504289749 03/24/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4336430

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
STEPHEN D. PANSHIN	10/24/2016
JEFFERSON P. WARD	10/26/2016
ERIK D. NESS	10/24/2016

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:	15469202

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: 360 212 4870 Email: ipa.mail@hp.com

Correspondent Name: HP INC.

Address Line 1: 3390 E. HARMONY ROAD

Address Line 2: MAIL STOP 35

Address Line 4: FORT COLLINS, COLORADO 80528-9544

ATTORNEY DOCKET NUMBER: 84605560

NAME OF SUBMITTER: BRENDA L. THOM

SIGNATURE: /Brenda L. Thom/

DATE SIGNED: 03/24/2017

Total Attachments: 4

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

Rev 8/2014 (Assignment)

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RECORD ID:	84515386

ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each), for good and valuable consideration, the receipt of which is hereby acknowledged, in furtherance of my/our obligations to HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P., a Texas

and in furtherance of my/our obligations to HEWLETT-PACKA Limited Partnership having its principal place of business in subsidiaries and affiliates, agree to assign and transfer and hereb assigns, the entire right, title and interest, including the right of pentitled:	Houston, Texas, (hereinafter HPDC), and to its by assign and transfer to HPDC, its successors and
REPLACEABLE ITEM AUTHENTICATION	
Filing Date: March 24, 2017 Appli	lication No.: 15/469202
and the invention(s) and improvement(s) set forth therein, and any divisionals, and renewals of and substitutes for said application for countries thereto which may be granted thereon or therefore; and an example of the same of the sa	for said Patent, and any and all other Patent of any
I/we additionally authorize HPDC to file applications in my/our napy HPDC, its successors, assigns, nominees or legal representative Patent respectively may be granted, reissued or extended, as fully enjoyed by me/us had this assignment, and transfer not been made;	res, to the full end of the term or terms for which said
AND I/we hereby covenant that I/we have full right to convey the executed and will not execute any agreement in conflict herewith, an time a request is made, and without undue delay, execute and deliver berfect the title to said invention(s) or improvement(s), said application and invention(s) or improvement(s), said application and said Patent papers, to execute all disclaimers and divisionals, continuations, Crightful oaths and declarations, and generally to do everything possible egal representatives to obtain and enforce, for its or their own ber mprovement(s) in any and all countries provided the expenses which and assistance are paid by HPDC;	and I/we further covenant and agree that I/we will, each ser all such papers as may be necessary or desirable to ion and said Patent, to HPDC, its successors, assigns to HPDC, or to its nominee, all known facts respecting nt, to testify in any legal proceedings, to sign all lawfu C-I-P's, reissue and foreign applications, to make a pole to aid HPDC, its successors, assigns, nominees and enefit, proper patent protection for said invention(s) or
AND I/we hereby authorize and request the official of any cour applications as aforesaid, to issue to HPDC, as assignee of the entinvention(s) or improvement(s) which may be issued and granted accordance with the terms of this assignment.	ntire right, title and interest, any and all Patent for said
I/we further authorize and direct the attorneys of record to ir application for Patent, now identified by the Record ID and title set for known to them.	insert the filing date and application number of said orth above, as soon as the same shall have been made
IN WITNESS WHEREOF, I/we hereunto set my/our hand(s) a	and seal(s):
Sted Paul :	24 oct 2016
inventor's Signature	Date
Stephen D. Panshin	
First/Middle Name Last Name	
Inventor's Signature	Date
Jefferson P. Ward	
First/Middle Name Last Name	

Page 1 of 2

HP Inc.		PATENT APPLICATION
Mail Stop 35 Fort Collins, Colorado 80528	RECORD ID:	84515386
ASSIGNMENT	FOF PATENT APPLICATION	
I/We, the undersigned (each), for good and valued in furtherance of my/our obligations to HE Limited Partnership having its principal place	WLETT-PACKARD DEVELOPMENT	COMPANY, L.P., a Texas

assigns, the entire right, title and interest, including the right of priority, in, to and under an application for Patent entitled:

REPLACEABLE ITEM AUTHENTICATION

Filing Date: March 24, 2017

and the invention(s) and improvement(s) set forth therein, and any and all continuations, continuations-in-part (C-I-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 reissues, or reexaminations, or extensions of said Patent.

Application No.:

15/469202

subsidiaries and affiliates, agree to assign and transfer and hereby assign and transfer to HPDC, its successors and

I/we additionally authorize HPDC to file applications in my/our name for Patent 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 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-t-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 t/we 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 Patent 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.

I/we 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 WHEREOF, I/we hereunto set my/our hand(s) and seal(s):

Inventor's Signature			Date
Stephen D.	Panshin		
First/Middle Name	Last Name		•••
Werker's Signature	7. Wad		26 Oct 2016
Jefferson P.	Ward		
First/Middle Name	Last Name	***************************************	
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HP Inc.
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Mail Stop 35
Fort Collins, Colorado 80528

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RECORD ID:	84515386
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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

subsidiaries and affiliates	, agree to assign and t	ransfer and hereby	assign and	xas, (hereinafter HPDC), and to its transfer to HPDC, its successors and and under an application for Patent
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Filing Date: <u>March</u>	24, 2017	Applica	ation No.:	15/469202
divisionals, and renewals	of and substitutes for	said application for	said Patent	nuations, continuations-in-part (C-I-P's), and any and all other Patent of any reexaminations, or extensions of said
by HPDC, its successors,	assigns, nominees or le e granted, reissued or	egal representatives, extended, as fully ar	to the full	t in any country, to be held and enjoyed end of the term or terms for which said is the same would have been held and
executed and will not executime a request is made, ar perfect the title to said involvements or legal represe said invention(s) or improve papers, to execute all disrightful oaths and declaratilegal representatives to	cute any agreement in c and without undue delay, ention(s) or improvemen ntatives, and I/we agree vement(s), said applicanal sclaimers and divisional ons, and generally to do btain and enforce, for it all countries provided the	onflict herewith, and execute and deliver a tot(s), said application a to communicate to lon and said Patent, s, continuations, C-for everything possible ts or their own bene	I/we further all such paper and said Path HPDC, or to to testify in E-P's, reissue to aid HPDC fit, proper p	therein assigned, and that I/we have no covenant and agree that I/we will, each ers as may be necessary or desirable to atent, to HPDC, its successors, assigns to its nominee, all known facts respecting any legal proceedings, to sign all lawfue and foreign applications, to make a county, its successors, assigns, nominees and atent protection for said invention(s) or ed by me/us in lending such cooperation
applications as aforesaid,	to issue to HPDC, as a ent(s) which may be is	assignee of the entire	e right, title a	es whose duty it is to issue patents or and interest, any and all Patent for said result of the application aforesaid, in
I/we further authorize application for Patent, now known to them.	and direct the attorned identified by the Record	eys of record to ins d ID and title set forth	ert the filing above, as	g date and application number of said soon as the same shall have been made
IN WITNESS WHERE	OF, I/we hereunto set	my/our hand(s) an	d seal(s):	
Inventor's Signature			Date	
Stephen D.	Panshin	,		
First/Middle Name	Last Name			
Inventor's Signature		the state of the s	Date	
Jefferson P.	Ward			
First/Middle Name	Last Name			
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6-1	ASSIGNMENT	OF PATENT APPLICA		2
Inventor's Signature		···	$\frac{\sqrt{0/2}}{\text{Date}}$	4/2016
Erik D.	Ness		,	
First/Middle Name	Last Name			
Inventor's Signature			Date	
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Inventor's Signature			Date	
First/Middle Name	Last Name	and the second s		
Inventor's Signature			Date	
First/Middle Name	Last Name			
Inventor's Signature	Mark the second distriction with market the transmit	1	Date	
First/Middle Name	Last Name	CHARLES AND		
Inventor's Signature			Date	
First/Middle Name	Last Name			
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RECORDED: 03/24/2017

Rev 8/2014 (Assignment)