506992592 11/23/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7039431

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
VITALY PORTNOY	08/26/2019
MICHEL ASSENHEIMER	08/26/2019
NAILSON BOAZ COSTA LEITE	08/26/2019
BRIAN SCHMITZ TANI	08/26/2019

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:	17613649

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:	86093042
NAME OF SUBMITTER:	CARRIE A. MILANO
SIGNATURE:	/Carrie A. Milano/
DATE SIGNED:	11/23/2021

Total Attachments: 4

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PATENT 506992592 REEL: 058194 FRAME: 0629

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PATENT REEL: 058194 FRAME: 0630 HP Inc. 3390 E. Harmony Road Mail Stop 35 Fort Collins, Colorado 80528 PATENT APPLICATION

RECORD ID: 85780135

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):

	VICE PARAMETER CONTRO LE ITEM LIFESPAN	DL USING MACHINE	LEARNING MODEL, IN ORDER	TO MAXIMIZE	
Filing Date:	September 6, 2019	_ Application No.:	PCT/US2019/049940	Patent Office: US	
ierein "patent" i Jesign rights, a	refers to any form of intellectual and utility model rights) (herein	property protection inc after "Inventions"); any	d discoveries, set forth in said applied discoveries, set forth in said applied uding, without limitation, invention and future applied line to the set of	rights, utility patent righ cations for patent of a	nts, any

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 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 assignee 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 WHE	REOF, I hereunto set my hand and seal:			
M.A.	-AA	26	08	2019
Inventor's Signature	7 / /	Day	Month	Year
Michel Assenheimer	\checkmark			
Given (First and Middle) N	lame(s) Family Name			

Rev 8/2018 (HPDC Assignment)

PATENT APPLICATION

RECORD ID: 85780135

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):

PRINTING DEVICE PARAMETER CONTROL USING MACHINE LEARNING MODEL, IN ORDER TO MAXIMIZE REPLACEABLE ITEM LIFESPAN

Filing Date: September 6, 2019 Application No.: PCT/US2019/049940 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

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, regional-phase applications 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.

! 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 assignee 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 he	ereunto set my hand and	l seal:		
V.P.		26	08	2019
Inventor's Signature		Day	Month	Year
Vitaly Portnoy	V			
Given (First and Middle) Name(s)	Family Name			

Rev 8/2018 (HPDC Assignment)

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

RECORD	ID:	85780135

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 ile, es

and interest,	arcading a	ce of business in Spri all rights of priority, in atent is in another land	ng, Texas, (hereinafter *l-	IPDO") its si	iccessors, and its	assigns, my entire right, title, language title in parentheses
PRINTING I	DEVICE F	PARAMETER CONT M LIFESPAN	ROL USING MACHINE	LEARNING	MODEL, IN OR	
Filing Date:	Septen	nber 6, 2019	Application No.:	PCT/US201	9/049940	Patent Office: US
design rights country or reg patent, any a said inventio indirectly dai of, divisional application for on or as a re	in release to and utility gion or un und all app ans, any a ms priority application patent for patent of sail	o any form of intellective ty model rights) (here der any international dications for patent dil and all applications for or benefit, and any any of said Inventional of said Inventional of said Inventional of the said Inventional of said Inventio	ual property protection ince einafter "Inventions"); an; agreement for any of saic rectly or indirectly claiming patent from which any and all continuation applical applications of, regional, ons) (hereinafter "Applicate"	luding, without and all exit an	ut limitation, inven sting and future a including, without or benefit of any all or patent for any ntinuation-in-part a cations of, renewal	application for patent (as used tion rights, utility patent rights, applications for patent of any limitation, said application for polication for patent for any of of said Inventions directly or applications (hereinafter CIPs) als of, and substitutes for any patents which may be granted examinations, and extensions
I HEREI entire right, ti conflict herev	ide, and in	ent that I convey my terest herein assigned	full rights in all countries d and transferred, and tha	and regions It I have not e	and under all intexecuted and will i	ternational agreements to the not execute any agreement in
authorize HF	DC, its s	uccessors, its assign	y name in any country o	region or u	inder any internat	representatives to file said tional agreement, and further rt the filing date, epplication t forth above, when known to
adily it to to t	ssuo paici	its, to issue to the DC	the officials of all countrie , its successors, or its as assignment and transfer;	200 20 20012	s and under all intri ignee of my entire	emational agreements whose a right, title, and interest, said
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 WITH	NESS WH	EREOF, I hereunto se	et my hand and seal:			
Noutro Inventor's Sig	n Bon	Loty freit		26 Day	O S	2019
Nailson Boa	************			υαγ	Month	Year *
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Rev 8/2018 (HPDC Assignment)

PATENT	APPLICAT	ION

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

RECORD	ID:	85780	135

ASSIGNMENT OF PATENT APPLICATION

transfer and he having its prince and interest, in-	reby assign and transfer to I ipal place of business in Sp	HEWLETT-PACKARD DE\ ring, Texas, (hereinafter "F n, to, and under an applica	/ELOPMEN IPDC"}, its s	T COMPANY, L.P. uccessors, and its	vledged, agree to assign and , a Texas Limited Partnership assigns, my entire right, title, language title in parentheses
PRINTING DE	EVICE PARAMETER CON LE ITEM LIFESPAN	TROL USING MACHINE	LEARNING	MODEL, IN OR	DER TO MAXIMIZE
Filing Date:	September 6, 2019	Application No.:	PCT/US2	019/049940	Patent Office: US
herein "patent" design rights, country or regin patent, any and said inventions indirectly claim of, divisional a application for on or as a resi	refers to any form of intellect and utility model rights) (he on or under any international of all applications for patent of all applications of applications of s priority or benefit, and any pplications of, national-phas patent for any of said Invent	stual property protection incoreinafter "Inventions"); any all agreement for any of said directly or indirectly claiming for patent from which any and all continuation applications) (hereinafter "Applications) (hereinafter "Patents")	luding, without and all extended in the control of	but limitation, inven- isting and future a (including, without or benefit of any ap- for patent for any intinuation-in-part a cations of, renews ent'): any and all to	application for patent (as used tion rights, utility patent rights, applications for patent of any limitation, said application for oplication for patent for any of of said Inventions directly or applications (hereinafter CIPs) als of, and substitutes for any latents which may be granted examinations, and extensions
I HEREBY entire right, title conflict herewit	e, and interest herein assign	y full rights in all countries ad and transferred, and tha	and regions of I have not	s and under all int executed and will a	ernational agreements to the not execute any agreement in
Applications for authorize HPC	or Patent in its name or in in IC, its successors, its assignment	my name in any country ogns, its nominees, and its	r region or : legal repre	under any internat sentatives to inse	representatives to file said ional agreement, and further if the filing date, application t forth above, when known to
duty it is to iss	REBY authorize and reques ue patents, to issue to HPD ordance with the terms of thi	C, its successors, or its as	s and region signs, as as	s and under all int signee of my entire	ernational agreements whose a right, title, and interest, said
such papers a HPDC, its such all known facts and sign all is applications) in generally to do maintain, and a and Patents, p	is may be necessary or decessors, or its assigns; common respecting said Inventions, awful papers (including, will elating to said Inventions. As everything possible to aid its anforce, for its or their own be	sirable to perfect the liftle inunicate to HPDC, its succeasing the succeasing th	in said Invertessors, its as ad Patents; the applications applications Patents; are assigns, its no operty prote	ntions. Applications signs, its nomines estify in any legal , continuation app and make all rightful ominees, and its lection for said inver-	delay, execute and deliver all s for Patent, and Patents, to s. or its legal representatives, or administrative proceedings plications, CIPs, and reissue all oaths and declarations and regal representatives to obtain, tions, Applications for Patent, assistance are paid by HPDC,
in withe	ESS WHEREOF, I hereunto	set my hand and seal:	4 ,		
			<u>d6</u>	August	2019
Inventor's Sign Brian Schmitt Given (First and	c Tani	/ Name	Day	- MOURE	Year

Rev 8/2016 (HPDC Assignment)