PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4545037

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BORIS ZUCKERMAN	04/30/2015
DOUGLAS L. VOIGT	05/01/2015
SUPARNA BHATTACHARYA	04/30/2015

RECEIVING PARTY DATA

Name:	Hewlett-Packard Development Company, L.P.	
Street Address:	11445 Compaq Center Drive West	
City:	Houston	
State/Country:	TEXAS	
Postal Code:	77070	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15543170

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 3404 E. HARMONY ROAD MS 79
Address Line 4: FORT COLLINS, COLORADO 80528

ATTORNEY DOCKET NUMBER:	90464642
NAME OF SUBMITTER:	TRACI THOMAS
SIGNATURE:	/Traci Thomas/
DATE SIGNED:	08/10/2017

Total Attachments: 3

source=90464642_AssignmentEXECUTED#page1.tif source=90464642_AssignmentEXECUTED#page2.tif source=90464642_AssignmentEXECUTED#page3.tif

PATENT 504498333 REEL: 043261 FRAME: 0521

HEWLETT-PACKARD COMP	477.
Intellectual Property Administ	103863
3404 E. Harmony Road	
Mail Stop 35	
Fort Collins, Colorado 80528	

Shr 3/2014 (Assignment)

PATENT	Sec. 25.	WY 11 77	C 386
C 48 C C C 19 C	5.62. 2. X	31. Oak 5 1	N 18 18

		84229486
	en e	CART DAO.
3	RECORDIO:	<u> </u>

ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each), for good and valuable consideration, the receipt of which is hereby acknowledged. and in furtherance of my/our obligations to HEVILETT-PACKARD DEVELOPMENT COMPANY, L.P., a Texas Limited Partnership having its principal place of business in Houston, Texas, (hereinafter HPDC), and to its subsidiaries and affiliates, agree to assign and transfer and hereby assign and transfer to HPDC, its successors and assigns, the entire right, title and interest, including the right of priority, in, to and under an application for Patent

Storage Memory Direct Access Application No.: 15/543,170 Filling Date: July 12, 2017 and the invention(s) and improvement(s) set forth therein, and any and all continuations, continuations-in-part (C+P's), divisionals, and renewals of and substitutes for said application for said Patent, and any and all other Patent of any countries thereto which may be granted thereon or therefore; and any releasues, or reexaminations, or extensions of said Patent. I/we additionally authorize HPDC to file applications in my/our name for Palent in any country, to be held and enjoyed by HPDC, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enloyed by me/us had this assignment, and transfer not been made: AND I/we hereby covenant that I/we have full right to convey the entire interest herein assigned, and that I/we have not executed and will not execute any agreement in conflict herewith, and t/we further covenant and agree that t/we will, each time a request is made, and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said invention(s) or improvement(s), said application and said Patent, to HPDC, its successors, assigns, nominees or legal representatives, and //we agree to communicate to HPDC, or to its nominee, all known facts respecting said invention(s) or improvement(s), said application and said Patent, to testify in any legal proceedings, to sign all lewful papers, to execute all disclaimers and divisionals, continuations, C-I-P's, reissue and foreign applications, to make all rightful paths and declarations, and generally to do everything possible to aid HPDC, its successors, assigns, nominees and legal representatives to obtain and enforce, for its or their own benefit, proper patent protection for said invention(s) or improvement(s) in any and all countries provided the expenses which may be incurred by me/us in lending such cooperation and assistance are paid by HPDC: AND live hereby authorize and request the official of any country or countries whose duty it is to issue patents on amplications as aforesaid, to issue to HPDC, as assignee of the entire right, title and interest, any and all Patent for said invention(s) or improvement(s) which may be issued and granted on or as a result of the application atcresaid, in accordance with the terms of this assignment. I've further sufhorize and direct the attorneys of record to insert the filing date and application number of said application for Patent, now identified by the Record ID and little set forth above, as soon as the same shall have been made known to them. IN WITNESS WHEREOF, I/we hereunto set my/our hand(s) and seal(s): Inventor's Signature Sors Zuckerman First/Middle Name Last Name inventor's Signature Douglas L. Voiat First/Middle Name Last Name

Page 1 of 2

HEWLETT-PACKARD COMPANY Intellectual Property Administrator 3404 E. Harmony Road Mail Stop 35 Fort Collins, Colorado 80528

re.	× *		4	A	pp	100			
w	SR :	s gans	vs s	44	54.445	38.	25. 5	35 33	ŧ۴

RECORD ID:	84229486
------------	----------

ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each), for good and valuable consideration, the receipt of which is hereby acknowledged, and in furtherance of my/our obligations to HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P., a Texas Limited Partnership having its principal place of business in Houston, Texas, (hereinafter HPDC), and to its subsidiaries and affiliates, agree to assign and transfer and hereby assign and transfer to HPDC, its successors and assigns, the entire right, title and interest, including the right of priority, in, to and under an application for Patent entitled:

Storage Memory Direct Access

Filing Date: July 12, 2017	Application	No.: 15/543	3,170
and the invention(s) and improvement(s) divisionals, and renewals of and substitutionals thereto which may be granted to Patent.	utes for said application for said	Patent, and any a	nd all other Patent of am
I/we additionally authorize HPDC to to by HPDC, its successors, assigns, nomin Patent respectively may be granted, reiss enjoyed by me/us had this assignment, an	ees or legal representatives, to t sued or extended, as fully and er	e full end of the te	rm or terms for which said
AND I/we hereby covenant that I/we I executed and will not execute any agreen time a request is made, and without undurperfect the little to said invention(s) or improvements, said invention(s) or improvement(s), said papers, to execute all disclaimers and control of the little of	nent in conflict herewith, and I/we are delay, execute and deliver all so rovernent(s), said application and we agree to communicate to HPD application and said Patent, to te livisionals, continuations, C-I-P's, rally to do everything possible to storce, for its or their own benefit, is provided the expenses which PDC; lest the official of any country or DC, as assignee of the entire right ay be issued and granted on dent.	further covenant and the papers as may be said Patent, to HPE control of the papers and foreign aid HPDC, its successful of the countries whose duty, title and interest, has a result of the said of the filling date and items.	d agree that I/we will, each to mecessary or desirable to DC, its successors, assigns, all known facts respecting occedings, to sign all lawful applications, to make all tessors, assigns, nomineer clion for said invention(s) or by me/us in lending such all the patents or any and all Patent for said e application aforesaid, in application number of said application number of said application number of said and contents or said application number of said application application number of said application ap
IN WITNESS WHEREOF, I/we here.	into set my/our hand(s) and se	al(s):	
Inventor's Signature		aie	· · · · · · · · · · · · · · · · · · ·
Boris Zucke	rman		
First/Middle Name Last Nam			
Dayla S. Vo	-t	5/1/1	5
Inventor's Signature	,	ate	
Douglas L. Voigt			
First/Middle Name Last Nar	<i>J</i> e		
Rev 8/2014 (Assignment)	Page 1 of 2		

PATENT REEL: 043261 FRAME: 0523 HEWLETT-PACKARD COMPANY Intellectual Property Administrator 3404 E. Harmony Road Mail Stop 35

PATENT APPLICATION

Mail Stop 35		RECORD ID: 84229486	
Fort Collins, Colorado 80528			TARABAN TARABA
		NT APPLICATION (cont.)	
Cingonophathachar	Υ.	April 30, 2015	
Superable that are Inventor's Signature	· · · · · · · · · · · · · · · · · · ·	Date	
Suparna	Bhattacharya		
First/Middle Name	Last Name		
Inventor's Signature		Date	
unacuma a culturante		Date	
First/Middle Name	Last Name	**************************************	
Inventor's Signature	00000000000000000000000000000000000000	Date	
Management of the second secon			
First/Middle Name	Last Name	,	
Inventor's Signature		Date	
First/Middle Name	Last Name		
	CONTRACTOR OF THE PROPERTY OF		
Inventor's Signature		Date	
First/Middle Name	Last Name		
Inventor's Signature	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Date	tegenegelessedgeschensenschilden
First/Middle Name	Last Name		

Page 2 of 2

Rev 8/2014 (Assignment)

RECORDED: 08/10/2017