507444335 08/17/2022

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7491224

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JAMES MICHAEL GARDNER	04/23/2019
SCOTT A. LINN	04/23/2019
STEPHEN D. PANSHIN	04/23/2019
JEFFERSON P. WARD	07/27/2020
DAVID OWEN ROETHIG	04/24/2019
DAVID N. OLSEN	04/23/2019
ANTHONY D. STUDER	04/24/2019
MICHAEL W. CUMBIE	04/24/2019
SIRENA CHI LU	04/24/2019

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:	17864662

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.

using a lax number, ii provided; ii that is unsuccessiul, it will be sent via 05 mail.

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

Correspondent Name: HP INC.

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

ATTORNEY DOCKET NUMBER: 86164006

NAME OF SUBMITTER: HEATHER MULKEY

PATENT 507444335 REEL: 060837 FRAME: 0009

SIGNATURE:	/Heather Mulkey/
DATE SIGNED:	08/17/2022
Total Attachments: 9	
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source=85721522 Assignment#page7.ti	f
source=85721522 Assignment#page8.ti	f
source=85721522 Assignment#page9.ti	f

PATENT REEL: 060837 FRAME: 0010

PATENT APPLICATION

RECORD ID: 85/21522

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):

Filing Date:	April 5, 2019	Application No.:	PCT/US19/26145	Patent Office: US ;
herein "patent design rights,	t" refers to any form of intellectua , and utility model rights) (here	al property protection inc inafter "Inventions"); an	luding, without limitation, y and all existing and fu	said application for patent (as used invention rights, utility patent rights, uture applications for patent of any
patent, any ar	nd all applications for patent dire	ectly or indirectly claimin	g priority to or benefit of	vithout limitation, said application for any application for patent for any of or any of said Inventions directly or
indirectly clair	ns priority or benefit, and any ar	nd all continuation applic	ations of, continuation-in	-part applications (hereinafter CIPs) enewals of, and substitutes for any

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;

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

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.

LOGIC CIRCUITRY

of said Applications for Patent or said Patents.

PATENT APPLICATION

RECORD	ID:	85721522	

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Filing Date: April 5, 2019	Application No	.: PCT/US19/26145	Patent Office: 1	US	,
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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 WITNESS WHEREOF, I hereunto set my hand and seal:

Inventor's Signature

Given (First and Middle) Name(s)

LINN Family Name Day Month

20/9

Scott A.

RECORD	ID:	85721522	

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 es

and interest, i	ncipal place of busine ncluding all rights of p tion for patent is in an	ss in Spring, Texas, (hereinafter "H priority, in, to, and under an applica other language):	IPDC"), its s	uccessors, and its as	ssigns, my entire right, title, nguage title in parentheses
LOGIC CIRC	CUITRY				
Filing Date:	April 5, 2019	Application No.:	PCT/US19/2	26145	Patent Office: US;
herein "patent design rights, country or reg patent, any ar said Inventior indirectly claim of, divisional a application for on or as a res	" refers to any form of and utility model rig ion or under any inte and all applications for as, any and all applic as priority or benefit, applications of, nation patent for any of sai	d all inventions, improvements, an intellectual property protection inchts) (hereinafter "Inventions"); an mational agreement for any of said patent directly or indirectly claimin ations for patent from which any and any and all continuation applicated all-phase applications of, regional d Inventions) (hereinafter "Applications for Patent (hereinafter "Patents" id Patents.	luding, withoy and all exit inventions griority to capplication dations of, co-phase applicions for Pate	ut limitation, invention isting and future app (including, without lin or benefit of any appl for patent for any of ntinuation-in-part app cations of, renewals ent"); any and all pate	n rights, utility patent rights, plications for patent of any nitation, said application for ication for patent for any of said Inventions directly or plications (hereinafter CIPs) of, and substitutes for any ents which may be granted
I HEREB entire right, titl conflict herew	le, and interest hereir	nvey my full rights in all countries assigned and transferred, and tha	and regions t I have not	s and under all internexecuted and will not	national agreements to the execute any agreement in
Applications for authorize HPI	or Patent in its name DC, its successors, i	PDC, its successors, its assigns or in my name in any country of ts assigns, its nominees, and its pplication for patent, now identifie	r region or i legal repre	under any internation sentatives to insert	nal agreement, and further the filing date, application
duty it is to iss	sue patents, to issue	request the officials of all countrie to HPDC, its successors, or its as ns of this assignment and transfer;	s and region signs, as ass	s and under all interr signee of my entire ri	national agreements whose ght, title, and interest, said
such papers a HPDC, its suc all known fact and sign all l applications) r generally to do maintain, and and Patents, p	as may be necessary cessors, or its assigns are respecting said Inversement of the result of the res	agree that I will, each time a requency or desirable to perfect the title of or desirable to perfect the title of the communicate to HPDC, its successions, Applications for Patent, and to aid HPDC, its successors, its arrown benefit, proper intellectual propers which may be incurred by me in the es, or its legal representatives.	n said Inversessors, its as d Patents; to applications, Patents; an ssigns, its no operty protect	ntions, Applications for estigns, its nominees, a estify in any legal or continuation applicated make all rightful of prinees, and its legal ction for said Invention	or Patent, and Patents, to or its legal representatives, administrative proceedings ations, CIPs, and reissue aths and declarations and I representatives to obtain, ns. Applications for Patent.
IN WITN	ESS WHEREOF, I he	reunto set my hand and seal:			
Stop D.	Pand:		23	April	2019
Inventor's Sign	nature		Day	Month	Year
Stephen D.		PANSHIN			
Given (First an	d Middle) Name(s)	Family Name			

RECORD	ID:	85721522
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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, if said application for patent is in another to	in, to, and under an applica			
LOGIC CIRCUITRY				
Filing Date: April 5, 2019	Application No.:	PCT/US19/2	6145	Patent Office: US
the subject matter, including any and all in herein "patent" refers to any form of intelle design rights, and utility model rights) (he country or region or under any internation patent, any and all applications for patent said Inventions, any and all applications indirectly claims priority or benefit, and any of, divisional applications of, national-pha application for patent for any of said Inveron or as a result of said Applications for For said Applications for Fatent or said Patent.	ctual properly protection inc ereinafter "Inventions"); an al agreement for any of sai directly or indirectly claimin for patent from which any y and all continuation applic se applications of, regional titions) (hereinafter "Applica "atent (hereinafter "Patents	duding, without y and all exist of inventions (g priority to o application for attions of, corrights for Pate tions for Pate	at limitation, inventi- sting and future ap- including, without I r benefit of any ap- or patent for any or tinuation-in-part ap- ations of, renewal nt"); any and all pa	on rights, utility patent rights, oplications for patent of any imitation, said application for plication for patent for any of said Inventions directly or oplications (hereinafter CIPs) is of, and substitutes for any atents which may be granted
I HEREBY represent that I convey nentire right, title, and interest herein assign conflict herewith;				
AND I HEREBY authorize HPDC, Applications for Patent in its name or in authorize HPDC, its successors, its ass number, and patent office of said applicat them;	my name in any country or igns, its nominees, and its	or region or u s legal repres	nder any internation internation in the internation	onal agreement, and further the filing date, application
AND I HEREBY authorize and requer duty it is to issue patents, to issue to HPI Patents, in accordance with the terms of the	DC, its successors, or its as	isigns, as ass		_
AND I HEREBY covenant and agree such papers as may be necessary or de HPDC, its successors, or its assigns; com all known facts respecting said Inventions and sign all lawful papers (including, w applications) relating to said Inventions, a generally to do everything possible to aid maintain, and enforce, for its or their own I and Patents, provided the expenses which its successors, its assigns, its nominees, or	estrable to perfect the title municate to HPDC, its success, Applications for Patent, a sithout limitation, divisional Applications for Patent, and HPDC, its successors, its appending proper intellectual parany be incurred by me in	in said Inventessors, its as nd Patents; te applications, d Patents; an assigns, its no roperty protect.	tions, Applications signs, its nominees stify in any legal o continuation app d make all rightful minees, and its legal stion for said invent	for Patent, and Patents, to s, or its legal representatives, or administrative proceedings lications, CIPs, and reissue oaths and declarations and gal representatives to obtain, tions, Applications for Patent,
IN WITNESS WHEREOF, I hereunto	set my hand and seal:		÷	
Jedderson P. Toland		27	July	2020
Inventor's Signature Jefferson P. WAI	RD Iv Name	Day	Month	Year
Given (First and Middle) Name(s) Fami	CA 1 SERVICE			

RECORD (D:	85721522
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ASSIGNMENT OF PATENT APPLICATION

I, the undersigned, for good and valuable consideration, the rectransfer and hereby assign and transfer to HEWLETT-PACKARD DE having its principal place of business in Spring, Texas, (hereinafter "and interest, including all rights of priority, in, to, and under an application for patent is in another language):	VELOPMENT HPDC"), its s	COMPANY, L.P., uccessors, and its a	a Texas Limited Partnership assigns, my entire right, title,
LOGIC CIRCUITRY			
Filing Date: April 5, 2019 Application No.:	PCT/US19/	26145	Patent Office: US ;
the subject matter, including any and all inventions, improvements, ar herein "patent" refers to any form of intellectual property protection indesign rights, and utility model rights) (hereinafter "Inventions"); ar country or region or under any international agreement for any of said 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 applied, divisional 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 all exited inventions of priority to contact application of cations of, collaphase applications for Pate attons for Pate attacks.	ut limitation, inventi- isting and future as (including, without li- or benefit of any ap- for patent for any of ntinuation-in-part as cations of, renewals ent"); any and all pa	on rights, utility patent rights, oplications for patent of any imitation, said application for plication for patent for any of said Inventions directly or oplications (hereinafter CIPs) is of, and substitutes for any atents which may be granted
I HEREBY represent that I convey my full rights in all countrie entire right, title, and interest herein assigned and transferred, and th conflict herewith;	s and regions at I have not	s and under all inte executed and will n	rnational agreements to the ot execute 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 identifies them;	or region or i s legal repre	under any internations sentatives to insert	onal agreement, and further 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	ssigns, as ass	s and under all inte signee of my entire	rnational agreements whose right, 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 succeall 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 and Patents; to applications of Patents; and assigns, its no roperty protes	ntions, Applications signs, its nominees estify in any legal o , continuation appli d make all rightful ominees, and its legotion for said Inventions.	for Patent, and Patents, to, or its legal representatives, radministrative proceedings ications, CIPs, and reissue oaths and declarations and lal representatives to obtain, ions. Applications for Patent
IN WITNESS WHEREOF, I hereunto set my hand and seal:			
And bu hatby	74	Da. 0	2019
Inventor's Signature	Day	Month	
David Owen ROETHIG	-		
Given (First and Middle) Name(s) Family Name			

PATENT APPLICATION

RECORD ID: 85721522	
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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

naving its prir and interest, i	ncipal place of busin	ansfer to HEWLE ess in Spring, Te priority, in, to, ar	TT-PACKARD DE exas, (hereinafter f nd under an applic	EVELOPMEN 'HPDC"), its	NT COMPANY, L.F. successors, and it	Wiedged, agree to assign and C., a Texas Limited Partnership s assigns, my entire right, title h-language title in parentheses
LOGIC CIRC	CUITRY	٠				
Filing Date:	April 5, 2019		Application No.:	PCT/US19	/26145	Patent Office: US
nerein "patent design rights, country or reg patent, any ar said Inventior indirectly claim of, divisional a application for on or as a res	" refers to any form and utility model r jion or under any int all applications forms, any and all applications forms, any and all applications of, nation r patent for any of s.	of intellectual proights) (hereinafte ernational agreer patent directly dications for patent, and any and allonal-phase applications) (hons for Patent (hons for Patent)	perty protection in er "Inventions"); a ment for any of sa or indirectly claimi nt from which any continuation appli cations of, regiona pereinafter "Applica	cluding, with ny and all e id Inventions ng priority to application cations of, c al-phase app ations for Pa	cout limitation, inversisting and future (including, without or benefit of any a for patent for any continuation-in-part lications of, renew tent"); any and all	application for patent (as used nation rights, utility patent rights applications for patent of any til limitation, said application for application for patent for any or of said Inventions directly of applications (hereinafter CIPs als of, and substitutes for any patents which may be granted eexaminations, and extensions
I HEREB entire right, tit conflict herew	le, and interest here	convey my full rig in assigned and t	ghts in all countrie transferred, and th	es and region at I have no	ns and under all ir t executed and will	nternational agreements to the not execute any agreement in
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HPDC, its suc all known fact and sign all lapplications) r generally to do maintain, and and Patents, p	as may be necessa cessors, or its assig s respecting said In- lawful papers (inclu- relating to said Inve- to everything possible enforce, for its or the	ry or desirable t ns; communicate ventions, Applica iding, without lin ntions, Applicatic e to aid HPDC, it eir own benefit, p es which may be	o perfect the title to HPDC, its succitions for Patent, a nitation, divisional ons for Patent, and its successors, its a roper intellectual princurred by me in	in said Invecessors, its a nd Patents; application d Patents; a assigns, its reporty protes	entions, Application issigns, its nomined testify in any legal s, continuation ap and make all rightforminees, and its lestion for said love	e delay, execute and deliver all as for Patent, and Patents, to es, or its legal representatives, or administrative proceedings plications, CIPs, and reissue ul oaths and declarations and egal representatives to obtain, ntions, Applications for Patent, assistance are paid by HPDC,
IN WITH	ESS WHEREOF, I'M	ereunto set my h	and and seal:			
Pa	NO 1/6			23	4	2014
Inventor's Sign	nature			Day	Month	Year
David N.		OLSEN				
Given (First and	d Middle) Name(s)	Family Name				

LOGIC CIRCUITRY

PAT	TENT	APP	LICA	TION

RECORD	ID:	85721522

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Filing Date: April 5, 2019	Application No.: PCT/US19/26145	Patent Office: US

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

anthon &	to	24	4	19
Inventor's Signature		Day	Month	Year
Anthony D.	STUDER			
Given (First and Middle) Name(s)	Family Name			

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LOGIC CIRCUITRY			
Filing Date: April 5, 2019 Application No.:	PCT/US19/	26145	Patent Office: US
the subject matter, including any and all inventions, improvements, a 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 claimis said Inventions, any and all applications for patent from which any indirectly claims priority or benefit, and any and all continuation applies, divisional 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 Patents.	cluding, without and all exited inventions and priority to a polication of cations of, coal-phase applications for Pate	out limitation, inven- isting and future a (including, without or benefit of any ap- for patent for any ntinuation-in-part a cations of, renewa ent"); any and all p	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 patents which may be granted
I 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 regions at I have not	s and under all int executed and will i	ernational agreements to the not execute 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 identified them;	or region or a	under any internat sentatives to inse	tional agreement, and further
AND I HEREBY authorize and request the officials of all countriduty it is to issue patents, to issue to HPDC, its successors, or its a Patents, in accordance with the terms of this assignment and transfel	ssigns, as ass	s and under all into signee of my entire	ernational agreements whose e right, title, and interest, said
AND I HEREBY covenant and agree that I will, each time a requisuch papers as may be necessary or desirable to perfect the title HPDC, its successors, or its assigns; communicate to HPDC, its succeall known facts respecting said Inventions, Applications for Patent, a and sign all lawful papers (including, without limitation, divisional applications) relating to said Inventions, Applications for Patent, an generally to do everything possible to aid HPDC, its successors, its maintain, and enforce, for its or their own benefit, proper intellectual pand Patents, provided the expenses which may be incurred by me in its successors, its assigns, its nominees, or its legal representatives.	in said Invercessors, its as and Patents; to applications of Patents; an assigns, its no property protect.	ntions, Applications signs, its nominee estify in any legal continuation application ap	s for Patent, and Patents, to s, or its legal representatives, or administrative proceedings blications, CIPs, and reissue I oaths and declarations and gal representatives to obtain, tions. Applications for Patent
IN WITNESS WHEREOF, I hereunto set my hand and seal:	1 4	April	2 014
Inventor's Signature	Day Day	Month	<u>2019</u>
Michael W. CUMBIE	Luy	MOHIII	I.Cai
Given (First and Middle) Name(s) Family Name			

	APPLI	

RECORD	ID:	85721522

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):

LOGIC	CIRCUITRY	
LUCIU	GIRGUHRY	

Filing Date: April 5, 2019	Application No.: PCT/US19/26145	Patent Office: US ;
herein "patent" refers to any form of interesting rights, and utility model rights) country or region or under any internat patent, any and all applications for paterial indirectly claims priority or benefit, and of, divisional applications of, national-p	l inventions, improvements, and discoveries, set forth in sai ellectual property protection including, without limitation, inventional agreement for any of said Inventions (including, without directly or indirectly claiming priority to or benefit of any ns for patent from which any application for patent for arrany and all continuation applications of, continuation-in-patents applications of, regional-phase applications of, renewentions) (hereinafter "Applications for Patent"); any and all	ention rights, utility patent rights, e applications for patent of any out limitation, said application for application for patent for any of ny of said Inventions directly or applications (hereinafter CIPs) wals of, and substitutes for any
on or as a result of said Applications for	or Patent (hereinafter "Patents"); and any and all reissues,	reexaminations, and extensions
of said Applications for Patent or said P	atents.	

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 WHEREOF, I h	ereunto set my hand and s	seal:		
		24	4	2019
Inventor's Signature		Day	Month	Year
Sirena Chi	LU			
Given (First and Middle) Name(s)	Family Name			