505329202 02/14/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5375983

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	REQUEST TO CORRECT 1ST ASSIGNOR'S ASSIGNMENT DATE, TRANSPOSED ON THE COVER SHEET, ON REEL/FRAME 047197/0318. ASSIGNOR(S) HEREBY CONFIRM THE ASSIGNMENT.		

CONVEYING PARTY DATA

Name	Execution Date
NASSIR MOHAMMAD	04/12/2017
JONATHAN GRIFFIN	04/12/2017
GURCHETAN GREWAL	04/13/2017
JOSHUA SERRATELLI SCHIFFMAN	04/15/2017
LUKE T. MATHER	04/21/2017

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:	16076544

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.

Phone: (541)360-4450 **Email:** ipa.mail@hp.com

Correspondent Name: HP INC.

Address Line 1:3390 E. HARMONY ROAD MS 35Address Line 4:FORT COLLINS, COLORADO 80528

ATTORNEY DOCKET NUMBER:	84996322
NAME OF SUBMITTER:	HEATHER MULKEY
SIGNATURE:	/Heather Mulkey/
DATE SIGNED:	02/14/2019

Total Attachments: 12

PATENT REEL: 048335 FRAME: 0967

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PATENT REEL: 048335 FRAME: 0968



UNITED STATES PATENT AND TRADEMARK OFFICE

Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office

OCTOBER 18, 2018

PTAS

HP INC. 3390 E. HARMONY ROAD MS 35 INTELLECTUAL PROPERTY FORT COLLINS, CO 80528

505145779

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE ASSIGNMENT RECORDATION BRANCH AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT RECORDATION BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 10/17/2018 REEL/FRAME: 047197/0318

NUMBER OF PAGES: 9

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: 84996322

ASSIGNOR:

MOHAMMAD, NASSIR DOC DATE: 13/04/2017 04/12/2017

ASSIGNOR:

GRIFFIN, JONATHAN DOC DATE: 04/12/2017

ASSIGNOR:

GREWAL, GURCHETAN DOC DATE: 04/13/2017

ASSIGNOR:

MATHER, LUKE T. DOC DATE: 04/21/2017

ASSIGNOR:

SCHIFFMAN, JOSHUA SERRATELLI DOC DATE: 04/15/2017

ASSIGNEE:

HEWLETT-PACKARD DEVELOPMENT COMPANY,

L.P.

11445 COMPAQ CENTER DRIVE WEST HOUSTON, TEXAS 77070

P.O. Box 1450, Alexandria, Virginia 22313-1450 - WWW.USPTO.GOV

PATENT REEL: 048335 FRAME: 0969 APPLICATION NUMBER: 16076544 FILING DATE:

PATENT NUMBER: ISSUE DATE: TITLE: ENCRYPTION KEY SHARES TO DIFFERENT DEVICES FOR RENDERING

ASSIGNMENT RECORDATION BRANCH PUBLIC RECORDS DIVISION

> **PATENT REEL: 048335 FRAME: 0970**

Assignment Page 1 of 2

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

{		NEW ASSIGNMENT
	NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NASSIR MOHAMMAD	12/04/2017 04/12/2017
JONATHAN GRIFFIN	04/12/2017
10011011011011111011111111111111111111	04/13/2017
LUKE T. MATHER	04/21/2017
JOSHUA SERRATELLI SCHIFFMAN	04/15/2017

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:	16076544

CORRESPONDENCE DATA

Fax Number: (970)778-4063 Phone: (541)715-8443

Email: ipa.mail@hp.com, khoellger@anaqua.com

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.

Correspondent Name: HP INC.
Address Line 1: 3390 E. HARMONY ROAD MS 35
Address Line 2: INTELLECTUAL PROPERTY
Address Line 4: FORT COLLINS, COLORADO 80528

**********	ATTORNEY DOCKET NUMBER:	84996322
**********	NAME OF SUBMITTER:	JOHN E. NEMAZI
*******	Signature:	/John E. Nemazi/

 $file: ///C: /Users/barbl/App Data/Local/Microsoft/Windows/INet Cache/Content. Outlook/K... \\ 10/17/2018$

Assignment Page 2 of 2

Total Attachments: 7
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RECEIPT INFORMATION

EPAS ID: PAT5192545
Receipt Date: 10/17/2018

REEL: 048335 FRAME: 0972

HP Inc.				
3390 E. Han	mon	y Ro	ad	
Mail Stop 35	•			
Fort Collins,	Cole	orad	0 8	0528

Inventor's Signature

First/Middle Name

Inventor's Signature

First/Middle Name

Rev 8/2014 (Assignment)

Jonathan

Nassir

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Mail Stop 35		PATENT APPLICATION
Fort Collins, Colorado 80528	RECORD ID: _	84601664
and in furtherance of my/our of Limited Partnership having its paudsidiaries and affiliates, agree assigns, the entire right, title and entitled:	ASSIGNMENT OF PATENT APPLICATIO, for good and valuable consideration, the receiphligations to HEWLETT-PACKARD DEVELOF principal place of business in Houston, Texa to assign and transfer and hereby assign and transfer fight of priority, in, to a DIFFERENT DEVICES FOR RENDERING	pt of which is hereby acknowledged PMENT COMPANY, L.P., a Texas as, (hereinafter HPDC), and to its
Filing Date: 21 April 2017	Application No.:	PCT/US2017/028737
divisionals, and renewals of and	nent(s) set forth therein, and any and all continusubstitutes for said application for said Patent, anted thereon or therefore; and any reissues, or	uations, continuations-in-part (C-I-P's)
 by HPDC, its successors, assigns 	DC to file applications in my/our name for Patent i , nominees or legal representatives, to the full en ad, reissued or extended, as fully and entirely as nent, and transfer not been made;	d of the term or terms for which said
executed and will not execute any time a request is made, and without perfect the title to said invention(s) nominees or legal representatives, said invention(s) or improvement(sepapers, to execute all disclaimers rightful oaths and declarations, and legal representatives to obtain an	at I/we have full right to convey the entire interest hagreement in conflict herewith, and I/we further out undue delay, execute and deliver all such papers or improvement(s), said application and said Pater, and I/we agree to communicate to HPDC, or to it it, said application and said Patert, to testify in an and divisionals, confinuations, C-I-P's, reissue of generally to do everything possible to aid HPDC, it deforce, for its or their own benefit, proper paterties provided the expenses which may be incurred	ovenant and agree that I/we will, each is as may be necessary or desirable to ent, to HPDC, its successors, assigns, is nominee, all known facts respecting by legal proceedings, to sign all lawful and foreign applications, to make all ts successors, assigns, nominees and ent protection for said invention(s) or
	ind request the official of any country or countries to HPDC, as assigned of the entire right, title and thich may be issued and granted on or as a reassignment.	d interest, any and all Patent for said
I/we further authorize and d application for Patent, now identifie known to them.	irect the attorneys of record to insert the filing or ad by the Record ID and title set forth above, as soo	date and application number of said on as the same shall have been made
IN WITNESS WHEREOF, I'W	e hereunto set my/our hand(s) and seal(s):	12 04.2017

Last Name

Mohammad

Last Name

Griffin

Date

Date

Page 1 of 2

REEL: 048335 FRAME: 0973

HP Inc. 3390 E. Harmony Road Mail Stop 35

PATENT APPLICATION

Fort Collins, Colorado 80528		RECORD ID:	84601664
	ASSIGNMENT OF PA	TENT APPLICATION (cont	.)
Inventor's Signature		Date	
Gurchetan	Grewal		
First/Middle Name	Last Name		
Inventor's Signature		 Date	
Luke T.	Mather		
First/Middle Name	Last Name		
Inventor's Signature		Date	
Joshua Ser	Schiffman		
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		

Page 2 of 2

HP Inc.	1
3390 E. Harmony Road	١
Mail Stop 35	1
Fort Collins, Colorado 80528	3

Rev 8/2014 (Assignment)

PATENT APPLICATION

lorado 80528	RECORD ID:	84601664
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## **ASSIGNMENT OF PATENT APPLICATION**

IWe, 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

	r and hereby assign and transfer to HPDC, its successors and ne right of priority, in, to and under an application for Patent
ENCRYPTION KEY SHARES TO DIFFERENT DEVIC	ES FOR RENDERING
Filing Date: 21 April 2017	Application No.: PCT/US2017/028737
divisionals, and renewals of and substitutes for said a	in, and any and all continuations, continuations-in-part (C-l-P's) oplication for said Patent, and any and all other Patent of any fore; and any reissues, or reexaminations, or extensions of said
by HPDC, its successors, assigns, nominees or legal re	in my/our name for Patent in any country, to be held and enjoyed presentatives, to the full end of the term or terms for which saided, as fully and entirely as the same would have been held and een made;
executed and will not execute any agreement in conflict I time a request is made, and without undue delay, execute perfect the title to said invention(s) or improvement(s), sa nominees or legal representatives, and I/we agree to cor said invention(s) or improvement(s), said application and papers, to execute all disclaimers and divisionals, cont rightful oaths and declarations, and generally to do everyt legal representatives to obtain and enforce, for its or th	convey the entire interest herein assigned, and that I/we have no nerewith, and I/we further covenant and agree that I/we will, each e and deliver all such papers as may be necessary or desirable to and deliver all such papers as may be necessary or desirable to iid application and said Patent, to HPDC, its successors, assigns municate to HPDC, or to its nominee, all known facts respecting said Patent, to testify in any legal proceedings, to sign all lawful inuations, C-I-P's, reissue and foreign applications, to make a hing possible to aid HPDC, its successors, assigns, nominees and eir own benefit, proper patent protection for said invention(s) of these which may be incurred by me/us in lending such cooperation
applications as aforesaid, to issue to HPDC, as assigned	of any country or countries whose duty it is to issue patents or e of the entire right, title and interest, any and all Patent for sain and granted on or as a result of the application aforesaid, in
	record to insert the filing date and application number of said title set forth above, as soon as the same shall have been made
IN WITNESS WHEREOF, I/we hereunto set my/or	ur hand(s) and seal(s):
Inventor's Signature	Date
Nassir Mohammad	
First/Middle Name Last Name  Fora than Arithin	12 Apr. 2017
Inventor's Signature	Date *
Jonathan Griffin	
First/Middle Name Last Name	***************************************

Page 1 of 2

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Lake T	Mather		
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inventor's Signature		Deta	
Joshua Ser	Schiffman		
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insentor's Signature		Date	
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HP Inc.
3390 E. Harmony Road
Mail Stop 35
Fort Collins, Colorado 80528

Rev 8/2014 (Assignment)

#### PATENT APPLICATION

RECORD ID: 84601664
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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 transfer a	ınd hereby assign and tra	<ul> <li>(hereinafter HPDC), and to its insfer to HPDC, its successors and ind under an application for Patent</li> </ul>
ENCRYPTION KEY SHA	RES TO DIFFERENT DEVICE	S FOR RENDERING	
Filing Date: 21 April 20	017	Application No.:	PCT/US2017/028737
divisionals, and renewals	of and substitutes for said app	lication for said Patent, a	ations, continuations-in-part (C-I-P's), nd any and all other Patent of any eexaminations, or extensions of said
by HPDC, its successors, patent respectively may be	assigns, nominees or legal repr	esentatives, to the full end , as fully and entirely as t	any country, to be held and enjoyed I of the term or terms for which said he same would have been held and
executed and will not executime a request is made, and perfect the title to said invenominees or legal represer said invention(s) or improve papers, to execute all discrightful oaths and declaration legal representatives to ob-	ute any agreement in conflict he d without undue delay, execute a ntion(s) or improvement(s), said statives, and I/we agree to comn ement(s), said application and s claimers and divisionals, continuous, and generally to do everythin tain and enforce, for its or their all countries provided the expens	rewith, and I/we further co and deliver all such papers application and said Pater nunicate to HPDC, or to its aid Patent, to testify in any uations, C-I-P's, reissue a ng possible to aid HPDC, it r own benefit, proper pate	rein assigned, and that I/we have not venant and agree that I/we will, each as may be necessary or desirable to nt, to HPDC, its successors, assigns, nominee, all known facts respecting y legal proceedings, to sign all lawful nd foreign applications, to make all successors, assigns, nominees and nt protection for said invention(s) or by me/us in lending such cooperation
applications as aforesaid, t	o issue to HPDC, as assignee ont(s) which may be issued an	of the entire right, title and	whose duty it is to issue patents on I interest, any and all Patent for said sult of the application aforesaid, in
			ate and application number of said n as the same shall have been made
IN WITNESS WHERE	DF, I/we hereunto set my/our	hand(s) and seal(s):	
Inventor's Signature		 Date	
Nassir	Mohammad		
First/Middle Name	Last Name		
Inventor's Signature		Date	
Jonathan	Griffin		
First/Middle Name	Last Name		

Page 1 of 2

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

Rev 8/2014 (Assignment)

## PATENT APPLICATION

Fort Collins, Colorado 80828		RECORD ID: 84601664
	ASSIGNMENT OF PA	TENT APPLICATION (cont.)
nventor's Signature		Date
Gurchetan	Grewal	
irst/Middle Name	Last Name	
nventor's Signature		21/04/17
uke T.	Mather	
irst/Middle Name	Last Name	
nventor's Signature		Date
loshua Ser	Schiffman	
irst/Middle Name	Last Name	
nventor's Signature		Date
irst/Middle Name	Last Name	
nventor's Signature		Date:
irst/Middle Name	Last Name	
nventor's Signature		Date
irst/Middle Name	Last Name	

Page 2 of 2

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

Rev 8/2014 (Assignment)

## PATENT APPLICATION

rado 80528	RECORD ID	84601664

## **ASSIGNMENT OF PATENT APPLICATION**

I/We, the undersigned (each), for good and valuable consideration, the receipt of which is hereby acknowledged,

Limited Partnersh subsidiaries and a	nip having its principal plac affiliates, agree to assign and	HEWLETT-PACKARD DEVELOPN be of business in Houston, Texas transfer and hereby assign and transled duding the right of priority, in, to an	, (hereinafter HPDC), and to its nsfer to HPDC, its successors and
ENCRYPTION KE	EY SHARES TO DIFFEREN	T DEVICES FOR RENDERING	
Filing Date: 2	1 April 2017	Application No.:	PCT/US2017/028737
divisionals, and re	newals of and substitutes fo	rth therein, and any and all continual r said application for said Patent, ar or therefore; and any reissues, or re	nd any and all other Patent of any
by HPDC, its succ Patent respectively	essors, assigns, nominees or	ications in my/our name for Patent in legal representatives, to the full end r extended, as fully and entirely as the fer not been made;	of the term or terms for which said
executed and will in time a request is in perfect the title to so nominees or legal said invention(s) of papers, to execute rightful oaths and of legal representative	not execute any agreement in nade, and without undue delay said invention(s) or improvement representatives, and I/we agre r improvement(s), said applicate all disclaimers and division leclarations, and generally to could es to obtain and enforce, for any and all countries provided	Il right to convey the entire interest her conflict herewith, and I/we further cover, execute and deliver all such papers ent(s), said application and said Patente to communicate to HPDC, or to its ation and said Patent, to testify in any als, continuations, C-I-P's, reissue are everything possible to aid HPDC, its its or their own benefit, proper pater the expenses which may be incurred the	renant and agree that I/we will, each as may be necessary or desirable to to to the total that to HPDC, its successors, assigns nominee, all known facts respecting legal proceedings, to sign all lawfund foreign applications, to make all successors, assigns, nominees and the protection for said invention(s) of
applications as afoinvention(s) or imp	resaid, to issue to HPDC, as	e official of any country or countries was assignee of the entire right, title and issued and granted on or as a res	interest, any and all Patent for said
		neys of record to insert the filing da rd ID and title set forth above, as soor	
IN WITNESS	WHEREOF, I/we hereunto se	et my/our hand(s) and seal(s):	
Inventor's Signature		Date	
Nassir	Mohammad		
First/Middle Name	Last Name		
Inventor's Signature		Date	
Jonathan	Griffin		
First/Middle Name	Last Name		

Page 1 of 2

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

## PATENT APPLICATION

Mail Stop 35 Fort Collins, Colorado 80528		RECORD ID:	84601664
	ASSIGNMENT OF PATEN	T APPLICATION (con	t)
Inventor's Signature		Date	
Gurchetan	Grewai		
First/Middle Name	Last Name		
Inventor's Signature		Date	
Luke T.	Mather		
First/Middle Name	Last Name		·
9-19-11-	A	APríl Date	15,2017
Inventor's Signature		Uate	
Joshua Sermadie III;	Schiffman		
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	

Page 2 of 2

PATENT REEL: 048335 FRAME: 0980

Rev 5/2014 (Assignment)