/personal Computer Validation Tool

PATENT
REEL: 038498 FRAME: 0782

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0783

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82255964	Published		12/5/2003		10/729607	US	System And Method For Fault Management In A Service-oriented Architecture
82256903	Granted	8897713	3/15/2005	11/25/2014	11/080331	US	System, Method, And Computer Program Product For Wireless Network Monitoring
82257524	Granted	8413107	7/15/2008	4/2/2013	12/218469	US	ARCHITECTURE FOR SERVICE ORIENTED ARCHITECTURE (SOA) SOFTWARE FACTORIES
82257593	Granted	8484645	6/10/2008	7/9/2013	12/136172	US	APPARATUS, AND ASSOCIATED METHOD, FOR HANDLING CONTENT PURSUANT TO TRANSFER BETWEEN ENTERPRISE CONTENT MANAGEMENT REPOSITORIES
83929640	Published		11/15/2011		14/353490	US	MOBILIZED SENSOR SYSTEM
81966347	Granted	6618825	4/20/2000	9/9/2003	09/553587	US	Hierarchy Of Fault Isolation Timers
81971156	Granted	6634005	5/1/2000	10/14/2003	09/563763	US	SYSTEM AND METHOD FOR TESTING AN INTERFACE BETWEEN TWO DIGITAL INTEGRATED CIRCUITS
81971276	Granted	6636906	4/28/2000	10/21/2003	09/560553	US	APPARATUS AND METHOD FOR ENSURING FORWARD PROGRESS IN COHERENT I/O SYSTEM
81971843	Granted	6775825	10/31/2000	8/10/2004	09/703949	US	Common Software Application Definition For Resource Management
81972527	Granted	6742152	4/11/2001	5/25/2004	09/834023	US	Parallel Scan Test Software
81973652	Granted	6748477	3/17/2001	6/8/2004	09/811193	US	Multiple-Path Interface Card For Interfacing Multiple Isolated Interfaces To A Storage System
81978959	Granted	6663003	2/22/2001	12/16/2003	09/790754	US	Apparatus And Method For Retrieving Data Related To A Data Cartridge In A Media Storage System
81984323	Granted	6684377	2/7/2001	1/27/2004	09/779301	US	ACCESS CELL DESIGN AND A METHOD FOR ENABLING AUTOMATIC INSERTION OF ACCESS CELLS INTO AN INTEGRATED CIRCUIT DESIGN
81990815	Granted	6857036	7/17/2001	2/15/2005	09/907072	US	Hardware Method For Implementing Atomic Semaphore Operations Using Code Macros
81993752	Granted	7216226	4/1/2002	5/8/2007	10/113073	US	Unique And Secure Identification Of A Networked Computing Node
81994250	Granted	6703652	1/16/2002	3/9/2004	10/051677	US	MEMORY STRUCTURE AND METHOD MAKING
81994502	Granted	6898785	8/16/2001	5/24/2005	09/930937	US	HANDLING CALLS FROM RELOCATED INSTRUMENTED FUNCTIONS TO FUNCTIONS THAT EXPECT A RETURN POINTER VALUE IN AN ORIGNAL ADDRESS SPACE
81997685	Granted	7734867	5/17/2002	6/8/2010	10/150595	US	DATA STORAGE USING DISK DRIVES IN ACCORDANCE WITH A SCHEDULE OF OPERATIONS
81997811	Granted	6627811	7/31/2001	9/30/2003	09/918976	US	Cable Protective Shield Assembly
81998495	Granted	6865614	7/2/2001	3/8/2005	09/897349	US	METHOD FOR TRANSFERING A PACKED DATA STRUCTURE TO AN UNPACKED DATA STRUCTURE BY COPYING THE PACKED DATA USING POINTER
82000868	Granted	6645841	11/16/2001	11/11/2003	10/016039	US	Selective Solder Bump Application

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82000931	Granted	7047437	12/12/2001	5/16/2006	10/021170	US	Method And System For Detecting Dropped Micro-Packets
82002368	Granted	7228527	7/15/2003	6/5/2007	10/619528	US	Method And System For Structuring A Procedure
82002491	Granted	6950962	10/12/2001	9/27/2005	09/976727	US	Method And Apparatus For Kernel Module Testing
82003364	Granted	6644481	2/11/2002	11/11/2003	10/073478	US	Apparatus And Method For Rackmounting A Chassis
82003490	Granted	6675720	8/31/2001	1/13/2004	09/944642	US	Management System For Multiple Cables
82006118	Granted	6728837	11/2/2001	4/27/2004	09/985426	US	Adaptive Data Insertion For Caching
82006922	Granted	6773616	12/26/2001	8/10/2004	10/033408	US	Formation Of Nanoscale Wires
82007174	Granted	6736277	5/23/2003	5/18/2004	10/444437	US	Adjustable Rackmount Assembly
82012046	Granted	5774505	4/4/1996	6/30/1998	08/628173	US	Intersymbol Interference Cancellation With Reduced Complexity
82014170	Granted	5886540	5/31/1996	3/23/1999	08/658920	US	EVALUATION PHASE EXPANSION FOR DYNAMIC LOGIC CIRCUITS
82016792	Granted	5815721	4/25/1996	9/29/1998	08/637988	US	Method And Apparatus For Optimizing Complex Control Structures Using Abstract Web Patterns
82017668	Granted	5838810	10/10/1996	11/17/1998	08/728452	US	Method And System Of Detecting Profile Maturation Using Image Processing Techniques
82020536	Granted	5805470	10/10/1996	9/8/1998	08/728468	US	VERIFICATION OF INSTRUCTION AND DATA FETCH RESOURCES IN A FUNCTIONAL MODEL OF A SPECULATIVE OUT-OF ORDER COMPUTER SYSTEM
82022093	Granted	5784550	10/29/1996	7/21/1998	08/739244	US	Method For Enhanced Functional Testing Of A Processor Using Dynamic Trap Handlers
82022471	Granted	5943499	11/27/1996	8/24/1999	08/757539	US	System And Method For Solving General Global Data Flow Predicated Code Problems
82024223	Granted	5940839	4/4/1997	8/17/1999	08/835089	US	FAULT-TOLERANT SYSTEM AND METHOD OF MANAGING TRANSACTION FAILURES IN HIERARCHIES
82024466	Granted	5892940	12/5/1996	4/6/1999	08/759584	US	Aliasing Nodes To Improve The Code Generated By A Circuit Compiler
82026782	Granted	5987576	2/27/1997	11/16/1999	08/807161	US	METHOD AND APPARATUS FOR GENERATING AND DISTRIBUTING CLOCK SIGNALS WITH MINIMAL SKEW
82027343	Granted	6128773	10/1/1997	10/3/2000	08/941829	US	AUTOMATICALLY MEASURING SOFTWARE COMPLEXITY
82027592	Granted	6117187	9/30/1997	9/12/2000	08/940756	US	Automatic Generation Of A Software Installation Package
82028342	Granted	6668314	6/24/1997	12/23/2003	08/881196	US	Virtual Memory Translation Control By TLB Purge Monitoring
82030151	Granted	6181050	10/27/1997	1/30/2001	08/958635	US	Electrostraic Micromotor With Large In Plane Force And No Out Of Plane Force
82030964	Granted	6243287	1/27/2000	6/5/2001	09/492510	US	Distributed Decode System And Method For Improving Static Random Access Memory (SRAM) Density

PATENT
REEL: 038498 FRAME: 0784

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

PATENT
REEL: 038498 FRAME: 0785

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82031153	Granted	6807625	2/18/2000	10/19/2004	09/507032	US	METHOD AND APPARATUS FOR EFFICIENTLY GENERATING, STORING, AND CONSUMING ARITHMETIC FLAGS BETWEEN PRODUCING AND CONSUMING MACROINSTRUCTIONS WHEN EMULATING WITH MICROINSTRUCTIONS
82031396	Granted	7343479	6/25/2003	3/11/2008	10/602916	US	Method And Apparatus For Implementing Two Architectures In A Chip
82034021	Granted	6064820	5/27/1998	5/16/2000	09/085299	US	APPARATUS AND METHOD TO INCREMENTALLY UPDATE SINGLE STATIC ASSIGNMENT (SSA) FORM
82034147	Granted	5926370	10/29/1998	7/20/1999	09/182939	US	Method And Apparatus For A Modular Integrated Apparatus For Multi-Function Components
82035206	Granted	6084824	10/20/1998	7/4/2000	09/175891	US	Optical Card Reader Including Mechanical Scanning Assembly
82036271	Granted	6651088	7/20/1999	11/18/2003	09/358582	US	Method For Reducing Coherent Misses In Shared-Memory Multiprocessors Utilizing Lock-Binding Prefetchs
82036394	Granted	6072952	4/22/1998	6/6/2000	09/064933	US	Method And Apparatus For Coalescing Variables
82038518	Granted	6151672	2/23/1998	11/21/2000	09/028258	US	Methods And Apparatus For Reducing Interference In A Branch History Table Of A Microprocessor
82039019	Granted	6160703	6/23/1998	12/12/2000	09/103667	US	Shock Mounting System For Data Storage Modules
82039205	Granted	6278624	12/1/1999	8/21/2001	09/452310	US	HIGH AVAILABILITY DC POWER SUPPLY WITH ISOLATED INPUTS, DIODE-OR-CONNECTED OUTPUTS, AND FACTOR CORRECTION
82039325	Granted	6272552	9/24/1998	8/7/2001	09/160463	US	DUAL CHANNEL 100BASE-T LINK FOR COMPUTER NETWORKS
82040951	Granted	6185669	2/18/1999	2/6/2001	09/252367	US	SYSTEM FOR FETCHING MAPPED BRANCH TARGET INSTRUCTIONS OF OPTIMIZED CODE PLACED INTO A TRACE MEMORY
82043882	Granted	6456622	3/3/1999	9/24/2002	09/261769	US	METHOD FOR KNOWLEDGE ACQUISITION FOR DIAGNOSTIC BAYESIAN NETWORKS
82044200	Granted	6625807	8/10/1999	9/23/2003	09/371466	US	APPARATUS AND METHOD FOR EFFICENTLY OBTAINING AND UTILIZING REGISTER USAGE INFORMATION DURING SOFTWARE BINARY TRANSLATION
82044569	Granted	7100025	1/28/2000	8/29/2006	09/491810	US	APPARATUS AND METHOD FOR PERFORMING SINGLE-INSTRUCTION MULTIPLE-DATA INSTRUCTIONS
82044884	Granted	6779100	12/17/1999	8/17/2004	09/465900	US	Method And Device For Address Translation For Compressed Instructions
82085531	Granted	6198655	12/10/1999	3/6/2001	09/459246	US	ELECTRICALLY ADDRESSABLE VOLATILE AND NON-VOLATILE MOLECULAR-BASED SWITCHING DEVICES
82105817	Granted	7191380	9/10/2003	3/13/2007	10/659892	US	Defect-tolerant And Fault-tolerant Circuit Interconnections
82201529	Granted	7447055	4/22/2005	11/4/2008	11/112085	US	Multiplexer Interface To A Nanoscale-crossbar
82201904	Granted	7763552	4/28/2006	7/27/2010	11/413476	US	Method Of Interconnect Formation Using Focused Beams

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82214699	Granted	8502198	4/28/2006	8/6/2013	11/414578	US	Switching Device And Methods For Controlling Electron Tunneling Therein
82214702	Granted	7778061	10/16/2006	8/17/2010	11/582208	US	Crossbar-memory Systems And Methods For Writing To And Reading From Crossbar Memory Junctions Of Crossbar-memory Systems
82218821	Granted	7544977	1/27/2006	6/9/2009	11/342076	US	Mixed-scale Electronic Interface
82249223	Granted	8093575	4/20/2009	1/10/2012	12/426647	US	MEMRISTIVE DEVICE WITH A BI-METALLIC ELECTRODE
82260215	Granted	7982504	1/29/2010	7/19/2011	12/696361	US	INTERCONNECTION ARCHITECTURE FOR MULTILAYER CIRCUITS
82260401	Granted	8207519	4/19/2010	6/26/2012	12/763091	US	IONIC-MODULATED DOPANT PROFILE CONTROL IN NANOSCALE SWITCHING DEVICES
82262084	Granted	8472262	6/10/2010	6/25/2013	12/813003	US	SENSE AMPLIFIER FOR READING A CROSSBAR MEMORY ARRAY
82263521	Granted	8325507	9/29/2010	12/4/2012	12/893825	US	MEMRISTORS WITH AN ELECTRODE METAL RESERVOIR FOR DOPANTS
82264706	Granted	8314475	11/9/2010	11/20/2012	12/942131	US	NANOSCALE ELECTRONIC DEVICE WITH ANISOTROPIC DIELECTRIC MATERIAL
82264709	Published		10/29/2010		12/916414	US	SEMICONDUCTOR DEVICE FOR PROVIDING HEAT MANAGEMENT
82659238	Granted	8503217	4/30/2011	8/6/2013	13/098453	US	RECONFIGURABLE CROSSBAR MEMORY ARRAY
82678319	Granted	8436330	12/23/2008	5/7/2013	13/121918	US	Electrically Actuated Devices
82747699	Granted	8907455	1/28/2009	12/9/2014	13/130817	US	Voltage-controlled Switches
82747719	Granted	9000411	1/6/2009	4/7/2015	13/130799	US	MEMRISTOR DEVICES CONFIGURED TO CONTROL BUBBLE FORMATION
82747722	Granted	8787064	1/13/2009	7/22/2014	13/130805	US	Programmable Bipolar Electronic Device
82749133	Granted	8729518	10/25/2011	5/20/2014	13/281186	US	MULTILAYER STRUCTURE BASED ON A NEGATIVE DIFFERENTIAL RESISTANCE MATERIAL
82837334	Granted	8812418	6/22/2009	8/19/2014	13/256246	US	Memristive Adaptive Resonance Networks
82853040	Granted	8542522	7/23/2009	9/24/2013	13/259164	US	NON-VOLATILE DATA-STORAGE LATCH
82924178	Granted	8611134	3/25/2010	12/17/2013	13/383622	US	SYSTEMS AND METHODS FOR ROW-WIRE VOLTAGE-LOSS COMPENSATION IN CROSSBAR ARRAYS
82963093	Published		4/13/2012		13/445995	US	FLAT-PANEL DISPLAY INCLUDING MEMRISTIVE DEVICES
82978178	Granted	9037672	6/15/2012	5/19/2015	13/524659	US	NON-VOLATILE MEMORY PHYSICAL NETWORKS
83100548	Granted	8890106	12/18/2012	11/18/2014	13/718689	US	HYBRID CIRCUIT OF NITRIDE-BASED TRANSISTOR AND MEMRISTOR
83101896	Published		1/29/2013		13/753511	US	LOCALLY ACTIVE MEMRISTIVE DEVICE
83138650	Allowed		2/28/2013		13/781114	US	MEMORY ELEMENTS WITH SERIES VOLATILE AND NONVOLATILE SWITCHES

PATENT
REEL: 038498 FRAME: 0786

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
83141544	Granted	9015405	6/29/2010	4/21/2015	13/805169	US	METHOD AND SYSTEM FOR ENCODING DATA FOR STORAGE IN A MEMORY ARRAY
83235043	Published		10/21/2010		13/880269	US	METAL-INSULATOR TRANSITION SWITCHING DEVICES
83256537	Granted	8971091	1/31/2011	3/3/2015	13/884140	US	METHOD AND CIRCUIT FOR SWITCHING A MEMRISTIVE DEVICE IN AN ARRAY
83623283	Allowed		2/28/2011		14/001835	US	MEMRISTIVE ELEMENTS THAT EXHIBIT MINIMAL SNEAK PATH CURRENT
83815245	Granted	9064568	8/26/2011	6/23/2015	14/239053	US	CIRCUIT AND METHOD FOR READING A RESISTIVE SWITCHING DEVICE IN AN ARRAY
83834203	Published		9/2/2011		14/342431	US	APPARATUS TO STORE DATA AND METHODS TO READ MEMORY CELLS
83857924	Published		10/12/2011		14/345295	US	SELECT DEVICE FOR CROSS POINT MEMORY STRUCTURES
84013988	Granted	8923034	8/21/2014	12/30/2014	14/464803	US	Multi-level Memory Cell with Continuously Tunable Switching
90050937	Application		9/4/2015		14/845714	US	NEURISTOR-BASED RESERVOIR COMPUTING DEVICES
81993566	Granted	6999998	10/4/2001	2/14/2006	09/971135	US	Shared Memory Coupling Of Network Infrastructure Devices
81998186	Granted	8145790	7/11/2002	3/27/2012	10/192631	US	Method And Device For Using Dynamic Updates In A Network
82058060	Granted	6678746	8/1/2000	1/13/2004	09/630033	US	Processing Network Packets
82085777	Granted	7920476	10/8/2003	4/5/2011	10/680911	US	Network Congestion Control
82183112	Granted	7372820	10/29/2004	5/13/2008	10/977147	US	SYSTEM AND METHOD FOR STRIPING DELAY-SENSITIVE DATA OVER MULTIPLE BURSTY CHANNELS
82217567	Granted	8254264	4/28/2006	8/28/2012	11/414059	US	Network Latency Estimation
82228121	Granted	7813351	4/13/2007	10/12/2010	11/787008	US	Available Bandwidth Estimation
82247036	Granted	7995595	10/30/2008	8/9/2011	12/261789	US	Method For Efficiently Detecting Node Addresses
82260833	Granted	8811398	4/30/2010	8/19/2014	12/770978	US	Method For Routing Data Packets Using Vlans
82838098	Allowed		10/31/2011		13/285803	US	Generating EGFT Network Topologies
82916249	Published		4/12/2012		13/444942	US	ASSIGNING SELECTED GROUPS TO ROUTING STRUCTURES
82916269	Published		4/3/2012		13/438493	US	Solving Under-Determined Problems for Networks
82916409	Granted	8811408	4/30/2012	8/19/2014	13/460132	US	ROUTING DATA PACKETS ON A NETWORK
82963525	Published		4/5/2012		13/440793	US	Communications Security in Multiple-Antenna Wireless Networks
83721282	Published		6/7/2011		14/122164	US	A SCALABLE MULTI-TENANT NETWORK ARCHITECTURE FOR VIRTUALIZED DATACENTERS
83815016	Published		9/23/2011		14/240511	US	Extrapolating Channel State Information ("CSI") Estimates From Multiple Packets Sent Over Different Antennas to Generate a Combined CSI Estimate for a MIMO-OFDM System

PATENT
REEL: 038498 FRAME: 0787

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84089359	Published		5/4/2012		14/397419	US	Context-Aware HTTP Compression
84303894	Application		7/22/2015		14/805,629	US	Generating Network Topologies
90017120	Application		1/31/2013		14/763797	US	INDEXED SHAPED GRAPH CREATION
90051518	Application		3/7/2013		14/773031	US	DISTRIBUTED ANTENNA SYSTEM OVER ETHERNET
82094639	Granted	7983422	7/25/2003	7/19/2011	10/627158	US	QUANTUM CRYPTOGRAPHY
82168127	Granted	6975514	1/31/2003	12/13/2005	10/355419	US	Integrated Vcsels On Traditional VLSI Packaging
82175489	Granted	8447146	1/11/2008	5/21/2013	12/008605	US	Photonic Interconnect System
82175495	Granted	7546004	1/11/2008	6/9/2009	12/008554	US	Photonic Interconnect System
82178486	Granted	7813613	12/3/2009	10/12/2010	12/630053	US	Optical Connections And Methods Of Forming Optical Connections
82178492	Granted	7344315	11/3/2004	3/18/2008	10/979989	US	Optical Connections And Methods Of Forming Optical Connections
82180925	Granted	7002133	10/3/2003	2/21/2006	10/678437	US	DETECTING ONE OR MORE PHOTONS FROM THEIR INTERACTIONS WITH PROBE PHOTONS IN A MATTER SYSTEM
82181489	Granted	7133173	7/26/2004	11/7/2006	10/899332	US	Nonlinear Electromagnetic Quantum Information Processing
82210514	Granted	7474823	10/12/2006	1/6/2009	11/581194	US	Tunable Dispersion Compensation
82214633	Granted	7609932	7/6/2006	10/27/2009	11/481687	US	Slot Waveguide Structure
82214636	Granted	7805826	7/6/2006	10/5/2010	11/481716	US	Fabrication Of Slot Waveguide
82214696	Granted	7910915	10/23/2008	3/22/2011	12/288860	US	Nanowire Devices And Systems, Light-emitting Nanowires, And Methods Of Precisely Positioning Nanoparticles
82217387	Granted	8135276	8/11/2006	3/13/2012	11/990421	US	QUANTUM REPEATER
82217507	Granted	7836007	1/30/2006	11/16/2010	11/343639	US	Methods For Preparing Entangled Quantum States
82217699	Granted	7426444	4/19/2006	9/16/2008	11/407600	US	Methods For Determining Relative Phase Differences In Entangled Quantum States
82222694	Granted	7880251	4/26/2007	2/1/2011	11/789821	US	Structure Having Nanoapertures
82223567	Granted	7701629	4/19/2007	4/20/2010	11/788445	US	Photonic Device Including Semiconductor Structure Having Doped Region With Array Of Subwavelength Recesses
82229309	Granted	7965436	4/26/2007	6/21/2011	11/796182	US	MICRON-SIZE OPTICAL FARADAY ROTATOR
82230368	Granted	7805080	6/22/2007	9/28/2010	11/821532	US	Optical Interconnect
82230497	Granted	7907654	4/27/2007	3/15/2011	11/796324	US	LASER DIODE WITH A GRATING LAYER
82230560	Granted	7548671	7/16/2007	6/16/2009	11/879242	US	Optical Device Including Waveguide Grating Structure
82230620	Granted	7964927	10/1/2008	6/21/2011	12/243155	US	SEMICONDUCTOR DEVICE AND METHOD FOR STRAIN CONTROLLED OPTICAL ABSORPTION
82230623	Granted	7849122	4/18/2007	12/7/2010	11/787903	US	Self-authenticating Quantum Random Bit Generators
82234550	Granted	8673217	10/18/2007	3/18/2014	11/975538	US	Sensor Using Plasmon Resonance
82234556	Granted	8009943	10/20/2008	8/30/2011	12/254415	US	Magnetically Activated Photonic Switches And Switch Fabrics Employing The Same
82234679	Granted	7609916	9/13/2007	10/27/2009	11/900714	US	Electrical Contact Apparatus For Optical Waveguides

PATENT
REEL: 038498 FRAME: 0788

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82238549	Published		1/30/2008		12/864205	US	NANOSTRUCTURES AND METHODS OF MAKING THE SAME
82240673	Granted	8198706	10/1/2008	6/12/2012	12/243853	US	MULTI-LEVEL NANOWIRE STRUCTURE AND METHOD OF MAKING THE SAME
82240985	Granted	8098492	10/31/2008	1/17/2012	12/263374	US	DATA PROCESSING MODULES AND SYSTEMS
82241111	Granted	7692135	10/31/2008	4/6/2010	12/262359	US	WDM Signal Detector
82243352	Granted	7532785	10/23/2007	5/12/2009	11/975974	US	Photonic Interconnects For Computer System Devices
82243358	Granted	7889956	4/29/2009	2/15/2011	12/387216	US	Photonic Interconnects For Computer System Devices
82260272	Granted	8265435	1/29/2010	9/11/2012	12/696330	US	OPTICAL FIBER COUPLING SYSTEMS AND METHODS FOR FABRICATING THE SAME
82260278	Published		1/5/2010		12/652278	US	LIGHT EMITTING DIODE DEVICE
82261775	Published		7/30/2010		12/847444	US	OPTICAL POWER DIVIDER
82405427	Granted	8712198	5/9/2008	4/29/2014	12/991651	US	Optical Splitter Device
82554389	Published		5/23/2008		12/994118	US	Optical Interconnect
82755920	Granted	8837544	10/28/2011	9/16/2014	13/284262	US	QUANTUM OPTICAL DEVICE
82774443	Allowed		1/7/2009		13/143649	US	PHOTONIC WAVEGUIDE
82852236	Granted	8718422	4/28/2009	5/6/2014	13/258420	US	ANGLED COUPLING FOR OPTICAL FIBERS
82852957	Granted	8485738	7/31/2009	7/16/2013	13/258599	US	Optical Fiber Connector
82853066	Published		9/18/2009		13/259444	US	LIGHT-EMITTING DIODE INCLUDING A METAL-DIELECTRIC-METAL STRUCTURE
82922738	Published		7/17/2009		13/383267	US	NON-PERIODIC GRATING REFLECTORS WITH FOCUSING POWER AND METHODS FOR FABRICATING THE SAME
82930498	Granted	8885991	12/21/2009	11/11/2014	13/384878	US	CIRCUIT SWITCHED OPTICAL INTERCONNECTION FABRIC
82930504	Granted	9011020	1/6/2010	4/21/2015	13/384883	US	OPTICAL INTERCONNECT
82930541	Published		9/23/2009		13/384725	US	OPTICAL DEVICES BASED ON DIFFRACTION GRATINGS
82978201	Granted	8883616	7/31/2012	11/11/2014	13/563222	US	GERMANIUM ON INSULATOR APPARATUS
83019366	Granted	8357926	6/1/2012	1/22/2013	13/486291	US	GAIN-CLAMPED SEMICONDUCTOR OPTICAL AMPLIFIERS
83266112	Published		12/20/2010		13/990009	US	VERTICAL-CAVITY SURFACE-EMITTING LASER SYSTEM AND METHOD FOR FABRICATING THE SAME
83422024	Granted	8929694	1/20/2011	1/6/2015	13/978039	US	COMPOSITE PROCESSORS
83791169	Published		7/29/2011		14/234987	US	OPTICAL POWER SPLITTERS
83948721	Published		1/9/2012		14/362233	US	Optical Connections
84020543	Published		4/30/2012		14/385250	US	HYBRID MOS OPTICAL MODULATOR
84076060	Published		6/28/2012		14/396429	US	Optical Shuffling
84112897	Application		7/30/2012		14/416124	US	OPTICAL COUPLING SYSTEM AND METHOD FOR FABRICATING THE SAME
84158908	Application		9/13/2012		14/423804	US	CONTROLLING TEMPERATURES IN OPTICAL CIRCUITS
84273744	Published		6/1/2015		14/727040	US	CIRCUIT MODULE
84282231	Application		6/17/2015		14/742279	US	THERMAL SHUNT
84282237	Application		6/19/2015		14/744245	US	VERTICAL-CAVITY SURFACE-EMITTING LASERS WITH NON-PERIODIC GRATINGS

PATENT
REEL: 038498 FRAME: 0789

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
90017240	Application		1/24/2013		14/763136	US	METHODS AND APPARATUS TO REMOVE DUST FROM AN OPTICAL WAVEGUIDE ASSEMBLY
82243043	Application		10/30/2008		12/261317	US	COMPUTER EXECUTABLE SERVICE
82243046	Granted	8392566	10/30/2008	3/5/2013	12/261187	US	COMPUTER EXECUTABLE SERVICES
82852336	Published		7/28/2009		13/258751	US	CONTROLLING CLOUD SERVICES
82919306	Granted	8930887	8/3/2009	1/6/2015	13/384675	US	LINKING MODEL INSTANCES TO PACKAGES
84172854	Application		4/30/2015		14/701441	US	NAMING OF CLOUD COMPONENTS
84172871	Application		4/30/2015		14/701433	US	CLOUD IMAGES
82268075	Granted	5971777	11/21/1997	10/26/1999	08/976199	US	BREAKAWAY PHYSICAL/ELECTRICAL MEDIA JACK
82268078	Granted	6186803	7/1/1999	2/13/2001	09/345891	US	BREAKWAY PHYSICAL/ELECTRICAL MEDIA JACK
82274693	Granted	6983323	8/12/2002	1/3/2006	10/217862	US	Multi-level packet screening with dynamically selected filtering criteria
82274759	Granted	7095715	7/2/2001	8/22/2006	09/897189	US	System and Method for Processing Network Packet Flows
82274762	Granted	7633868	6/23/2006	12/15/2009	11/473885	US	System and Method for Processing Network Packet Flows
82275008	Granted	8458796	3/8/2011	6/4/2013	13/043287	US	METHODS AND SYSTEMS FOR FULL PATTERN MATCHING IN HARDWARE
82579221	Granted	8230507	6/1/2010	7/24/2012	12/791556	US	Modular Agent For Network Security Intrusion Detection System
82579241	Granted	7650638	12/2/2002	1/19/2010	10/308417	US	Network Security Monitoring System Employing Bi-Directional Communication
82579278	Granted	8015604	10/10/2003	9/6/2011	10/683221	US	Hierarchical Architecture In A Network Security System
82579318	Granted	8099782	11/17/2009	1/17/2012	12/620345	US	Event Aggregation In A Network
82579407	Granted	8850565	1/10/2005	9/30/2014	10/905537	US	System And Method For Coordinating Network Incident Response Activities
82579424	Published		5/27/2010		12/789318	US	Specifying a Parser Using a Properties File
82579553	Granted	9031916	12/28/2007	5/12/2015	11/966078	US	Storing Log Data Efficiently While Supporting Querying To Assist In Computer Network Security
83422193	Published		10/11/2011		13/984976	US	Network Topology Discovery
84038227	Published		5/30/2012		14/398017	US	PARAMETER ADJUSTMENT FOR PATTERN DISCOVERY
84312765	Application		1/28/2013		14/763190	US	DISPLAYING REAL-TIME SECURITY EVENTS
82093082	Granted	7596792	8/7/2002	9/29/2009	10/212692	US	Method And System For Supporting A Plurality Of Event Types
82105943	Granted	8914606	1/20/2005	12/16/2014	11/038379	US	System And Method For Soft Partitioning A Computer System
82120616	Granted	8539340	1/4/2002	9/17/2013	10/037683	US	METHOD TO SERVE REAL-TIME DATA IN EMBEDDED WEB SERVER
82128605	Granted	6233634	8/17/1996	5/15/2001	08/697678	US	SERVER CONTROLLER CONFIGURED TO SNOOP AND RECEIVE A DUPLICATIVE COPY OF DISPLAY DATA PRESENTED TO A VIDEO CONTROLLER
82132604	Granted	6098143	6/25/1998	8/1/2000	09/105725	US	REMOTE SERVER MANAGEMENT DEVICE

PATENT
REEL: 038498 FRAME: 0790

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82135226	Granted	6145102	1/20/1998	11/7/2000	09/009084	US	TRANSMISSION OF AN ERROR MESSAGE OVER A NETWORK BY A COMPUTER WHICH FAILS A SELF-TEST
82135658	Granted	6212530	5/12/1998	4/3/2001	09/076373	US	METHOD AND APPARATUS BASED ON RELATIONAL DATABASE DESIGN TECHNIQUES SUPPORTING MODELING, ANALYSIS AND AUTOMATIC HYPERTEXT GENERATION FOR STRUCTURED DOCUMENT COLLECTIONS
82136471	Granted	6134665	1/20/1998	10/17/2000	09/009809	US	COMPUTER WITH REMOTE WAKE UP AND TRANSMISSION OF A STATUS PACKET WHEN THE COMPUTER FAILS A SELF TEST
82187669	Granted	8933941	8/23/2005	1/13/2015	11/209886	US	Method And Apparatus For Redirection Of Video Data
82222127	Granted	7721120	9/7/2006	5/18/2010	11/517104	US	Controlling Fan Speed In Electronic System
82226126	Granted	7694093	4/27/2007	4/6/2010	11/741487	US	Memory Module And Method For Mirroring Data By Rank
82226252	Granted	7783876	5/1/2007	8/24/2010	11/742594	US	COMPARING CHARACTERISTICS PRIOR TO BOOTING DEVICES
82231931	Granted	7761622	7/26/2007	7/20/2010	11/828724	US	Centralized Server Rack Management Using USB
82245164	Granted	8347070	10/30/2008	1/1/2013	12/261926	US	SYSTEM AND METHOD FOR SHARING PLATFORM DATA
82260584	Granted	8151147	12/17/2009	4/3/2012	12/640971	US	SYNCHRONIZE ERROR HANDLING FOR A PLURALITY OF PARTITIONS
82260647	Granted	8122290	12/17/2009	2/21/2012	12/641103	US	ERROR LOG CONSOLIDATION
82938261	Published		11/30/2009		13/386681	US	SYSTEM AND METHOD OF BOOTING A COMPUTER SYSTEM USING AN EFI PERSONALITY OF A DIFFERENT COMPUTER SYSTEM
83139188	Application		1/28/2013		13/751886	US	THINNING OPERATING SYSTEMS
83171568	Published		1/20/2013		13/745820	US	UPDATING NON-APPENDABLE RECORD
83205242	Published		3/22/2013		13/849271	US	ENTITIES WITH BIOMETRICALLY DERIVED KEYS
83205262	Published		8/30/2013		14/015758	US	MEMORY MODULE ERRORS
83974775	Application		1/30/2012		14/370058	US	PROVIDING NETWORK ATTACHED STORAGE DEVICES TO MANAGEMENT SUB-SYSTEMS
84084135	Published		4/25/2012		14/396383	US	DYNAMIC MEMORY ALLOCATION
84292954	Application		1/31/2013		14/764210	US	RAM REFRESH RATE
82250783	Published		7/30/2009		12/462186	US	Generating A Visualization Of Reviews According To Distance Associations Between Attributes And Opinion Words In The Reviews
82836850	Granted	8700674	7/14/2009	4/15/2014	12/502890	US	DATABASE STORAGE ARCHITECTURE
83019400	Granted	8312027	6/5/2012	11/13/2012	13/489094	US	MODULAR QUERY OPTIMIZER
83566678	Application		8/15/2013		13/968278	US	MANAGING DATABASE NODES
84079598	Published		5/15/2012		14/398229	US	QUERY PROCESSING
82062989	Granted	7370077	11/21/2001	5/6/2008	09/989111	US	Dynamic Generation Of A Networked Information Resource

PATENT
REEL: 038498 FRAME: 0791

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82253717	Published		8/13/2008		12/191046	US	INTEGRATED DEVELOPMENT ENGINE FOR A CLOUD COMPUTING ENVIRONMENT
82257587	Granted	8239553	4/24/2008	8/7/2012	12/109208	US	Providing Services For Multiple Business Consumers
82263959	Granted	8340429	11/24/2010	12/25/2012	12/953460	US	SEARCHING DOCUMENT IMAGES
82947667	Granted	8527436	8/30/2010	9/3/2013	12/871879	US	AUTOMATED PARSING OF E-MAIL MESSAGES
82948105	Granted	8107015	6/6/1997	1/31/2012	08/870836	US	KEY FRAME SELECTION
82948125	Granted	6877134	7/8/1999	4/5/2005	09/363974	US	INTEGRATED DATA AND REAL-TIME METADATA CAPTURE SYSTEM AND METHOD
82948131	Granted	7403224	9/10/2004	7/22/2008	10/939216	US	EMBEDDED METADATA ENGINES IN DIGITAL CAPTURE DEVICES
82948148	Published		8/21/2007		11/842711	US	NETWORK VIDEO GUIDE AND SPIDERING
82948311	Granted	5855020	2/21/1996	12/29/1998	08/604584	US	IMPROVED WED SCAN PROCESS
82948623	Granted	8918366	10/2/2006	12/23/2014	11/541996	US	SYNTHETIC FULL COPIES OF DATA AND DYNAMIC BULK-TO-BRICK TRANSFORMATION
82948626	Granted	8543542	10/2/2006	9/24/2013	11/541856	US	SYNTHETIC FULL COPIES OF DATA AND DYNAMIC BULK-TO-BRICK TRANSFORMATION
82948629	Granted	8935214	8/16/2010	1/13/2015	12/856904	US	STORING ELECTRONIC CONTENT WITH TIME-VARYING PROTERTIES
82962552	Granted	8984404	5/21/2012	3/17/2015	13/476358	US	GUIDING AN IMAGE-BASED TASK EXECUTION
82991663	Granted	8387087	4/27/2012	2/26/2013	13/458971	US	SYSTEM AND METHOD FOR APPLYING A DATABASE TO VIDEO MULTIMEDIA
83174548	Granted	8781817	3/4/2013	7/15/2014	13/784187	US	PHRASE-BASED DOCUMENT CLUSTERING WITH AUTOMATIC PHRASE EXTRACTION
83712065	Published		2/3/2012		14/131291	US	SELECTOR SYNCRONIZED WITH MOVEMENT OF DATA IN MEMORY
83782573	Published		12/22/2011		14/232217	US	CRYPTOGRAPHIC INFORMATION ASSOCIATION TO MEMORY REGIONS
83782782	Allowed		3/30/2012		14/233334	US	SECURE BOOT INFORMATION WITH VALIDATION CONTROL DATA SPECIFYING A VALIDATION TECHNIQUE
83784170	Published		1/31/2012		14/232224	US	Access to Memory Region Including Confidential Information
81947804	Granted	5721865	1/18/1996	2/24/1998	08/588503	US	Information Processing Equipment
81974771	Granted	6691210	12/29/2000	2/10/2004	09/751371	US	Circuit And Method For Hardware-assisted Software Flushing Of Data And Instruction Caches
81988508	Granted	6964035	7/3/2001	11/8/2005	09/898204	US	Debugging An Operating System Kernel With Debugger Support In A Network Interface Card
81997121	Granted	6994158	10/15/2003	2/7/2006	10/684480	US	Multi-Load Thermal Regulating System Having Electronic Valve Control
81997310	Granted	6687168	1/18/2002	2/3/2004	10/053995	US	Method For Writing Data Bits To A Memory Array
81998183	Granted	7836205	7/11/2002	11/16/2010	10/192609	US	Method And Device For Use With A Virtual Network

PATENT
REEL: 038498 FRAME: 0792

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82020410	Granted	5964891	8/27/1997	10/12/1999	08/924416	US	Diagnostic System For A Distributed Data Access Networked System
82049570	Granted	6675262	6/8/2001	1/6/2004	09/877368	US	Multi-processor Computer System With Cache-flushing System Using Memory Recall
82050626	Granted	6766435	5/31/2000	7/20/2004	09/583795	US	Address Translation Registers In A Processor
82050629	Granted	6567907	10/19/2000	5/20/2003	09/691973	US	Avoiding Mapping Conflicts In A Translation Look-aside Buffer
82051124	Granted	6813705	1/5/2001	11/2/2004	09/755774	US	Memory Disambiguation Scheme For Partially Redundant Load Removal
82079225	Granted	7024573	2/5/2002	4/4/2006	10/062443	US	Method And Apparatus For Cooling Heat Generating Components
82086650	Granted	6945058	5/14/2004	9/20/2005	10/845359	US	Cooling Of Data Centers
82088339	Granted	6922752	8/23/2002	7/26/2005	10/226111	US	STORAGE SYSTEM USING FAST STORAGE DEVICES FOR STORING REDUNDANT DATA
82091270	Granted	7073059	4/8/2002	7/4/2006	10/118646	US	Secure Machine Platform That Interfaces To Operating Systems And Customized Control Programs
82106501	Granted	7617250	9/22/2003	11/10/2009	10/666577	US	Semantic File System
82106507	Granted	8311980	12/1/2003	11/13/2012	10/726041	US	Namespace Consistency For A Wide-area File System
82117808	Granted	6725334	6/8/2001	4/20/2004	09/877530	US	METHOD AND SYSTEM FOR EXCLUSIVE TWO-LEVEL CACHING IN A CHIP-MULTIPROCESSOR
82120175	Granted	7389389	9/26/2003	6/17/2008	10/672960	US	System And Method For Limited Fanout Daisy Chaining Of Cache Invalidation Requests In A Shared-memory Multiprocessor System
82120181	Granted	6622217	6/11/2001	9/16/2003	09/878983	US	CACHE COHERENCE PROTOCOL ENGINE SYSTEM AND METHOD FOR PROCESSING MEMORY TRANSACTION IN DISTINCT ADDRESS SUBSETS DURING INTERLEAVED TIME PERIODS IN A MULTIPROCESSOR SYSTEM
82134911	Granted	5857097	3/10/1997	1/5/1999	08/814190	US	A METHOD FOR IDENTIFYING REASONS FOR DYNAMIC STALL CYCLES DURING THE EXECUTION OF A PROGRAM
82136282	Granted	6070009	11/26/1997	5/30/2000	08/980166	US	METHOD FOR ESTIMATING EXECUTION RATES OF PROGRAM EXECUTION PATHS
82136285	Granted	6237073	6/28/2000	5/22/2001	08/979034	US	METHOD FOR PROVIDING VIRTUAL MEMORY TO PHYSICAL MEMORY PAGE MAPPING IN A COMPUTER OPERATING SYSTEM THAT RANDOMILY SAMPLES STATE INFORMATION
82136408	Granted	6374367	11/26/1997	4/16/2002	08/980124	US	APPARATUS AND METHOD FOR MONITORING A COMPUTER SYSTEM TO GUIDE OPTIMIZATION
82172561	Granted	8775763	7/13/2007	7/8/2014	11/827973	US	Redundant Data Assigment In A Data Storage System
82175552	Granted	8250107	6/3/2003	8/21/2012	10/454252	US	Techniques For Graph Data Structure Management
82176242	Granted	7310703	10/23/2003	12/18/2007	10/693758	US	Methods Of Reading And Writing Data
82176494	Granted	7072739	5/29/2003	7/4/2006	10/446867	US	DATA CENTER ROBOTIC DEVICE

PATENT
REEL: 038498 FRAME: 0793

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82183355	Granted	8019477	5/26/2004	9/13/2011	10/853529	US	Energy Efficient CRAC Unit Operation
82183421	Granted	7421575	7/16/2004	9/2/2008	10/892272	US	Configuring A Physical Platform In A Reconfigurable Data Center
82183547	Granted	7673296	7/28/2004	3/2/2010	10/902199	US	Method And System For Optional Code Scheduling
82184297	Granted	7269753	8/27/2004	9/11/2007	10/927235	US	Mapping Power System Components
82184354	Granted	8055845	2/3/2005	11/8/2011	11/051435	US	Method Of Cooperative Caching For Distributed Storage System
82184357	Granted	7823156	2/3/2005	10/26/2010	11/051436	US	Method Of Hashing Address Space To Storage Servers
82184669	Granted	8214819	7/9/2004	7/3/2012	10/886705	US	Determining Call Counts In A Program
82190099	Granted	7586892	4/26/2004	9/8/2009	10/832487	US	Computer Method And Apparatus For Periodic Scheduling With Jitter-approximation Tradeoff
82190414	Granted	7549298	12/4/2004	6/23/2009	11/005284	US	Spray Cooling With Spray Deflection
82191353	Granted	8095928	10/6/2004	1/10/2012	10/959536	US	Method Of Forming Virtual Computer Cluster Within Shared Computing Environment
82197719	Granted	RE42195	11/8/2006	3/1/2011	11/594721	US	Energy Efficient CRAC Unit Operation Using Heat Transfer Levels
82202147	Granted	8718301	10/25/2004	5/6/2014	10/973794	US	Telescopic Spatial Radio System
82203272	Granted	7682234	11/1/2005	3/23/2010	11/264793	US	Correlation Of Airflow Delivery Devices And Air Movers
82204961	Granted	7644148	5/16/2005	1/5/2010	11/129986	US	Historical Data Based Workload Allocation
82206146	Granted	8799891	3/2/2005	8/5/2014	11/070602	US	System And Method For Attributing CPU Usage Of A Virtual Machine Monitor To A Corresponding Virtual Machine
82206149	Granted	7797707	3/2/2005	9/14/2010	11/070605	US	SYSTEM AND METHOD FOR ATTRIBUTING TO A CORRESPONDING VIRTUAL MACHINE CPU USAGE OF A DOMAIN IN WHICH A SHARED RESOURCE'S DEVICE DRIVER RESIDES
82207643	Granted	7620480	11/1/2005	11/17/2009	11/264786	US	Cooling Components Across A Continuum
82208891	Granted	7880590	7/18/2006	2/1/2011	11/488489	US	METHOD AND APPARATUS FOR LOCALIZATION OF CONFIGURABLE DEVICES
82211267	Granted	7797704	3/30/2005	9/14/2010	11/094554	US	SYSTEM AND METHOD FOR PERFORMING WORK BY ONE OF PLURAL THREADS USING A LOCKABLE REOURCE
82212641	Granted	7529949	10/26/2005	5/5/2009	11/258758	US	Heterogeneous Power Supply Management System
82220252	Granted	7806333	10/18/2006	10/5/2010	11/582753	US	TRACKING RFID TAGS WITH OVERLAPPING ANTENNAS
82220381	Granted	8179258	8/8/2006	5/15/2012	11/500546	US	Method For Reading A Tag
82220564	Granted	8098658	8/1/2006	1/17/2012	11/496860	US	Power-based Networking Resource Allocation
82220567	Granted	8457121	8/1/2006	6/4/2013	11/496945	US	Heterogeneous Network Switch System
82220570	Granted	8107458	8/1/2006	1/31/2012	11/496859	US	Power-based Networking Path Allocation
82222007	Granted	7596431	10/31/2006	9/29/2009	11/590525	US	Method For Assessing Electronic Devices
82229186	Granted	7962769	4/30/2007	6/14/2011	11/796942	US	BALANCING OF RENEWABLE POWER USAGE AND WORKLOAD PERFORMANCE BETWEEN COOLING SYSTEM AND ELECTRONIC COMPONENTS

PATENT
REEL: 038498 FRAME: 0794

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82229246	Granted	7743285	4/17/2007	6/22/2010	11/787881	US	Chip Multiprocessor With Configurable Fault Isolation
82230116	Granted	7861102	4/30/2007	12/28/2010	11/796962	US	Unified Power Management Architecture
82231742	Granted	8327354	5/31/2007	12/4/2012	11/756125	US	Virtualization With Binary Translation
82231991	Application		7/23/2007		11/781333	US	Resource Utilization Based System Modeling
82233431	Granted	7966358	7/20/2007	6/21/2011	11/880135	US	Determining An Approximate Number Of Instances Of An Item For An Organization
82240043	Granted	8181180	9/14/2007	5/15/2012	11/855682	US	Managing Jobs In Shared File Systems
82240046	Application		9/14/2007		11/855700	US	Retrieving Data From Multiple Locations In Storage Systems
82240049	Application		9/14/2007		11/855715	US	Reducing Latency Of I/O Requests In Storage Systems
82240175	Granted	8731733	4/1/2008	5/20/2014	12/935904	US	Management System Operable Under Multiple Metric Levels
82242482	Granted	8250433	10/1/2008	8/21/2012	12/243419	US	Allocation Of Symbols Of An Erasure Code Across A Plurality Of Devices
82245167	Granted	8677375	1/29/2009	3/18/2014	12/362202	US	SELECTING EXECUTING REQUESTS TO PREEMPT
82247039	Published		1/5/2009		12/348832	US	Computer-implemented Method For Role Discovery And Simplification In Access Control Systems
82247348	Granted	9130852	4/27/2009	9/8/2015	12/430236	US	Generating A Summary Of Users That Have Accessed A Resource
82249163	Published		4/29/2009		12/432492	US	ONTOLOGY CREATION BY REFERENCE TO A KNOWLEDGE CORPUS
82249601	Granted	8452626	8/10/2009	5/28/2013	12/538454	US	Technology Replacement Fost Estimation Using Environmental Cost Considerations
82251161	Published		10/6/2009		12/574303	US	ASSESSING AN ENVIRONMENTAL FOOTPRINT OF AN OBJECT
82257965	Granted	8683477	7/5/2009	3/25/2014	12/497676	US	Performance Degradation Based At Least On Computing Application Priority And In A Relative Manner That Is Known And Predictable Beforehand
82258277	Published		11/25/2009		12/625780	US	Business Services Risk Management
82258340	Granted	8966195	6/26/2009	2/24/2015	12/492537	US	Direct Memory Access And Super Page Swapping Optimizations For A Memory Blade
82259210	Granted	8908912	9/24/2009	12/9/2014	13/258476	US	Particle Tracking Methods
82261088	Published		6/11/2010		12/813635	US	Computing Cluster Performance Simulation Using A Genetic Algorithm Solution
82261211	Granted	8359463	5/26/2010	1/22/2013	12/788013	US	Selecting A Configuration For An Application
82262147	Granted	8565931	10/27/2010	10/22/2013	12/913368	US	MANAGING ENERGY DEMAND IN AN INFRASTRUCTURE
82262648	Published		6/1/2010		12/791263	US	Changing A Number Of Disk Agents To Backup Objects To A Storage Device
82262831	Granted	8838423	10/29/2010	9/16/2014	12/915212	US	MANAGING AN INFRASTRUCTURE

Schedule A of Patent Assignment

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82265084	Published		1/27/2011		13/015501	US	DETERMINING AN ENTITY'S SHARE OF ECONOMIC CONTRIBUTION AND ENVIRONMENTAL BURDEN
82467402	Granted	8626693	1/14/2011	1/7/2014	13/007270	US	Node similarity for component substitution
82467840	Granted	8641804	7/29/2011	2/4/2014	13/194123	US	SYSTEMS AND METHODS TO CONDITION AIR
82618428	Published		8/23/2011		13/215830	US	Data Sharing Methods and Data Sharing Systems
82654469	Granted	8677365	8/27/2008	3/18/2014	13/061004	US	Performing Zone Based Workload Scheduling According To Environmental Conditions
82747739	Granted	8918566	1/23/2009	12/23/2014	13/130836	US	System And Methods For Allocating Shared Storage Resources
82756401	Granted	8405530	8/17/2011	3/26/2013	13/211695	US	ENCODING DATA BASED ON WEIGHT CONSTRAINTS
82775047	Published		10/31/2011		13/285755	US	Server Replication and Transaction Commitment
82816544	Granted	8560940	8/29/2011	10/15/2013	13/220351	US	Detect Repeat Patterns On Web Page
82833813	Published		10/26/2011		13/282390	US	MANAGING MULTIPLE COOLING SYSTEMS IN A FACILITY
82853272	Granted	8707098	1/14/2010	4/22/2014	13/259221	US	Recovery Procedure For A Data Storage System
82854022	Granted	8212230	9/25/2011	7/3/2012	13/244514	US	Integrated Circuits With Phase Change Devices
82923425	Published		2/13/2010		13/383592	US	SYSTEM AND METHOD FOR IDENTIFYING THE PRINCIPAL DOCUMENTS IN A DOCUMENT SET
82923485	Granted	8675391	4/19/2010	3/18/2014	13/383599	US	REFRESHING MEMRISTIVE SYSTEMS
82924195	Granted	9142287	3/12/2010	9/22/2015	13/383644	US	CODING FOR CROSSBAR ARCHITECTURE
82925171	Published		10/28/2009		13/384761	US	USING A FINANCIAL INSTITUTION BASED ACCOUNT FOR ULTRA-LOW LATENCY TRANSACTIONS
82963425	Published		4/30/2012		13/460806	US	Multi-Geography Cloud Storage
82990999	Published		7/9/2012		13/544575	US	Storing Data Structures in Cache
82991019	Published		6/22/2012		13/531075	US	Recommending Options Based on Sustainability Metrics
83038802	Published		7/30/2012		13/561217	US	JOB PLACEMENT BASED ON MODELING OF JOB SLOTS
83139311	Published		1/31/2013		13/755332	US	REDUCING BANDWIDTH USAGE OF A MOBILE CLIENT
83164704	Published		7/30/2010		13/812104	US	Method For Selecting User Desirable Content From Web Pages
83618019	Published		8/30/2013		14/014834	US	GENERATING A DEMAND RESPONSE FOR AN ENERGY-CONSUMING FACILITY
83991320	Published		3/2/2012		14/374812	US	VERSIONED MEMORIES USING A MULTI-LEVEL CELL
83991575	Published		4/27/2012		14/374817	US	LOCAL CHECKPOINTING USING A MULTI-LEVEL CELL
84101327	Published		5/25/2012		14/403386	US	PROVIDING A MODEL OF IMPACT OF A COOLING INFRASTRUCTURE
84114792	Published		12/9/2014		14/564215	US	Interface Methods And Apparatus For Memory Devices
84140136	Published		10/31/2012		14/417236	US	Combined Block-Style Error Correction
84140159	Published		10/30/2012		14/417220	US	SMART MEMORY BUFFERS
84217909	Published		10/19/2012		14/436048	US	ASYNCRHONOUS CONSISTENT SNAPSHOTS IN PERSISTENT MEMORY STORES

PATENT
REEL: 038498 FRAME: 0796

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
84301132	Application		1/31/2013		14/764673	US	ADAPTIVE GRANULARITY ROW- BUFFER CACHE
84304461	Application		1/31/2013		14/764135	US	NON-VOLATILE MULTI-LEVEL-CELL MEMORY WITH DECOUPLED BITS FOR HIGHER PERFORMANCE AND ENERGY EFFICIENCY
84304478	Application		1/31/2013		14/764214	US	SELECTING CIRCUITS OF A MULTI-LEVEL INTEGRATED CIRCUIT
84306273	Application		3/20/2013		14/764651	US	CACHING DATA IN A MEMORY SYSTEM HAVING MEMORY NODES AT DIFFERENT HIERARCHICAL LEVELS
90052809	Application		3/14/2013		14/774521	US	MULTIVERSIONED NONVOLATILE MEMORY HIERARCHY FOR PERSISTENT MEMORY
83137777	Application		1/31/2013		13/755431	US	ASSET CHARACTERISTIC TRANSFORMATION USING TRANSFORM DISTRIBUTIONS
82098947	Granted	7400996	6/26/2003	7/15/2008	10/606463	US	Use Of I2c-based Potentiometers To Enable Voltage Rail Variation Under BMC Control
82103570	Granted	7825538	2/11/2004	11/2/2010	10/777505	US	Power Distribution System Utilizing Redundant AC Sources Or DC Sources
82103696	Granted	7436950	7/2/2003	10/14/2008	10/612523	US	APPARATUS AND METHOD FOR REAL-TIME POWER DISTRIBUTION MANAGEMENT
82120676	Granted	6784531	6/13/2002	8/31/2004	10/170613	US	POWER DISTRIBUTION PLANE LAYOUT FOR VLSI PACKAGES
82130663	Granted	6252177	2/18/1998	6/26/2001	09/025670	US	LOW INDUCTANCE CAPACITOR MOUNTING STRUCTURE FOR CAPACITORS OF A PRINTED CIRCUIT BOARD
82173806	Granted	7082042	12/16/2003	7/25/2006	10/737045	US	System And Method For Power Distribution
82220378	Granted	7443055	10/24/2006	10/28/2008	11/585545	US	Systems And Methods For Providing Redundant Voltage Regulation
82229936	Granted	7890742	4/23/2007	2/15/2011	11/789163	US	AUTOMATICALLY SELECTING FIRMWARE INSTRUCTIONS FOR AN OPERATING SYSTEM
82829628	Granted	8225122	8/29/2011	7/17/2012	13/220432	US	Method Of Determining Computing Module's Power Requirements
84086382	Application		4/23/2012		14/396378	US	MODERATING A CHARGING
84291325	Application		1/21/2013		14/760706	US	POWER FACTOR CORRECTOR POWER SHARING
82100510	Granted	6922337	4/30/2003	7/26/2005	10/427226	US	Circuit Card Divider To Facilitate Thermal Management In An Electronic System
82130918	Granted	6101459	8/15/1997	8/8/2000	08/912293	US	SYSTEM AND ASSOCIATED METHOD FOR COOLING COMPONENTS WITHIN A COMPUTER SYSTEM
82131416	Granted	5986882	10/16/1997	11/16/1999	08/951932	US	COMPUTER SERVER APPARATUS HAVING REMOVABLE PROCESSOR/HEAT PIPE COOLING DEVICE MODULES THEREIN
82136159	Granted	6286109	6/30/1998	9/4/2001	09/107648	US	METHOD AND APPARATUS FOR REDUCING HEAT GENERATION IN A PORTABLE COMPUTER
82172180	Granted	6956344	10/31/2003	10/18/2005	10/698904	US	High Availability Fan System

PATENT
REEL: 038498 FRAME: 0797

DocuSign Envelope ID: 6AFD1E57-BC79-4961-A76D-3887F0FAA048

HP Record ID	Status	Patent Number	Filing Date	Grant Date	Application Number	CC	Title
82174304	Granted	7408772	5/14/2004	8/5/2008	10/846031	US	Fan Tray For Electronics Enclosure
82175120	Granted	7280358	4/19/2004	10/9/2007	10/827801	US	Liquid Loop With Multiple Heat Exchangers For Efficient Space Utilization
82179548	Granted	7289328	12/21/2004	10/30/2007	11/021500	US	Multi-chip Module With Power System And Pass-thru Holes
82182488	Granted	7764184	12/22/2004	7/27/2010	11/022594	US	Apparatus And System For Monitoring Environmental Factors In A Computer System
82191971	Granted	7434743	1/28/2005	10/14/2008	11/045249	US	Reversible Fan Of Electronic Module
82194659	Granted	7548421	10/25/2005	6/16/2009	11/259544	US	Impingement Cooling Of Components In An Electronic System
82203959	Granted	7660110	9/16/2008	2/9/2010	12/211670	US	Computer System With Motor Cooler
82209644	Granted	7920384	8/9/2005	4/5/2011	11/199845	US	Fan Cage For Computer Systems
82218383	Granted	7379297	10/25/2006	5/27/2008	11/586300	US	Air Flow Regulation Devices
82229867	Granted	8462508	4/30/2007	6/11/2013	11/742540	US	HEAT SINK WITH SURFACE-FORMED VAPOR CHAMBER BASE
82231370	Granted	7945743	4/30/2007	5/17/2011	11/742094	US	DYNAMIC STORAGE BASED ON PERFORMANCE THROTTLING
82237676	Granted	7660115	5/5/2008	2/9/2010	12/115266	US	FAN DOCKING COLLAR
82238297	Granted	8042995	6/6/2008	10/25/2011	12/155606	US	Method For Monitoring Temperature Of Computer Components To Determine Ambient Chassis Temperature
82250909	Granted	8179071	10/28/2009	5/15/2012	12/607812	US	System And Method For Cooling Using Counter-rotating Fans
82901596	Published		1/11/2012		13/347958	US	ADIABATIC COOLING UNIT
82901719	Granted	8649171	2/26/2010	2/11/2014	13/387175	US	MIXED-FLOW DUCTED FAN
83123207	Granted	9057378	10/17/2012	6/16/2015	13/653709	US	Intelligent Air Moving Apparatus
84310907	Application		7/13/2015		14/797,708	US	DATA CENTER CANOPY INCLUDING TURNING VANES
84009634	Application		7/30/2014		14/447600	US	SELECTION OF A FRAME FOR AUTHENTICATION
83205182	Published		3/26/2013		13/850865	US	EVENT NOTIFICATIONS BASED ON LEARNED TRAVELING TIMES BETWEEN LOCATIONS
84299280	Application		4/29/2013		14/759711	US	RECORDING UNSTRUCTURED EVENTS IN CONTEXT
82066427	Granted	6169638	9/22/1997	1/2/2001	08/934762	US	AUTOMATIC GAIN CONTROL CIRCUIT AND METHOD
82173620	Granted	6914778	6/27/2003	7/5/2005	10/608727	US	MOUNTING PERIPHERAL DEVICES USING A MOUNTING MECHANISM

PATENT
REEL: 038498 FRAME: 0798
RECORDED: 04/19/2016