# 507744213 02/10/2023

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7791361

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
HENGCHANG HSU	06/02/2020
SYED AZAM	06/02/2020
SHIH HENG CHEN	06/02/2020
WANCHIEH LU	06/03/2020

#### **RECEIVING PARTY DATA**

Name:	Hewlett-Packard Development Company, L.P.
Street Address:	10300 Energy Drive
City:	Spring
State/Country:	TEXAS
Postal Code:	77389

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	18008073

### **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 35
Address Line 4: FORT COLLINS, COLORADO 80528

ATTORNEY DOCKET NUMBER:	86206058
NAME OF SUBMITTER:	ANGELA D. BOLTJES
SIGNATURE:	/Angela D. Boltjes/
DATE SIGNED:	02/10/2023

### **Total Attachments: 4**

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PATENT 507744213 REEL: 062660 FRAME: 0467

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PATENT REEL: 062660 FRAME: 0468

RECORD ID:	85872147

#### ASSIGNMENT OF PATENT APPLICATION

I, the undersigned, for good and valuable consideration, the receipt of which is hereby acknowledged, agree to assign and transfer and hereby assign and transfer to HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P., a Texas Limited Partnership having its principal place of business in Spring, Texas, (hereinafter "HPDC"), its successors, and its assigns, my entire right, title, and interest, including all rights of priority, in, to, and under an application for patent entitled (English-language title in parentheses

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OUT-OF-BAND TRANSMISSIONS OF CONT	TROL SIGNALS		
Filing Date:	Application No.:		Patent Office:;
the subject matter, including any and all invention herein "patent" refers to any form of intellectual p design rights, and utility model rights) (hereinal country or region or under any international agre- patent, any and all applications for patent directly said Inventions, any and all applications for pa- indirectly claims priority or benefit, and any and a of, divisional applications of, national-phase application for patent for any of said Inventions) on or as a result of said Applications for Patent of said Applications for Patent or said Patents.	roperly protection including fiter "Inventions"); any and rement for any of said inver y or indirectly claiming prior tent from which any applic all continuation applications blications of, regional-phase (hereinatter "Applications to	without limitation, inve- all existing and future ations (including, without ity to or benefit of any ation for patent for any of, continuation-in-part applications of, renew or Patent"); any and all	ention rights, utility patent rights, applications for patent of any at limitation, said application for application for patent for any of y of said inventions directly or applications (hereinafter CIPs) vals of, and substitutes for any patents which may be granted
I HEREBY represent that I convey my full entire right, title, and interest herein assigned an conflict herewith;			
AND I HEREBY authorize HPDC, its sur Applications for Patent in its name or in my na authorize HPDC, its successors, its assigns, it number, and patent office of said application for them;	ime in any country or regit is nominees, and its legal	on or under any intern representatives to ins	ational agreement, and further sert the filing date, application
AND I HEREBY authorize and request the duty it is to issue patents, to issue to HPDC, its Patents, in accordance with the terms of this assi	successors, or its assigns,		
AND I HEREBY covenant and agree that I visuch papers as may be necessary or desirable HPDC, its successors, or its assigns; communically known facts respecting said inventions, Applicated sign all lawful papers (including, without applications) relating to said Inventions, Applications) relating to said Inventions, Applications) relating to said Inventions, Applications, and deverything possible to aid HPDC maintain, and enforce, for its or their own benefit, and Patents, provided the expenses which may this successors, its assigns, its nominees, or its leading to the expenses.	e to perfect the title in sake ate to HPDC, its successors cations for Patent, and Pat- limitation, divisional applic dions for Patent, and Patent, its successors, its assigns proper intellectual property be incurred by me in lending	I Inventions, Application, its assigns, its nomine ents; testify in any legal ations, continuation apits; and make all rights, its nominees, and its protection for said inverse.	ons for Patent, and Patents, to bees, or its legal representatives, of or administrative proceedings applications, CIPs, and reissue ful oaths and declarations and legal representatives to obtain, entions, Applications for Patent,
IN WITNESS WHEREOF, I hereunto set my	y hand and seal:		
Shih Heng Chen	<i>.</i>	2 June	2,20
Invenior's Signature	Day	Month	Year
ShihHeng Chen Given (First and Middle) Name(s) Family Name			
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### **ASSIGNMENT OF PATENT APPLICATION**

I, the undersigned, for good and valuable consideration, the receipt of which is hereby acknowledged, agree to assign and transfer and hereby assign and transfer to HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P., a Texas Limited Partnership having its principal place of business in Spring, Texas, (hereinafter "HPDC"), its successors, and its assigns, my entire right, title, and interest, including all rights of priority, in, to, and under an application for patent entitled (English-language title in parentheses if said application for patent is in another language):

and interest, including all rights of priority, in, to, and under an if said application for patent is in another language):			
OUT-OF-BAND TRANSMISSIONS OF CONTROL SIGNA	LS		
Filing Date: Application	No.:		Patent Office:;
the subject matter, including any and all inventions, improvementation in the patent in the refers to any form of intellectual property protect design rights, and utility model rights) (hereinafter "Invention country or region or under any international agreement for any patent, any and all applications for patent directly or indirectly said Inventions, any and all applications for patent from which indirectly claims priority or benefit, and any and all continuation of, divisional applications of, national-phase applications of, rapplication for patent for any of said Inventions) (hereinafter "A on or as a result of said Applications for Patent (hereinafter "For said Applications for Patent).	tion including, wit is"); any and all of said Inventior claiming priority t ch any application applications of, egional-phase ap Applications for P	hout limitation, inve existing and future is (including, withou o or benefit of any a n for patent for any continuation-in-part plications of, renew atent"); any and all	ntion rights, utility patent rights, applications for patent of any it limitation, said application for application for patent for any of y of said Inventions directly or applications (hereinafter CIPs) yals of, and substitutes for any patents which may be granted
I HEREBY represent that I convey my full rights in all contine right, title, and interest herein assigned and transferred, conflict herewith;			
AND I HEREBY authorize HPDC, its successors, its Applications for Patent in its name or in my name in any coauthorize HPDC, its successors, its assigns, its nominees, number, and patent office of said application for patent, now it them;	ountry or region of and its legal rep	or under any interna presentatives to ins	ational agreement, and further ert the filing date, application
AND I HEREBY authorize and request the officials of all of duty it is to issue patents, to issue to HPDC, its successors, of Patents, in accordance with the terms of this assignment and to	or its assigns, as		
AND I HEREBY covenant and agree that I will, each time such papers as may be necessary or desirable to perfect the HPDC, its successors, or its assigns; communicate to HPDC, it all known facts respecting said Inventions, Applications for Paland sign all lawful papers (including, without limitation, divapplications) relating to said Inventions, Applications for Pategenerally to do everything possible to aid HPDC, its successor maintain, and enforce, for its or their own benefit, proper inteller and Patents, provided the expenses which may be incurred by its successors, its assigns, its nominees, or its legal representations.	ne title in said In- ts successors, its itent, and Patents risional application ent, and Patents; rs, its assigns, its roctual property pro- r me in lending su	ventions, Applications, its nomine assigns, its nomine; testify in any legans, continuation apaid make all rights nominees, and its tection for said Investion for said Investigation and said Investigation for	ns for Patent, and Patents, to es, or its legal representatives, I or administrative proceedings oplications, CIPs, and reissue ful oaths and declarations and legal representatives to obtain, entions, Applications for Patent,
IN WITNESS WHEREOF, I hereunto set my hand and se	al:		
Wanchieh Lu	3	6	2020
Inventor's Signature	Day	Month	Year
WanChieh Lu			
Given (First and Middle) Name(s) Family Name			

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RELUCIRITIES.	85872147
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# ASSIGNMENT OF PATENT APPLICATION

I, the undersigned, for good and valuable consideration, the receipt of which is hereby acknowledged, agree to assign and

transfer and hereby assign and transfer to having its principal place of business in Sp and interest, including all rights of priority, i if said application for patent is in another la	ring, Texas, (hereinafter "H n, to, and under an applicati	PDC"), its su	ccessors, and its assig	gns, my entire right, title
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Filing Date:	Application No.:			Patent Office:
the subject matter, including any and all invinerein "patent" refers to any form of intellect design rights, and utility model rights) (he country or region or under any international patent, any and all applications for patent characteristics, any and all applications for indirectly claims priority or benefit, and any of, divisional applications of, national-phasis application for patent for any of said Invention or as a result of said Applications for Professional Applications for Professional Applications for Professional Applications for Patent or said Patent or sai	etual property protection includereinafter "Inventions"); any all agreement for any of said directly or indirectly claiming for patent from which any are and all continuation applicates applications of, regionaltions) (hereinafter "Patents")	uding, withou and all exis Inventions (i priority to or application for ations of, con phase applic ons for Pate	It limitation, invention r sting and future applic ncluding, without limita benefit of any applica or patent for any of sa tinuation-in-part applications of, renewals of nt"); any and all paten	ights, utility patent rights pations for patent of an ation, said application fo ation for patent for any o aid Inventions directly o pations (hereinafter CIPs , and substitutes for and ts which may be granted
I HEREBY represent that I convey mentire right, title, and interest herein assign- conflict herewith;				
AND I HEREBY authorize HPDC, it Applications for Patent in its name or in rauthorize HPDC, its successors, its assignumber, and patent office of said application them;	my name in any country or gns, its nominees, and its	region or u legal repres	nder any international entatives to insert the	l agreement, and furthe e filing date, application
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AND I HEREBY covenant and agree the such papers as may be necessary or detended the HPDC, its successors, or its assigns; commall known facts respecting said Inventions, and sign all lawful papers (including, with applications) relating to said Inventions, A generally to do everything possible to aid it maintain, and enforce, for its or their own beand Patents, provided the expenses which its successors, its assigns, its nominees, or	sirable to perfect the title in nunicate to HPDC, its succe Applications for Patent, and thout limitation, divisional applications for Patent, and HPDC, its successors, its as enefit, proper intellectual pro- may be incurred by me in le	n said Inventussors, its assid Patents; te applications, Patents; and ssigns, its no operty protect	tions, Applications for signs, its nominees, or stify in any legal or ac continuation applicat d make all rightful oat minees, and its legal r tion for said Inventions	Patent, and Patents, to its legal representatives dministrative proceedings ions, CIPs, and reissue the and declarations and representatives to obtain s, Applications for Patent
IN WITNESS WHEREOF, I hereunto	set my hand and seal:			
May Marghana 34	49 6	62	o (,	20 20
Inventor's Signature		Day	Month	Year
HengChang Hsu				
Given (First and Middle) Name(s) Family	Name			

Rev 8/2018 (HPDC Assignment)

RECORD	ID:	85872147
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# ASSIGNMENT OF PATENT APPLICATION

I, the undersigned, for good and valuable consideration, the receipt of which is hereby acknowledged, agree to assign and transfer and hereby assign and transfer to HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P., a Texas Limited Partnership

having its principal place of business in Spring, Texas and interest, including all rights of priority, in, to, and us if said application for patent is in another language):	, (hereinafter "HPDC"), its s	uccessors, and its assig	
OUT-OF-BAND TRANSMISSIONS OF CONTROL	SIGNALS		
Filing Date: App	lication No.:		Patent Office:
the subject matter, including any and all inventions, implerein "patent" refers to any form of intellectual propert design rights, and utility model rights) (hereinafter "licountry or region or under any international agreement patent, any and all applications for patent directly or insaid Inventions, any and all applications for patent frindirectly claims priority or benefit, and any and all condo, divisional applications of, national-phase application of, divisional applications of national-phase application or as a result of said Applications for Patent (herein of said Applications for Patents.	y protection including, withon enventions"); any and all ex- t for any of said Inventions directly claiming priority to om which any application tinuation applications of, co ons of, regional-phase applinafter "Applications for Pat	out limitation, invention r iisting and future application (including, without limitation or benefit of any application for patent for any of sation intinuation-in-part applications of, renewals of ent"); any and all paten	ights, utility patent rights ations for patent of any ation, said application fo ation for patent for any o aid Inventions directly o ations (hereinafter CIPs , and substitutes for any ts which may be granter
I HEREBY represent that I convey my full rights entire right, title, and interest herein assigned and transconflict herewith;			
AND I HEREBY authorize HPDC, its successor Applications for Patent in its name or in my name in authorize HPDC, its successors, its assigns, its nor number, and patent office of said application for patent them;	any country or region or ninees, and its legal repre	under any international esentatives to insert the	l agreement, and furthe e filing date, application
AND I HEREBY authorize and request the official duty it is to issue patents, to issue to HPDC, its succe Patents, in accordance with the terms of this assignment.	ssors, or its assigns, as as	ns and under all internal signee of my entire righ	tional agreements whose nt, title, and interest, said
AND I HEREBY covenant and agree that I will, easuch papers as may be necessary or desirable to p HPDC, its successors, or its assigns; communicate to all known facts respecting said Inventions, Application and sign all lawful papers (including, without limital applications) relating to said Inventions, Applications generally to do everything possible to aid HPDC, its straintain, and enforce, for its or their own benefit, proper and Patents, provided the expenses which may be incited its successors, its assigns, its nominees, or its legal rejections.	erfect the title in said Inve HPDC, its successors, its a s for Patent, and Patents; it tion, divisional applications for Patent, and Patents; a uccessors, its assigns, its n er intellectual property prote urred by me in lending sucl	ntions, Applications for ssigns, its nominees, or testify in any legal or act, continuation applicat and make all rightful oat ominees, and its legal of ection for said Inventions	Patent, and Patents, to its legal representatives Iministrative proceedings ions, CIPs, and reissue ths and declarations and representatives to obtain s, Applications for Patent
IN WITNESS WHEREOF, I hereunto set my hand			2.2.
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Inventor's Signature Syed Azam	Day.	14(P) (ff)	rout
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Rev 8/2018 (HPDC Assignment)