01/12/2022 507069731

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7116567

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
YUAN HSI CHENG	01/07/2022
WAN-CHIEH LU	01/07/2022
CHENG-KAI CHEN	01/10/2022
MING-FONG CHOU	01/10/2022

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:	17573742

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.

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

Correspondent Name: HP INC.

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

ATTORNEY DOCKET NUMBER:	86102887
NAME OF SUBMITTER:	STEVEN L. NICHOLS
SIGNATURE:	/Steven L. Nichols/
DATE SIGNED:	01/12/2022

Total Attachments: 4

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PATENT REEL: 058628 FRAME: 0177 HP Inc. 3390 E. Harmony Road Mail Stop 35 Fort Callins. Colorado 8⁰⁵³⁸

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ASSIGNMENT OF PATENT APPLICATION

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

HEWLE TLPACKARD DEVELOPMENT COMPANY L.P. a Texas Limited Partnership having its principal place of business in Spring Texas, USA (heroinafler "HPDC").

and research and its assigns my entire right little, and interest including all rights of profity in its and under an application for patent emitted (English language title in parentheses it said application for patent is in another language).

iling Date	Application No.	Patent Office: US
the subject matter including as used herein patent refers this patent of any or patent of any or whout limitation said application for pagent for any application for pagent for any of said Inventor must on-in-part application has elapolications of renewell applications for Patent's any	any and all inventions, improvements, and disco- to any form of intellectual property protection indi- is, and utility model rights) (hereinafter 'Invention our try or region or under any international agree on for patent, any and all applications for patent attent for any of said Inventions, any and all applica- tions directly or indirectly claims providy or benef- is (hereinafter CIPs) or divisional applications is of and substitutes for any application for paten and all patents which may be granted on or as a y and all reissues, reexaminations, and extension	duding without limitation inventor rights ins') any and all existing and future ement for any of said linventors (including directly or indirectly claiming priority to or cations for patent from which any applications of it, and any and all continuation applications of of national-phase applications of regional it or any of said inventors (free-rights result of said Applications for Patent
HEREBY represent that I contine right title, and interest high persent in conflict herewith	convey my full rights in all countries and regions a erein assigned and transferred, and that I have r	and under all international agreements to the not executed and will not execute airs
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Transition Separate From Hall Charms) Casy	Afonit tea
ruan Ha Cheng Inventors Legal Name		

PATENT REEL: 058628 FRAME: 0178

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

Inventor's Legal Name

	RECORD	ID:	86102887
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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, USA (hereinafter "HPDC"),

Title: PHOTODETECTOR A	CTIVATIONS	
Filing Date:	Application No.:	Patent Office: US
(as used herein "patent" refersutility patent rights, design right applications for patent of any without limitation, said application for patent for any application for patent for any of said Invercontinuation-in-part application phase applications of, renewa "Applications for Patent"); any	g any and all inventions, improvements, and discost to any form of intellectual property protection includes, and utility model rights) (hereinafter "Invention country or region or under any international agreement of patent, any and all applications for patent patent for any of said Inventions, any and all applications directly or indirectly claims priority or benefit ins (hereinafter "CIPs") of, divisional applications of als of, and substitutes for any application for patent of any and all patents which may be granted on or as a many and all reissues, reexaminations, and extension	luding, without limitation, invention rights, as"); any and all existing and future ment for any of said Inventions (including, directly or indirectly claiming priority to or cations for patent from which any application t, and any and all continuation applications of, of, national-phase applications of, regionalt for any of said Inventions) (hereinafter result of said Applications for Patent
•	convey my full rights in all countries and regions a herein assigned and transferred, and that I have no n;	_
Applications for Patent in its n authorize HPDC, its successor	HPDC, its successors, its assigns, its nominees, and ame or in my name in any country or region or unors, its assigns, its nominees, and its legal represestated application for patent, now identified by the Reference	der any international agreement, and further ntatives to insert the filing date, application
whose duty it is to issue pater	and request the officials of all countries and region nts, to issue to HPDC, its successors, or its assign rdance with the terms of this assignment and trans	s, as assignee of my entire right, title, and
all such papers as may be new to HPDC, its successors, or its representatives, all known fact administrative proceedings are applications, CIPs, and reissurightful oaths and declarations and its legal representatives to for said Inventions, Applications	and agree that I will, each time a request is made, cessary or desirable to perfect the title in said Invest assigns; communicate to HPDC, its successors, ets respecting said Inventions, Applications for Pater and sign all lawful papers (including, without limitations applications) relating to said Inventions, Applicate applications) relating to said Inventions, Applicate and generally to do everything possible to aid HF or obtain, maintain, and enforce, for its or their own ins for Patent, and Patents, provided the expenses are paid by HPDC, its successors, its assigns, its next assigns, its next assigns.	entions, Applications for Patent, and Patents, its assigns, its nominees, or its legal ent, and Patents; testify in any legal or on, divisional applications, continuation itions for Patent, and Patents; and make all PDC, its successors, its assigns, its nominees, in benefit, proper intellectual property protections which may be incurred by me in lending such
IN WITNESS WHEREOF, I	hereunto set my hand and seal:	
Lu, WAN-C	HIEH 07/	01 / 2022
Inventor's Signature	 Day	Month Year

PATENT REEL: 058628 FRAME: 0179 HP Inc. 3390 E. Harmony Road Mail Stop 35 Fort Collins, Colorado 80528

RECORD ID: 86102887

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, USA (h	nereinafter "HPDC"),	are prosper process of
its successors, and its assigns, application for patent entitled (Eng	my entire right, title, and interest, including all rig lish-language title in parentheses if said applicat	hts of priority, in, to, and under an ion for patent is in another language):
Title: PHOTODETECTOR ACTIV	ATIONS	
Filing Date:	Application No.:	Patent Office: US
(as used herein "patent" refers to a utility patent rights, design rights, applications for patent of any cour without limitation, said application benefit of any application for pater for patent for any of said Invention continuation-in-part applications (I phase applications of, renewals of "Applications for Patent"); any and	y and all inventions, improvements, and discover any form of intellectual property protection includ and utility model rights) (hereinafter "Inventions") intry or region or under any international agreeme for patent, any and all applications for patent directly for any of said Inventions, any and all application is directly or indirectly claims priority or benefit, a inereinafter "CIPs") of, divisional applications of, in and substitutes for any application for patent for all patents which may be granted on or as a resing all reissues, reexaminations, and extensions of	ing, without limitation, invention rights, any and all existing and future nt for any of said Inventions (including, ectly or indirectly claiming priority to or ons for patent from which any application nd any and all continuation applications of, eational-phase applications of, regional-r any of said Inventions) (hereinafter ult of said Applications for Patent
	rey my full rights in all countries and regions and in assigned and transferred, and that I have not e	
Applications for Patent in its name authorize HPDC, its successors, it	C, its successors, its assigns, its nominees, and or in my name in any country or region or under is assigns, its nominees, and its legal representa application for patent, now identified by the Reco	any international agreement, and further tives to insert the filing date, application
whose duty it is to issue patents, t	request the officials of all countries and regions a o issue to HPDC, its successors, or its assigns, a ce with the terms of this assignment and transfel	as assignee of my entire right, title, and
all such papers as may be necess to HPDC, its successors, or its asserepresentatives, all known facts readministrative proceedings and significations, CIPs, and reissue aprightful oaths and declarations and and its legal representatives to obfor said Inventions, Applications for	agree that I will, each time a request is made, and ary or desirable to perfect the title in said Inventionsigns; communicate to HPDC, its successors, its especting said Inventions, Applications for Patent gn all lawful papers (including, without limitation, plications) relating to said Inventions, Application digenerally to do everything possible to aid HPDC tain, maintain, and enforce, for its or their own be a Patent, and Patents, provided the expenses while by HPDC, its successors, its assigns, its nome	ons, Applications for Patent, and Patents, assigns, its nominees, or its legal, and Patents; testify in any legal or divisional applications, continuation as for Patent, and Patents; and make all C, its successors, its assigns, its nominees, enefit, proper intellectual property protection nich may be incurred by me in lending such
IN WITNESS WHEREOF, I her	eunto set my hand and seal:	
Cherry-Kai Chen Inventor's Signature		1. 2022 onth Year
Cheng-Kai Chen		
Inventor's Legal Name		

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

RECORD ID:	86102887
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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, USA (here its successors, and its assigns, my	entire right, title, and interest, inc				
application for patent entitled (English	-language title in parentheses if	said app	lication for pa	tent is in another language):	
Title: PHOTODETECTOR ACTIVAT	IONS				
Filing Date:	Application No.:			Patent Office: US	
the subject matter, including any and all inventions, improvements, and discoveries, set forth in said application for patent (as used herein "patent" refers to any form of intellectual property protection including, without limitation, invention rights, utility patent rights, design rights, and utility model rights) (hereinafter "Inventions"); any and all existing and future applications for patent of any country or region or under any international agreement for any of said Inventions (including, without limitation, said application for patent, any and all applications for patent directly or indirectly claiming priority to or benefit of any application for patent for any of said Inventions, any and all applications for patent from which any application for patent for any of said Inventions directly or indirectly claims priority or benefit, and any and all continuation applications of, continuation-in-part applications (hereinafter "CIPs") of, divisional applications of, national-phase applications of, renewals of, and substitutes for any application for patent for any of said Inventions) (hereinafter "Applications for Patent"); any and all patents which may be granted on or as a result of said Applications for Patent (hereinafter "Patents"); and any and all reissues, reexaminations, and extensions of said Applications for Patent or said Patents.					
I HEREBY represent that I convey entire right, title, and interest herein a agreement in conflict herewith;					
AND I HEREBY authorize HPDC, it Applications for Patent in its name or authorize HPDC, its successors, its anumber, and patent office of said applied to them;	in my name in any country or reg ssigns, its nominees, and its lega	jion or u Il repres	nder any inte entatives to ir	mational agreement, and further usert the filing date, application	
AND I HEREBY authorize and requiveness duty it is to issue patents, to is interest, said Patents, in accordance with the contraction of the contra	sue to HPDC, its successors, or	its assig	ns, as assign	all international agreements ee of my entire right, title, and	
AND I HEREBY covenant and agreall such papers as may be necessary to HPDC, its successors, or its assign representatives, all known facts respendent administrative proceedings and sign applications, CIPs, and reissue applications, declarations and geand its legal representatives to obtain for said Inventions, Applications for Pacooperation and assistance are paid to	or desirable to perfect the title in is; communicate to HPDC, its su- ecting said Inventions, Application ill lawful papers (including, witho ations) relating to said Inventions enerally to do everything possible , maintain, and enforce, for its or atent, and Patents, provided the	said Invocessors as for Pa ut limitat s, Applic to aid H their ow expense	ventions, Apples, its assigns, atent, and Patition, divisional ations for Patitions, its succential process which may	ications for Patent, and Patents, its nominees, or its legal ents; testify in any legal or lapplications, continuation ent, and Patents; and make all cessors, its assigns, its nominees per intellectual property protections incurred by me in lending suc	
IN WITNESS WHEREOF, I hereun	to set my hand and seal:				
Mind - Fond Ch Inventors signature	ou	/ O Day	Month,	∑ 0 ∑ Z Year	
Ming-Fong Chou					
Inventor's Legal Name					

Rev 8/2020