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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MICHAEL CUMBIE	09/26/2018
CHIEN-HUA CHEN	09/26/2018

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:	17251856

CORRESPONDENCE DATA

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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:	85960191
NAME OF SUBMITTER:	CARRIE A. MILANO
SIGNATURE:	/Carrie A. Milano/
DATE SIGNED:	12/14/2020

Total Attachments: 2

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PATENT REEL: 054630 FRAME: 0510 506400538

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

RECORD ID:	85004804
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ASSIGNMENT OF PATENT APPLICATION

i, the undersigned, for good and valuable consideration, the re- transfer and hereby assign and transfer to HEWLETT-PACKARD DE having its principal place of business in Houston, Texas, (hereinaft title, and interest, including all rights of priority, in, to, and under parentheses if said application for patent is in another language):	VELOPMEN er "HPDC"),	T COMPANY, L.P., a its successors, and	a Texas Limited Partnership
CARRIERS INCLUDING FLUID EJECTION DIES			
Filing Date: September 27, 2018 Application No.:	PCT/US	52018/053037	Patent Office: US
the subject matter, including any and all inventions, improvements, at herein "patent" refers to any form of intellectual property protection in design rights, and utility model rights) (hereinafter "inventions"); at country or region or under any international agreement for any of sa patent, any and all applications for patent directly or indirectly claiming said inventions, any and all applications for patent from which any indirectly claims priority or benefit, and any and all continuation applicational applications of, national-phase applications of, regional application for patent for any of said Inventions) (hereinafter "Application or as a result of said Applications for Patent (hereinafter "Patents of said Applications for Patent or said Patents.	cluding, without an an and and	out limitation, invention letting and future ap (including, without linual or benefit of any app for patent for any or intinuation-in-part ap ications of, renewals ent'); any and all part	on rights, utility patent rights plications for patent of an mitation, said application for patent for any of said Inventions directly of plications (hereinafter CIPs of, and substitutes for an tents which may be granted.
HEREBY represent that I convey my full rights in all countrie entire right, title, and interest herein assigned and transferred, and the conflict herewith;	s and region at I have not	s and under all inter executed and will no	national agreements to the dexecute any agreement in
AND I HEREBY authorize HPDC, its successors, its assign Applications for Patent in its name or in my name in any country authorize HPDC, its successors, its assigns, its nominees, and it number, and patent office of said application for patent, now identifie them;	or region or s legal repre	under any internatio sentatives to insert	nal agreement, and furthe the filing date, application
AND I HEREBY authorize and request the officials of all countried duty it is to issue patents, to issue to HPDC, its successors, or its as Patents, in accordance with the terms of this assignment and transfer	signs, as as	is and under all intersisignee of my entire r	national agreements whose ight, title, and interest, said
AND I HEREBY covenant and agree that I will, each time a requision papers as may be necessary or desirable to perfect the title HPDC, its successors, or its assigns; communicate to HPDC, its successors all known facts respecting said Inventions, Applications for Patent, and sign all lawful papers (including, without limitation, divisional applications) relating to said Inventions, Applications for Patent, and generally to do everything possible to aid HPDC, its successors, its amaintain, and enforce, for its or their own benefit, proper intellectual pland Patents, provided the expenses which may be incurred by me in its successors, its assigns, its nominees, or its legal representatives.	in said Invertessors, its as nd Patents; the applications of Patents; are ussigns, its no roperty protes	ntions, Applications in signs, its nominees, estify in any legal or , continuation applic and make all rightful of cominees, and its lega ction for said invention	for Patent, and Patents, to or its legal representatives administrative proceedings cations, CIPs, and reissue paths and declarations and al representatives to obtain ons. Applications for Patent
IN WITNESS WHEREOF, I hereunto set my hand and seal:			٠
Thicheel and the	24	Septemb Month	zer 2018
Inventor's Signature	Day	Month	Year
Michael Cumble Given (First and Middle) Name(s) Family Name			
and the second s			

Rev 8/2018 (HPDC Assignment)

PATENT

REEL: 054630 FRAME: 0511

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

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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 Houston, 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):

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of said Applications for Patent or said Patents.

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 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, regional-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

i HEREBY represent that I convey my full rights in all countries and regions and under all international agreements to the entire right, title, and interest herein assigned and transferred, and that I have not executed and will not execute any agreement in conflict herewith;

AND I HEREBY authorize HPDC, its successors, its assigns, its nominees, and its legal representatives to file said Applications for Patent in its name or in my name in any country or region or under any international agreement, and further authorize HPDC, its successors, its assigns, its nominees, and its legal representatives to insert the filing date, application number, and patent office of said application for patent, now identified by the Record ID and title set forth above, when known to them;

AND'I HEREBY authorize and request the officials of all countries and regions and under all international agreements whose duty it is to issue patents, to issue to HPDC, its successors, or its assigns, as assigned of my entire right, title, and interest, said Patents, in accordance with the terms of this assignment and transfer;

AND I HEREBY covenant and agree that I 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 in said inventions, Applications for Patent, and Patents, to HPDC, its successors, or its assigns; communicate to HPDC, its successors, its assigns, its nominees, or its legal representatives, all known facts respecting said Inventions, Applications for Patent, and Patents; testify in any legal or administrative proceedings and sign all lawful papers (including, without limitation, divisional applications, continuation applications, CIPs, and reissue applications) relating to said inventions, Applications for Patent, and Patents; and make all rightful oaths and declarations and generally to do everything possible to aid HPDC, its successors, its assigns, its nominees, and its legal representatives to obtain, maintain, and enforce, for its or their own benefit, proper intellectual property protection for said Inventions, Applications for Patent, and Patents, provided the expenses which may be incurred by me in lending such cooperation and assistance are paid by HPDC, its successors, its assigns, its nominees, or its legal representatives.

IN WITNESS WHEREOF, I hereunto set my hand and seal:

Inventor's Signature Day

Chien-Hua Chen

Given (First and Middle) Name(s) Family Name

Rev 8/2018 (HPDC Assignment)

PATENT

REEL: 054630 FRAME: 0512