506657364 05/11/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6704176

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MASON GUNYUZLU	04/30/2019
VALIUDDIN ALI	04/29/2019
ROBERT CRAIG	04/30/2019
TEVIN RICHARDS	04/30/2019
RICHARD BRAMLEY	04/29/2019
ENDRIGO NADIN PINHEIRO	04/30/2019

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:	17293015

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 ipa.mail@hp.com Email:

HP INC. **Correspondent Name:**

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

ATTORNEY DOCKET NUMBER:	86015920
NAME OF SUBMITTER:	CARRIE A. MILANO
SIGNATURE:	/Carrie A. Milano/
DATE SIGNED:	05/11/2021

Total Attachments: 6

PATENT REEL: 056206 FRAME: 0428

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PATENT REEL: 056206 FRAME: 0429

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RECORD	ID:	85700263

ASSIGNMENT OF PATENT APPLICATION

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

and interest, inc	ereby assign and transfer to hipal place of business in Spr cluding all rights of priority, in on for patent is in another lan	IEWLETT-PACKARD DE\ ing, Texas, (hereinafter "H i, to, and under an applicat	ELOPMEI	NT COMPANY, L.P., a successors and its as	sions my entire right title
SYSTEM MAN	NAGEMENT MEMORY CO	HERENCY DETECTION			
Filing Date: _	April 30, 2019	Application No.:	PCT/U	JS2019/029928	Patent Office: US
design rights, a country or regio patent, any and said Inventions, indirectly claims of, divisional apapplication for pon or as a result	ter, including any and all inverse refers to any form of intellect and utility model rights) (here on or under any international all applications for patent display and all applications for priority or benefit, and any applications of, national-phase patent for any of said Inventions for Pations for Patent or said Patent	ual property protection incleinafter "Inventions"); any agreement for any of said rectly or indirectly claiming patent from which any and all continuation applicate applications of, regionalons) (hereinafter "Applicationt (hereinafter "Patents")	uding, with and all end all end all end all end all end application ations of, contact applications for Paragraph and for Paragraph and all end end all end	nout limitation, invention existing and future apply including, without line or benefit of any apply for patent for any of continuation-in-part apply lications of, renewals fent"); any and all pate fent"); any and all pate fent"); any and all pate	n rights, utility patent rights blications for patent of any nitation, said application fo ication for patent for any o said Inventions directly o blications (hereinafter CIPs of, and substitutes for any parts which may be greated.
I HEREBY entire right, title, conflict herewith	represent that I convey my , and interest herein assigned;	full rights in all countries d and transferred, and tha	and region	ns and under all interr t executed and will not	national agreements to the execute any agreement in
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Rev 8/2018 (HPDC Assignment)

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ASSIGNMENT OF PATENT APPLICATION

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SYSTEM MA	NAGEMENT MEMORY CO	HERENCY DETECTION	8		
Filing Date:	April 30, 2019	Application No.:	PCT/US2	019/029928	Patent Office: US;
herein "patent" design rights, a country or regir patent, any and said inventions indirectly claims of, divisional a application for on or as a resu	iter, including any and all invirefers to any form of intellect and utility model rights) (he on or under any international d all applications for patent d s, any and all applications fo s priority or benefit, and any pplications of, national-phase patent for any of said Invent ult of said Applications for Pations for Patent	tual property protection inc reinafter "Inventions"); an I agreement for any of said lirectly or indirectly claimin or patent from which any and all continuation applic e applications of, regional ions) (hereinafter "Applica stent (hereinafter "Patents"	luding, without y and all exist i Inventions (ir g priority to or application for ations of, cont -phase applications for Paten	limitation, inventi- ing and future ap- icluding, without li- benefit of any ap- patent for any of inuation-in-part ap- itions of, renewalt t"); any and all pa	on rights, utility patent rights, optications for patent of any imitation, said application for plication for patent for any of if said Inventions directly or optications (hereinafter CIPs) s of, and substitutes for any stents which may be granted
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IN WITHE	ESS WHEREOF, I hereunto s	set my hand and seal:			
	the .	·	29	04	2019
Inventor's Sign	lature		Day	Month	Year
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Rev 8/2016 (HPDC Assignment)

RECORD	ID:	85700263

ASSIGNMENT OF PATENT APPLICATION

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SYSTEM MAN	NAGEMENT MEMORY COHER				
Filing Date: _	April 30, 2019	_ Application No.:	PCT/US	2019/029928	Patent Office: US
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IN WITNE	SS WHEREOF, I hereunto set m	y hand and seal:			
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Inventor's Signa	ature		Day	Month	Year
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Given (First and	l Middle) Name(s) Family Nam	ie			

Rev 8/2018 (HPDC Assignment)

RECORD ID: 85700263

ASSIGNMENT OF PATENT APPLICATION

I the undersigned for good and valuable consideration, the receipt of which is hereby acknowledged, an qi le,

transfer and her having its princi and interest, inc	reby assign and transfer to HEV pal place of business in Spring cluding all rights of priority, in, to prior patent is in another languate.	VLETT-PACKARD DEV , Texas, (hereinafter "H , and under an applicat	ELOPMEN PDC"), its s	T COMPANY, L.P., a nuccessors, and its ass	Texas Limited Partnership signs, my entire right, title,					
SYSTEM MAN	AGEMENT MEMORY COHE	RENCY DETECTION								
Filing Date: _	April 30, 2019	Application No.: _	PCT/U	S2019/029928	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, 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 of said Applications for Patent or said Patents.										
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IN WITNES	SS WHEREOF, I hereunto set n	ny hand and seal:								
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Inventor's Signa	ture		Day	Month	Year					
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Rev 8/2018 (HPDC Assignment)

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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):

SYSTEM MANAGEMENT MEMORY COHERENCY DETECTION
Filing Date: April 30, 2019 Application No.: PCT/US2019/029928 tent Office: US

the subject metter, 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 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—n-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, reexeminations, 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 sutherize 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 HERESY 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 caths 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.

Rev \$2018 (HPDC Assignment)

RECORD	ID:	85700263	

ASSIGNMENT OF PATENT APPLICATION

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

the subject matter, including any and all inventions, improvements, and discoveries, set forth in said application for patent (as herein "patent" refers to any form of intellectual property protection including, without limitation, invention rights, utility patent right design rights, and utility model rights) (hereinafter "Inventions"); any and all existing and future applications for patent of country or region or under any international agreement for any or said inventions (including, without limitation, said application of country or region or under any international agreement for any or said inventions (including, without limitation, said application of country or region or under any international agreement for any of said inventions (including, without limitation, said application of patent for any applications for patent for any application for patent for any applications for patent for any said inventions of regional-phase applications of, continuation-in-part applications (hereinafter 'double application for patent for any of said inventions) (hereinafter "Applications for Patent for any of said inventions) (hereinafter "Patents"); and any and all patents which may be gra or or as a result of said Applications for Patent (hereinafter "Patents"); and any and all relisaues, reexaminations, and extens 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 of said applications for Patent in its name or in my name in any country or region or under any international agreements to entire right, title, and interest herein assigned and transferred, and that I have not executed and will not execute any agreement conflict herewith; AND I HEREBY authorize HPDC, its successors, its assigns, its nominees, and its legal representatives to file Applications for Patent in its name or in my name in any country or region or under any international agreements which them; it is a successors, its assigns, and its	transfer and hereby assign and transfer to HEV having its principal place of business in Spring, and interest, including all rights of priority, in, to, if said application for patent is in another language.	VLETT-PACKARD DE\ Texas, (hereinafter "F , and under an applica	/ELOPMEN IPDC"), its s	IT COMPANY, L.P., a successors, and its as	sians, my entire right, title	p e.
the subject matter, including any and all inventions, improvements, and discoveries, set forth in said application for patent (as herein "patent" refers to any form of intellectual property protection including, without limitation, invention rights, utility patent in design rights, and utility model rights) (hereinafter "inventions"; any and all existing and future applications for patent of country or region or under any international agreement for any of said Inventions (including, without limitation, said applications for patent directly or indirectly claiming priority to or benefit of any application for patent for a said inventions, any and all applications for patent from which any application for patent for any said inventions or patent for any application for patent for any said inventions of regional-phase applications of, continuation-in-part applications for indirectly claiming priority or benefit, and any and all continuation applications of, continuation-in-part applications (freeinafter "of, divisional applications of, national-phase applications of, regional-phase applications of, remeals of, and substitutes for application for patent for any of said Inventions) (hereinafter "Patents"); and any and all patents which may be gra or or as a result of said Applications for Patent (hereinafter "Patents"); and any and all reissues, reexaminations, and extens 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 entire right, title, and interest herein assigned and transferred, and that I have not executed and will not execute any agreeme conflict herewith; AND I HEREBY authorize HPDC, its successors, its assigns, its nominees, and its legal representatives to file Applications for Patent in its name or in my name in any country or region or under any international agreements who duty it is to issue patents, to issue to HPDC, its successors, or its assigns, as assignee of my entire right,	SYSTEM MANAGEMENT MEMORY COHE	RENCY DETECTION	l			
inerein 'patent' refers to any form of intellectual property protection including, without limitation, invention rights, utility patent in design rights, and utility model rights) (hereinafter "inventions"; any and all existing and future applications for patent of country or region or under any international agreement for any of said Inventions (including, without limitation, said application patent, any and all applications for patent directly or indirectly claiming priority to or benefit of any application for patent for any asid Inventions, any and all applications for patent from which any application for patent for any of said Inventions direct indirectly claims priority or benefit, and any and all continuation applications of, continuation-in-part applications (hereinafter of, divisional applications of, national-phase applications of, regional-phase applications of, and substitutes for application for patent for any of said Inventions) (hereinafter "Applications for Patent for any of said Inventions) (hereinafter "Patents"); and any and all patents which may be grain or as a result of said Applications for Patent (hereinafter "Patents"); and any and all reissues, reexaminations, and extens 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 entire right, title, and interest herein assigned and transferred, and that I have not executed and will not execute any agreeme conflict herewith; AND I HEREBY authorize HPDC, its successors, its assigns, its nominees, and its legal representatives to file Applications for Patent in its name or in my name in any country or region or under any international agreement, and fur authorize HPDC, its successors, its assigns, and its legal representatives to insert the filing date, applice number, and patent office of said application for patent, now identified by the Record ID and title set forth above, when know them; AND I HEREBY authorize and request t	Filing Date: April 30, 2019	_ Application No.:	PCT/U	S2019/029928	Patent Office: US	_;
entire right, title, and interest herein assigned and transferred, and that I have not executed and will not execute any agreeme conflict herewith; AND I HEREBY authorize HPDC, its successors, its assigns, its nominees, and its legal representatives to file Applications for Patent in its name or in my name in any country or region or under any international agreement, and fur 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 know them; AND I HEREBY authorize and request the officials of all countries and regions and under all international agreements who that it is to issue patents, to issue to HPDC, its successors, or its assigns, as assignee of my entire right, title, and interest, and transfer; AND I HEREBY covenant and agree that I will, each time a request is made, and without undue delay, execute and delive such papers as may be necessary or desirable to perfect the title in said Inventions, Applications for Patent, and Patents HPDC, its successors, or its assigns; communicate to HPDC, its successors, its assigns, its nominees, or its legal representatival lknown facts respecting said Inventions, Applications for Patent, and Patents; testify in any legal or administrative proceeding and sign all lawful papers (including, without limitation, divisional applications, continuation applications, CIPs, and reis applications) relating to said Inventions, Applications for Patent, and Patents; and make all rightful oaths and declarations generally to do everything possible to aid HPDC, its successors, its assigns, its nominees, and its legal representatives to obtain any patents, provided the expenses which may be incurred by me in lending such cooperation and assistance are paid by HPI its successors, its assigns, its nominees, or its legal representatives. IN WITNESS WHEREOF, I hereunto set my hand and seal: I	herein "patent" refers to any form of intellectual patents, and utility model rights) (hereing country or region or under any international agreement, any and all applications for patent direct said Inventions, any and all applications for patent direct said Inventions, any and all applications for patent of, divisional applications of, national-phase ap application for patent for any of said Inventions) on or as a result of said Applications for Patent	property protection inc after "Inventions"); any eement for any of said tly or indirectly claiming atent from which any all continuation applic eplications of, regional- () (hereinafter "Applicat	luding, without all exit and all exit Inventions go priority to application ations of, couphase applions for Pations for Pations	out limitation, invention kisting and future app (including, without lin or benefit of any appl for patent for any of ontinuation-in-part app ications of, renewals ent"); any and all pate	n rights, utility patent right blications for patent of an nitation, said application for ication for patent for any said Inventions directly blications (hereinafter CIPs of, and substitutes for an ents which may be grante	s, or of or or
Applications for Patent in its name or in my name in any country or region or under any international agreement, and fur 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 know them; AND I HEREBY authorize and request the officials of all countries and regions and under all international agreements who duty it is to issue patents, to issue to HPDC, its successors, or its assigns, as assignee of my entire right, title, and interest, and 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 delive such papers as may be necessary or desirable to perfect the title in said Inventions, Applications for Patent, and Patents HPDC, its successors, or its assigns; communicate to HPDC, its successors, its assigns, its nominees, or its legal representatival known facts respecting said Inventions, Applications for Patent, and Patents; testify in any legal or administrative proceeding and sign all lawful papers (including, without limitation, divisional applications, continuation applications, CIPs, and reis applications to said Inventions, Applications for Patent, and Patents; and make all rightful oaths and declarations generally to do everything possible to aid HPDC, its successors, its assigns, its nominees, and its legal representatives to obtain and Patents, provided the expenses which may be incurred by me in lending such cooperation and assistance are paid by HP its successors, its assigns, its nominees, or its legal representatives. IN WITNESS WHEREOF, I hereunto set my hand and seal: IN WITNESS WHEREOF, I hereunto set my hand and seal:	entire right, title, and interest herein assigned an	rights in all countries nd transferred, and tha	and region t I have not	s and under all interr executed and will not	national agreements to the execute any agreement in	e
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Rev 8/2018 (HPDC Assignment)

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