

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4051338

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	RELEASE OF REEL 032810 FRAME 0038 (TL)
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
BANK OF AMERICA, N.A., AS COLLATERAL AGENT	09/07/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	DELL SOFTWARE INC.
<b>Street Address:</b>	5 POLARIS WAY
<b>City:</b>	ALISO VIEJO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	92656
<b>Name:</b>	DELL PRODUCTS L.P.
<b>Street Address:</b>	ONE DELL WAY
<b>City:</b>	ROUND ROCK
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	78682
<b>Name:</b>	SECUREWORKS, INC.
<b>Street Address:</b>	ONE CONCOURSE PARKWAY, STE. 500
<b>City:</b>	ATLANTA
<b>State/Country:</b>	GEORGIA
<b>Postal Code:</b>	30328
<b>PROPERTY NUMBERS Total: 69</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	14178102
Application Number:	14178158
Application Number:	14178165
Application Number:	14178725
Application Number:	14178729
Application Number:	14180742
Application Number:	14180809
Application Number:	14181483
Application Number:	14181482
Application Number:	14182647

PATENT

Property Type	Number
Application Number:	14182739
Application Number:	14185549
Application Number:	14186870
Application Number:	14186903
Application Number:	14186917
Application Number:	14186945
Application Number:	14189360
Application Number:	14189991
Application Number:	14190465
Application Number:	14190563
Application Number:	14190767
Application Number:	14190850
Application Number:	14190985
Application Number:	14191068
Application Number:	14191648
Application Number:	14193194
Application Number:	14193242
Application Number:	14193447
Application Number:	14194648
Application Number:	14194652
Application Number:	14194670
Application Number:	14195544
Application Number:	14196124
Application Number:	14198602
Application Number:	14199660
Application Number:	14199686
Application Number:	14199701
Application Number:	14199715
Application Number:	14199721
Application Number:	14199735
Application Number:	14199748
Application Number:	14202270
Application Number:	14202341
Application Number:	14205595
Application Number:	14209382
Application Number:	14215302
Application Number:	14215637
Application Number:	14218393

Property Type	Number
Application Number:	14219308
Application Number:	14219771
Application Number:	14220651
Application Number:	14220763
Application Number:	14220789
Application Number:	14221371
Application Number:	14221374
Application Number:	14221377
Application Number:	14221381
Application Number:	14221654
Application Number:	14221878
Application Number:	14221912
Application Number:	14221928
Application Number:	14221942
Application Number:	14221967
Application Number:	14224260
Application Number:	14224601
Application Number:	14225170
Application Number:	29482165
Application Number:	29484470
Application Number:	14223779

#### CORRESPONDENCE DATA

**Fax Number:** (800)914-4240

*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:** 800-713-0755

**Email:** Michael.Violet@wolterskluwer.com

**Correspondent Name:** MICHAEL VIOLET

**Address Line 1:** 4400 EASTON COMMONS WAY

**Address Line 2:** SUITE 125

**Address Line 4:** COLUMBUS, OHIO 43219

<b>NAME OF SUBMITTER:</b>	JENNIFER RIEHL
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<b>SIGNATURE:</b>	/Jennifer Riehl/
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<b>DATE SIGNED:</b>	09/14/2016
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#### Total Attachments: 8

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RECORDATION FORM COVER SHEET  
**PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Bank of America, N.A., as Collateral Agent

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) September 7, 2016

- ☐ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Joint Research Agreement  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☒ Other Release of Reel 032810 Frame 0038 (TL)

2. Name and address of receiving party(ies)

Name: Dell Software Inc.

Internal Address:

Street Address: 5 Polaris Way

City: Aliso Viejo

State: CA

Country: USA Zip 92656

Additional name(s) & address(es) attached? ☒ Yes ☐ No

4. Application or patent number(s):

☐ This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

14/178,102

Additional numbers attached? ☒ Yes ☐ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Jennifer Riehl, Legal Assistant

Internal Address: Cahill Gordon & Reindel LLP

Street Address: 80 Pine Street

City: New York

State: NY Zip 10005

Phone Number: (212) 701-3788

Docket Number:

Email Address: jriehl@cahill.com

6. Total number of applications and patents involved: 89

7. Total fee (37 CFR 1.21(h) & 3.41) \$

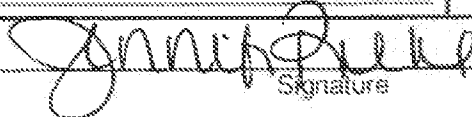
- ☐ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

8. Payment Information

Deposit Account Number

Authorized User Name

9. Signature:



Jennifer Riehl

Name of Person Signing

September 7, 2016

Date

Total number of pages including cover sheet, attachments, and documents:

8

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

**ITEM 2 (cont'd)**  
**to Patents Recordation Form Cover Sheet**  
**Release of Reel 032810 Frame 0038**

**Additional Receiving Parties**

<b>Entity</b>	<b>Address</b>
Dell Products L.P.	One Dell Way Round Rock, TX 78682
SecureWorks, Inc.	One Concourse Parkway, Ste. 500 Atlanta, GA 30328

**RELEASE OF SECURITY INTEREST IN PATENTS  
(Term Loan)**

This RELEASE OF SECURITY INTEREST IN PATENTS (this "Release"), dated as of September 7, 2016 (the "Effective Date"), is made by Bank of America, N.A., in its capacity as Collateral Agent (the "Agent"), in favor of Dell Software Inc., a Delaware corporation, Dell Products L.P., a Texas limited partnership, and SecureWorks, Inc., a Georgia corporation (each a "Grantor" and collectively, the "Grantors").

WHEREAS, pursuant to that certain Collateral Agreement, dated as of October 29, 2013 by and among the Agent, the Grantors and certain other parties thereto (as amended, amended and restated, or otherwise modified from time to time, the "Collateral Agreement"), the Grantors granted to the Agent, in its capacity as Collateral Agent, a security interest in and to certain collateral;

WHEREAS, pursuant to the Collateral Agreement, the Grantors executed and delivered a Supplemental Patent Security Agreement, dated as of April 2, 2014 (the "Patent Security Agreement"), for recordal with the United States Patent and Trademark Office;

WHEREAS, the Patent Security Agreement was recorded with the United States Patent and Trademark Office on May 1, 2014 at Reel/Frame 032810/0038;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Agent hereby agrees as follows:

1. Defined Terms. All capitalized terms used, but not otherwise defined herein, shall have the respective meanings ascribed in or otherwise referenced in the Collateral Agreement or the Patent Security Agreement, as applicable.

2. Release. The Agent, without representation or warranty of any kind, hereby releases, discharges, terminates and cancels all of its security interest in and to the Patent Collateral, including the patents and patent applications set forth Schedule 1 attached hereto, arising under the Collateral Agreement and the Patent Security Agreement. If and to the extent that the Agent has acquired any right, title or interest in and to the Patent Collateral under the Patent Security Agreement, the Agent, without representation or warranty of any kind, hereby re-transfers, re-conveys and re-assigns such right, title or interest to the Grantors. The Agent hereby requests the Commissioner for Patents record this Release.

3. Termination. The Agent, without representation or warranty of any kind, terminates and cancels the Patent Security Agreement.

4. Further Assurances. The Agent agrees to take all further actions, and provide to the Grantors and its successors, assigns or other legal representatives, all such cooperation and assistance (including, without limitation, the execution and delivery of any and all documents or other instruments), reasonably requested by the Grantors, at the Grantors' sole cost and expense, to more fully and effectively effectuate the purposes of this Release.

5. Governing Law. This Release shall be governed exclusively under the laws of New York, without regard to conflicts of law or choice of law principles.

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IN WITNESS WHEREOF, the Agent has caused this Release to be executed by its duly authorized representative as of the Effective Date:

**BANK OF AMERICA, N.A., acting in its  
capacity as Collateral Agent for the Lenders**

By: 

Name:

**Henry Pennell**

Title:

**Vice President**

[Dell – Term Patent Release]

**PATENT  
REEL: 040027 FRAME: 0693**



## SCHEDULE 1

	Application #	Title	Assignee
1.	14/178102	METHOD FOR SERVICING POWER SPIKES BETWEEN ADJACENT POE PSE DEVICES	Dell Products L.P.
2.	14/178158	SYSTEM AND METHOD FOR MANAGING A CLUSTERED RADIO NETWORK	Dell Software Inc.
3.	14/178165	SYSTEM AND METHOD FOR COLLECTING DATA FROM LOW-AVAILABILITY DEVICES	Dell Software Inc.
4.	14/178725	SYSTEM AND METHOD FOR TRANSFERRING DATA USING A DIRECTIONAL TOUCH GESTURE	Dell Products L.P.
5.	14/178729	UNIFIED EXTENSIBLE FIRMWARE INTERFACE SYSTEM MANAGEMENT MODE INITIALIZATION PROTECTIONS WITH SYSTEM MANAGEMENT INTERRUPT TRANSFER MONITOR SANDBOXING	Dell Products L.P.
6.	14/180742	AUTO-SNAPSHOT MANAGER ANALYSIS TOOL	Dell Products L.P.
7.	14/180809	METHODS AND SYSTEMS FOR PROVIDING USER SELECTION OF ASSOCIATIONS BETWEEN INFORMATION HANDLING RESOURCES AND INFORMATION HANDLING SYSTEMS IN AN INTEGRATED CHASSIS	Dell Products L.P.
8.	14/181483	MAC TABLE REDUCTION	Dell Products L.P.
9.	14/181482	HOW MULTIPLE SCREENS ON ENTERPRISE CHASSIS EQUIPMENT CAN FUNCTION TOGETHER AS A SINGLE USER INTERFACE	Dell Products L.P.
10.	14/182647	METHOD TO CAPTURE THE GAMES EXECUTABLE ON INDIRECT LAUNCHING FOR SUCCESSFUL SET AND RESTORE OF ENVIRONMENT SETTINGS	Dell Products L.P.
11.	14/182739	METHOD FOR PROCESSING UEFI PROTOCOLS AND SYSTEM THEREFOR	Dell Products L.P.
12.	14/185549	PEER ASSISTED DEPLOYMENT OF RESOURCES IN A NETWORK	Dell Products L.P.
13.	14/186870	FRONT-END HIGH AVAILABILITY PROXY	Dell Products L.P.
14.	14/186903	GENERIC TRANSCODING SERVICE WITH LIBRARY ATTACHMENT	Dell Products L.P.
15.	14/186917	VIDEO COMPOSE FUNCTION	Dell Products L.P.
16.	14/186945	TRANSCODING INSTANCE WITH MULTIPLE CHANNELS	Dell Products L.P.
17.	14/189360	METHODS AND SYSTEMS FOR MULTIPLE MODULE POWER REGULATION IN A MODULAR CHASSIS	Dell Products L.P.
18.	14/189991	SECURE SERVICE DELEGATOR	Dell Products L.P.
19.	14/190465	SYSTEMS AND METHODS FOR SECURING BIOS VARIABLES	Dell Products L.P.

[Schedule 1 to Release of Security Interest in Patents]

**PATENT**  
**REEL: 040027 FRAME: 0694**

	<u>Application #</u>	<u>Title</u>	<u>Assignee</u>
20.	14/190563	SYSTEMS AND METHODS FOR PROVIDING USER-VISIBLE THERMAL PERFORMANCE DEGRADATION MONITORING IN AN INFORMATION HANDLING SYSTEM	Dell Products L.P.
21.	14/190767	SYSTEMS AND METHODS FOR MUTING VISUAL INDICATORS IN AN INFORMATION HANDLING SYSTEM	Dell Products L.P.
22.	14/190850	SYSTEM AND METHOD TO MONITOR CONTACT JOINT INTEGRITY	Dell Products L.P.
23.	14/190985	IMPROVED BANDWIDTH OPTIMIZATION FOR REMOTE DESKTOP PROTOCOL	Dell Products L.P.
24.	14/191068	SYSTEM AND METHOD FOR HANDLING REMOTE DRAWING COMMANDS	Dell Products L.P.
25.	14/191648	SYSTEM AND METHOD FOR CONTENT-INDEPENDENT DETERMINATION OF FILE-SYSTEM-OBJECT RISK OF EXPOSURE	Dell Software Inc.
26.	14/193194	DISCOVERING SITE OWNERS AND ENABLING COLLABORATION BETWEEN THEM IN A SHAREPOINT (OR SIMILAR) CORPORATE NETWORK	Dell Software Inc.
27.	14/193242	SIM CREATING CONDITIONAL IMMUTABLE OBJECTS IN A STORAGE DEVICE	Dell Products L.P.
28.	14/193447	DISPLAY OF OBJECTS ON A TOUCH SCREEN AND THEIR SELECTION	Dell Products L.P.
29.	14/194648	METHODS AND SYSTEMS FOR OPTIMIZATION OF STORAGE PERFORMANCE ACROSS MULTIPLE COMPUTE DEVICES	Dell Products L.P.
30.	14/194652	MULTI-MODE HYBRID STORAGE DRIVE	Dell Products L.P.
31.	14/194670	SYSTEM AND METHOD FOR MANAGING MULTI-TENANT CHASSIS ENVIRONMENT USING VIRTUAL PRIVATE CHASSIS MANAGEMENT CONTROLLERS	Dell Products L.P.
32.	14/195544	INTERACTIVE PROJECTOR DEVICE	Dell Products L.P.
33.	14/196124	METHOD TO AUTO-CONFIGURE LOCAL PHY USING REMOTE PHY	Dell Products L.P.
34.	14/198602	N-NODE VIRTUAL LINK TRUNKING (VLT) SUPPORTING ARBITRARY TOPOLOGIES	Dell Products L.P.
35.	14/199660	SYSTEM AND METHOD FOR PROVIDING A SERVER RACK MANAGEMENT CONTROLLER	Dell Products L.P.
36.	14/199686	SYSTEM AND METHOD FOR PROVIDING A U-SPACE ALIGNED KVM/ETHERNET MANAGEMENT SWITCH/SERIAL AGGREGATOR CONTROLLER	Dell Products L.P.
37.	14/199701	SYSTEM AND METHOD FOR SERVER RACK POWER MAPPING	Dell Products L.P.
38.	14/199715	SYSTEM AND METHOD FOR SERVER RACK POWER MANAGEMENT	Dell Products L.P.
39.	14/199721	SYSTEM AND METHOD FOR SERVER RACK AND DATA CENTER COOLING	Dell Products L.P.
40.	14/199735	SYSTEM AND METHOD FOR PROVIDING A TILE MANAGEMENT CONTROLLER	Dell Products L.P.

	<b><u>Application #</u></b>	<b><u>Title</u></b>	<b><u>Assignee</u></b>
41.	14/199748	SYSTEM AND METHOD FOR PROVIDING A DATA CENTER MANAGEMENT CONTROLLER	Dell Products L.P.
42.	14/202270	CONDITION BASED PRE-CHARGE AND UNRECOVERABLE VOLTAGE FOR LI-ION BATTERY CELL	Dell Products L.P.
43.	14/202341	METHOD FOR ADAPTER OVER-CURRENT-PROTECTION (OCP) PROTECTION AND USER WARNING	Dell Products L.P.
44.	14/205595	METHOD FOR STORING AND ACCESSING STRUCTURED DATA INTO AN INDEXED KEY/VALUE PAIR FOR OFFLINE ACCESS	Dell Products L.P.
45.	14/209382	SYSTEMS AND METHODS FOR DEFINING CONFIGURATIONS AND/OR CONTROLLING OPERATION FOR VARIABLE PRESSURE SENSOR AND KEYBOARDS OF INFORMATION HANDLING SYSTEMS USING	Dell Products L.P.
46.	14/215302	SYSTEMS AND METHODS FOR EXTENDED POWER PERFORMANCE CAPABILITY DISCOVERY FOR A MODULAR CHASSIS	Dell Products L.P.
47.	14/215637	STRIPING CACHE BLOCKS WITH LOGICAL BLOCK ADDRESS SCRAMBLING	Dell Products L.P.
48.	14/218393	SYSTEMS AND METHODS FOR DYNAMIC MEMORY ALLOCATION OF FAULT RESISTANT MEMORY (FRM)	Dell Products L.P.
49.	14/219308	SYSTEM AND METHOD FOR RUNNING A VALIDATION PROCESS FOR AN INFORMATION HANDLING SYSTEM DURING A FACTORY PROCESS	Dell Products L.P.
50.	14/219771	MESSAGE PROCESSING USING DYNAMIC LOAD BALANCING QUEUES IN A MESSAGING SYSTEM	Dell Products L.P.
51.	14/220651	DYNAMIC SESSION TRANSFORMATION	Dell Products L.P.
52.	14/220763	SYSTEM AND METHOD FOR AUTOMATIC ACCESS LAYER CONFIGURATION	Dell Products L.P.
53.	14/220789	SYSTEM AND METHOD FOR COORDINATING IMAGE CAPTURE IN A CAMERA HIDDEN BEHIND A DISPLAY DEVICE	Dell Products L.P.
54.	14/221371	METHOD AND APPARATUS TO DERIVE PRODUCT- LEVEL COMPETITIVE INSIGHTS IN REAL-TIME USING SOCIAL MEDIA ANALYTICS	Dell Products L.P.
55.	14/221374	METHOD AND APPARATUS TO CREATE A MASH-UP OF SOCIAL MEDIA DATA AND BUSINESS DATA TO DERIVE ACTIONABLE INSIGHTS FOR THE BUSINESS	Dell Products L.P.
56.	14/221377	METHOD AND APPARATUS TO CALCULATE REAL-TIME CUSTOMER SATISFACTION AND LOYALTY METRIC USING SOCIAL MEDIA ANALYTICS	Dell Products L.P.
57.	14/221381	METHOD AND APPARATUS TO CALCULATE SOCIAL PRICING INDEX TO DETERMINE PRODUCT PRICING IN REAL-TIME	Dell Products L.P.

	<u>Application #</u>	<u>Title</u>	<u>Assignee</u>
58.	14/221654	PROJECTED INFORMATION HANDLING SYSTEM INPUT INTERFACE WITH DYNAMIC ADJUSTMENT	Dell Products L.P.
59.	14/221878	PROJECTED INFORMATION HANDLING SYSTEM INPUT ENVIRONMENT WITH OBJECT INITIATED RESPONSES	Dell Products L.P.
60.	14/221912	CONTEXT ADAPTABLE PROJECTED INFORMATION HANDLING SYSTEM INPUT ENVIRONMENT	Dell Products L.P.
61.	14/221928	GESTURE CONTROLLED ADAPTIVE PROJECTED INFORMATION HANDLING SYSTEM INPUT AND OUTPUT DEVICES	Dell Products L.P.
62.	14/221942	INTERACTIVE PROJECTED INFORMATION HANDLING SYSTEM SUPPORT INPUT AND OUTPUT DEVICES	Dell Products L.P.
63.	14/221967	ADAPTIVE PROJECTED INFORMATION HANDLING SYSTEM OUTPUT DEVICES	Dell Products L.P.
64.	14/224260	SYSTEM AND METHOD FOR USING A SIDE CAMERA FOR A FREE SPACE GESTURE INPUTS	Dell Products L.P.
65.	14/224601	SAN PERFORMANCE ANALYSIS TOOL	Dell Products L.P.
66.	14/225170	METHOD FOR GENERATING CUSTOM BIOS SETUP INTERFACE AND SYSTEM THEREFOR	Dell Products L.P.
67.	29/482165	INFORMATION HANDLING SYSTEM HOUSING	Dell Products L.P.
68.	29/484470	INFORMATION HANDLING SYSTEM HOUSING	Dell Products L.P.
69.	14/223779	METHOD FOR DETERMINING NORMAL SEQUENCES OF EVENTS	SecureWorks, Inc.

[Schedule 1 to Release of Security Interest in Patents]