506370690 11/24/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT6417446

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
VIJAYKUMAR NAYAK	11/09/2018
YUN DAVID TANG	11/09/2018
ROYA SUSAN AKHAVAIN	11/12/2018
HAO MENG	11/09/2018
BRIAN R. JUNG	11/09/2018

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:	17058347

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

HP INC. **Correspondent Name:**

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

ATTORNEY DOCKET NUMBER: 85958091 NAME OF SUBMITTER: ALISSA A JUNGE **SIGNATURE:** /Alissa A Junge/ **DATE SIGNED:** 11/24/2020

Total Attachments: 5

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PATENT REEL: 054458 FRAME: 0577

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PATENT REEL: 054458 FRAME: 0578

ASSIGNMENT OF PATENT APPLICATION

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

transfer and hereby assign and transfer to HEWLETT-PACKARD L having its principal place of business in Houston, Texas, (hereina title, and interest, including all rights of priority, in, to, and under parentheses if said application for patent is in another language):	ifter "HPDC"),	its successors, and i	ts assigns, my entire right,
MULTIPLE-PATTERN FIDUCIAL FOR HETEROGENEOUS IN	IAGING SEN	SOR SYSTEMS	
Filing Date: 12 Nov 2018 Application No.	.: <u>PCT/U</u>	S2018/060270	Patent Office: US ;
the subject matter, including any and all inventions, improvements, herein "patent" refers to any form of intellectual property protection design rights, and utility model rights) (hereinafter "Inventions"); country or region or under any international agreement for any of spatent, any and all applications for patent directly or indirectly claims aid Inventions, any and all applications for patent from which are indirectly claims priority or benefit, and any and all continuation applicational applications of, national-phase applications of, region application for patent for any of said Inventions) (hereinafter "Applion or as a result of said Applications for Patent (hereinafter "Patent of said Applications for Patent or said Patents.	including, with any and all ex- said Inventions ning priority to ny application olications of, con al-phase applications for Pat	out limitation, invention xisting and future applet (including, without linder or benefit of any applet for patent for any of continuation-in-part applications of, renewals tent"); any and all patent and and all patent and all all all all all all all all all al	n rights, utility patent rights, plications for patent of any mitation, said application for lication for patent for any of said Inventions directly or olications (hereinafter CIPs) of, and substitutes for any ents which may be granted
I HEREBY represent that I convey my full rights in all countrentire right, title, and interest herein assigned and transferred, and conflict herewith;			
AND I HEREBY authorize HPDC, its successors, its assignapplications for Patent in its name or in my name in any country authorize HPDC, its successors, its assigns, its nominees, and number, and patent office of said application for patent, now identithem;	or region or its legal repre	under any internatio esentatives to insert	nal agreement, and further the filing date, application
AND I HEREBY authorize and request the officials of all count duty it is to issue patents, to issue to HPDC, its successors, or its Patents, in accordance with the terms of this assignment and transfer	assigns, as as		
AND I HEREBY covenant and agree that I will, each time a rec such papers as may be necessary or desirable to perfect the titl HPDC, its successors, or its assigns; communicate to HPDC, its su all known facts respecting said Inventions, Applications for Patent, and sign all lawful papers (including, without limitation, division applications) relating to said Inventions, Applications for Patent, a generally to do everything possible to aid HPDC, its successors, its maintain, and enforce, for its or their own benefit, proper intellectual and Patents, provided the expenses which may be incurred by me its successors, its assigns, its nominees, or its legal representatives	e in said Inveccessors, its a and Patents; al applications and Patents; as assigns, its no property protein lending sucl	entions, Applications in ssigns, its nominees, testify in any legal or s, continuation applice and make all rightful or tominees, and its legal ection 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:	09		2018
Inventor's Signature Vijaykumar Nayak	Day	Month	Year
Given (First and Middle) Name(s) Family Name	_		

Rev 8/2018 (HPDC Assignment)

RECORD	ID:	85018	553

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):

having its prir title, and inte	icipal place of bus	iness in Houstor	n, Texas, (hereinafter , in, to, and under a	"HPDC"),	its successors, and it	Texas Limited Partnership s assigns, my entire right, (English-language title in
MULTIPLE-F	PATTERN FIDUC	IAL FOR HETE	ROGENEOUS IMAG	SING SEN	SOR SYSTEMS	
Filing Date:	12 Nov 201	18	Application No.:	PCT/	US2018/060270	Patent Office: US
herein ⁴ patent' design rights, country or reg patent, any an said Invention indirectly claim of, divisional a application for on or as a res	refers to any form and utility model ion or under any ir d all applications f s, any and all app as priority or benefit applications of, nat patent for any of s	of intellectual prights) (hereinaf iternational agreor patent directly blications for patit, and any and a ional-phase appsaid Inventions) ions for Patent (roperty protection incl ter "Inventions"); any ement for any of said or indirectly claiming ent from which any a Ill continuation applica lications of, regional- (hereinafter "Applicati	uding, with and all ex- Inventions priority to application ations of, co ohase app ons for Pa	out limitation, inventior xisting and future app (including, without lim or benefit of any appli for patent for any of ontinuation-in-part app lications of, renewals tent"); any and all pate	lication for patent (as used a rights, utility patent rights, lications for patent of any itation, said application for cation for patent for any of said Inventions directly or lications (hereinafter CIPs) of, and substitutes for any ints which may be granted minations, and extensions
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Applications for authorize HPI	or Patent in its na OC, its successors	me or in my nai s, its assigns, its	me in any country or s nominees, and its	region or legal repr	under any internation esentatives to insert t	presentatives to file said al agreement, and further he filing date, application rth above, when known to
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IN WITH	ESS WHEREOF, I	hereunto set my	hand and seal:			
yr	nho			9	Nov.	2018
Inventor's Sigr	ature		· · · · · · · · · · · · · · · · · · ·	Day	Month	Year
Yun David		Tang				
Given (First and	d Middle) Name(s)	Family Name				

Rev 8/2018 (HPDC Assignment)

RECORD	10:	8501	8553	
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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

having its princip title, and interes	oal place of business in it, including all rights o	to HEWLETT-PACKARD DE\	r "HPDC"), i	its successors, and its	s assigns, my entire right,
MULTIPLE-PA	TTERN FIDUCIAL FO	R HETEROGENEOUS IMA	GING SEN	SOR SYSTEMS	
Filing Date:	12 Nov 2018	Application No.:	PCT/U	S2018/060270	Patent Office: US ;
herein patent redesign rights, ar design rights, ar country or region patent, any and said Inventions, indirectly claims of, divisional appartication for pron or as a result	efers to any form of intend utility model rights) or under any international applications for pater any and all application priority or benefit, and a silications of, national-platent for any of said Invertent for any of said Invertent	inventions, improvements, an ilectual property protection ind (hereinafter "Inventions"); an onal agreement for any of sain int directly or indirectly claimin, is for patent from which any iny and all continuation applications applications (hereinafter "Applications) (hereinafter "Patents" atents.	luding, without all explored and all explored application at longer application at longer applications of, or phase applicans for Pai	out limitation, invention disting and future appli (including, without lim or benefit of any application for patent for any of ontinuation-in-part applications of, renewals ent"); any and all pate	rights, utility patent rights, lications for patent of any litation, said application for cation for patent for any of said inventions directly or lications (hereinafter CIPs) of, and substitutes for any ents which may be granted
	and interest herein ass	my full rights in all countries igned and transferred, and the			
Applications for authorize HPDC	Patent in its name or , its successors, its a	; its successors, its assigns in my name in any country o ssigns, its nominees, and its ation for patent, now identifie	ir region or i legal repri	under any internation esentatives to insert t	al agreement, and further the filing date, application
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IN WITNES	S WHEREOF, I hereur	ito set my hand and seal:	વ ે જ	· •	
	4		12	November	<u>2018</u>
Inventors Signa		Brancousta	Day	Month	Year
Roya Susan Given (First and I		havain mily Name			

Rev 8/3018 (HPDC Assignment)

RECORD	ID:	8501	8553	l

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

title, and interes	nal place of business in H t, including all rights of p aid application for patent is	ouston, Texas, (hereinafter priority, in, to, and under a in another language):	"HPDC"), i n applicatio	its successors, and its on for patent entitled	s assigns, my entire right (English-language title ir
MULTIPLE-PA	TTERN FIDUCIAL FOR	HETEROGENEOUS IMAG	SING SEN	SOR SYSTEMS	
Filing Date: _	12 Nov 2018	Application No.: _	PCT/U	JS2018/060270	Patent Office: US
herein "patent" redesign rights, and country or region patent, any and a said Inventions, indirectly claims of, divisional appropriation for particular of the particular of the particular of the particular of the patents of the pat	Ifers to any form of intellect of utility model rights) (he or under any international all applications for patent of any and all applications for priority or benefit, and any dications of, national-phase tent for any of said Invent	rentions, improvements, and tual property protection includereinafter "Inventions"); any all agreement for any of said directly or indirectly claiming for patent from which any and all continuation applicate applications) (hereinafter "Applications) (hereinafter "Patents") ints.	uding, without and all extending priority to application attions of, cophase applicant for Pations for Pations of Pations for Pations and applicant applicant and applicant appl	out limitation, invention isting and future app (including, without lim or benefit of any applifor patent for any of entinuation-in-part applications of, renewals ent"); any and all pate	rights, utility patent rights lications for patent of an itation, said application for cation for patent for any casid Inventions directly clications (hereinafter CIPs of, and substitutes for an ents which may be granter
I HEREBY rentire right, title, conflict herewith;	represent that I convey mand interest herein assign	y full rights in all countries ed and transferred, and tha	and region I have not	s and under all intern executed and will not	ational agreements to the execute any agreement in
Applications for authorize HPDC	Patent in its name or in r . its successors, its assic	ts successors, its assigns, my name in any country of gns, its nominees, and its on for patent, now identified	region or legal repre	under any internation esentatives to insert t	al agreement, and furthe the filing date, application
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IN WITNES	S WHEREOF, I hereunto	set my hand and seal:			
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Inventor's Signat			Day	Month	үеаг
Hao	Meng				

Rev 8/2018 (HPDC Assignment)

Given (First and Middle) Name(s)

Family Name

RECORD ID:	85018553
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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):

title, and interes	t, including all rig	patent is in another language):			
MULTIPLE-PAT	TTERN FIDUCIA	L FOR HETEROGENEOUS I	MAGING SEI	NSOR SYSTEMS	
Filing Date:	12 Nov 2018	Application No.	D.: <u>PCT/</u>	US2018/060270	Patent Office: US;
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		onvey my full rights in all count n assigned and transferred, and			
Applications for F authorize HPDC,	Patent in its name its successors,	IPDC, its successors, its assigner or in my name in any countries assigns, its nominees, and application for patent, now identify	ry or region o its legal rep	r under any internationa resentatives to insert th	al agreement, and further the filing date, application
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IN WITNESS	S WHEREOF, I he	reunto set my hand and seal:			
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Inventor's Signatu	re/	\$	Day	Month	Year ⁻
Brian R. Given (First and Mi	iddle) Name(s)	Jung Family Name	_		
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Rev 8/2018 (HPDC Assignment)