PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
VIRGINIA Q. HERRERA	01/26/2017
CHRISTOPH GRAHAM	01/25/2017
THOMAS JOSEPH FLYNN	01/27/2017

RECEIVING PARTY DATA

Name:	Hewlett-Packard Development Company, L.P.
Street Address:	11445 Compaq Center Drive West
City:	Houston
State/Country:	TEXAS
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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16082397

CORRESPONDENCE DATA

Fax Number: (970)778-4063

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.

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Correspondent Name: HP INC.

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Address Line 2: INTELLECTUAL PROPERTY

Address Line 4: FORT COLLINS, COLORADO 80528

ATTORNEY DOCKET NUMBER:	84997293
NAME OF SUBMITTER:	JOHN E. NEMAZI
SIGNATURE:	/John E. Nemazi/
DATE SIGNED:	10/04/2018

Total Attachments: 4

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PATENT REEL: 047061 FRAME: 0484

HP inc
3390 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

HP inc 3390 E. Harmor	ny Road		PATENT APPLICATION
Mail Stop 35 Fort Collins, Col	lorado 80528	RECORD ID:	84570150
	ASSIGNME	ENT OF PATENT APPLICATION	N
and in further Limited Partne subsidiaries as	rance of my/our obligations to ership having its principal pla- nd affiliates, agree to assign and	HEWLETT-PACKARD DEVELOR So of business in Houston, Text I transfer and hereby assign and to	ipt of which is hereby acknowledged, PMENT COMPANY, L.P., a Texas as, (hereinafter HPDC), and to its ransfer to HPDC, its successors and and under an application for Patent
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Filing Date:	05-SEP-2018	Application No.:	16/082,397
divisionals, and	d renewals of and substitutes fo	r said application for said Patent,	uations, continuations-in-part (C-I-P's) and any and all other Patent of any reexaminations, or extensions of said
by HPDC, its s	successors, assigns, nominees o	' legal representatives, to the full er	in any country, to be held and enjoyed nd 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 enjoyed 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 I/we further covenant and agree that I/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 I/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 lawful papers, to execute all disclaimers and divisionals, continuations, C-I-P's, reissue and foreign applications, to make all rightful oaths 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 applications as aforesaid, to issue to HPDC, as assignee of the entire right, title and interest, any and all Palent for said invention(s) or improvement(s) which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

liwe further authorize 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 title set forth above, as soon as the same shall have been made known to them.

IN WITNESS WHERE	OF, I/we hereunto set	t my/our hand(s) and	d seal(s):
17/2 milija m	i	Maritan managaman	1/26/2017
Inventor's Signature ()			Date
Virginia Q.	Herrera		
First/Middle Name	Last Name		*
inventor's Signature			Date
Christoph	Graham		
First/Middle Name	Last Name		
Rev 8/2014 (Assignment)		Page 1 of 2	

HP Inc. 3390 E. Harmony Road Mail Stop 35			PATENT APPLICATION
Fort Collins, Colorado 80528		RECORD ID:	84570150
	ASSIGNMENT OF F	PATENT APPLICATION (c	A
W/M	7/1	L.	1-27-17
Inventor's Signature	- 	Date	
Thomas Joseph	Flynn		
First/Middle Name	Last Name		
Inventor's Signature	***************************************	Date	
siveriles o orginatare		Date	
First/Middle Name	Last Name		
Inventor's Signature		Date	
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First/Middle Name	Last Name		
Inventor's Signature		Date	
First/Middle Name	Last Name	······································	
In the Association of the Associ		Paka	
Inventor's Signature		Date	
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First/Middle Name	Last Name		
Inventor's Signature	······	Date	
First/Middle Name	Last Name		

Page 2 of 2

Rev 8/2014 (Assignment)

HP Inc.
3390 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

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	84570150
RECORD ID:	26.55.00.4.15.5.00.05
PRECUMENT SEE	04010100

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

					ansfer to HPDC, its successors and and under an application for Patent
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Filing Date:	05-SEP-2018	}	Application	n No.:	16/082,397
divisionals, and	d renewals of and	substitutes for sa	id application for said	d Patent.	ations, continuations-in-part (C-I-P's), and any and all other Patent of any reexaminations, or extensions of said
by HPDC, its s Patent respect	successors, assigns	s, nominees or leg ed, reissued or ex	al representatives, to tended, as fully and o	the full er	n any country, to be held and enjoyed of of the term or terms for which said the same would have been held and
executed and time a request perfect the title nominees or le said invention(papers, to exerightful oaths a legal represen improvement(s	will not execute any is made, and without to said invention(signal representatives s) or improvement(soute all disclaimer and declarations, and tatives to obtain ar	agreement in con ut undue delay, ex) or improvement(s , and I/we agree to s), said application s and divisionals, d generally to do e nd enforce, for its ntries provided the	flict herewith, and I/w ecute and deliver all s i), said application and communicate to HPI and said Patent, to t continuations. C-I-P's verything possible to a or their own benefit.	e further cauch paper desided Pate DC, or to it estify in an it, reissue and HPDC, proper pate	terein assigned, and that I/we have not overant and agree that I/we will, each is as may be necessary or desirable to ent, to HPDC, its successors, assigns, its nominee, all known facts respecting by legal proceedings, to sign all lawful and foreign applications, to make all its successors, assigns, nominees and tent protection for said invention(s) or 1 by me/us in lending such cooperation
applications as invention(s) or	s aforesaid, to issue	e to HPDC, as ass which may be issu	ignee of the entire rig	ght, title ar	s whose duty it is to issue patents on ad interest, any and all Patent for said esult of the application aforesaid, in
I/we furth application for known to them	Patent, now identifi	lirect the attorneys ed by the Record I	of record to insert D and title set forth ab	the filing ove, as so	date and application number of said on as the same shall have been made
IN WITH	ESS WHEREOF, I/w	re hereunto set m	y/our hand(s) and s	eal(s):	
Inventor's Signa	ature			Date	
Virginia Q.		Herrera			
First/Middle-Nan		Last Name			
				7	125/2007
invantor's Signi	aune.			Date	× ×
Christoph		Graham			
First/Middle Nar	ne	Last Name			
Rev 5/2014 (Assign	ment)		Page 1 of 2		

PATENT REEL: 047061 FRAME: 0487 HP Inc. 3390 E, Harmony Road Mail Stop 35

PATENT APPLICATION

Fort Collins, Colorado 8052	8]	RECORD ID:	84570150
	ASSIGNMENT OF PA	TENT APPLICATION (cont	.)
Inventor's Signature		Date	
Thomas Joseph	Flynn		
First/Middle Name	Last Name		
Inventor's Signature		Date	
First/Middle Name	Last Name		
Inventor's Signature			
First/Middle Name	Last Name		
Inventor's Signature		Date	
First/Middle Name	Last Name		
Inventor's Signature		Date	
First/Middle Name	Last Name		
Inventor's Signature		Date	
First/Middle Name	Last Name		

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Rev 8/2014 (Assignment)

RECORDED: 10/04/2018