#### 506302194 10/14/2020

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT6348943

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
STERLING CHAFFINS	10/16/2018
DAVID TUCKER	10/18/2018
KEVIN P. DEKAM	10/16/2018
DAVID C. WOODLOCK	10/16/2018
LEE DOCKSTADER	10/16/2018

### 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:	17047455

### **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:

**Correspondent Name:** HP INC.

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

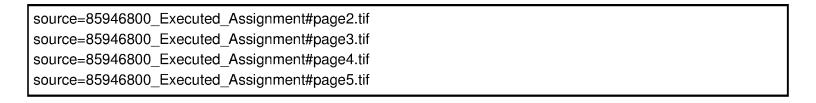
ATTORNEY DOCKET NUMBER:	85946800
NAME OF SUBMITTER:	CARRIE A. MILANO
SIGNATURE:	/Carrie A. Milano/
DATE SIGNED:	10/14/2020

**Total Attachments: 5** 

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**PATENT** REEL: 054048 FRAME: 0632



PATENT REEL: 054048 FRAME: 0633

RECORD	ID:	85006170

## **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):
THREE-DIMENSIONAL PRINTING
Filing Date: October 19, 2018 Application No.: PCT/US2018/056616 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.
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 hereunto set my hand and seal:

Rev 8/2018 (HPDC Assignment)

Given (First and Middle) Name(s)

Family Name

THREE-DIMENSIONAL PRINTING

#### **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)

Filing Date:	October 19, 2018	_ Application No.:	PCT/US2018/056616	Patent Office: US
the subject mai	ter including any and all inventio	ns improvements an	d discoveries, set forth in said app	lication for patent (as 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, 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 WHEREOF, I hereunto set my hand and seal:	18	Och ba	701D
Inventor's Signature	Day	Month	Year
David Tucker			
Given (First and Middle) Name(s) Family Name	-		

Rev 8/2018 (HPDC Assignment)

### **ASSIGNMENT OF PATENT APPLICATION**

I, the undersigned, for good and valuable consideration, the re transfer and hereby assign and transfer to HEWLETT-PACKARD DE having its principal place of business in Houston, Texas, (hereinaftitle, and interest, including all rights of priority, in, to, and under parentheses if said application for patent is in another language):	EVELOPMEN ter "HPDC"),	IT COMPANY, L.P., its successors, and	a Texas Limited Partnership its assigns, my entire right,
THREE-DIMENSIONAL PRINTING			
Filing Date: October 19, 2018 Application No.:	PCT/U	JS2018/056616	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"); a country or region or under any international agreement for any of sa patent, any and all applications for patent directly or indirectly claims said Inventions, any and all applications for patent from which an indirectly claims priority or benefit, and any and all continuation applications of, national-phase applications of, region: application for patent for any of said Inventions) (hereinafter "Applic on or as a result of said Applications for Patent (hereinafter "Patent of said Applications for Patents.	ncluding, withous and all examples and all examples and Inventions ing priority to y application of, coal-phase applications for Pations for Pations	out limitation, inventivisting and future a fincluding, without if or benefit of any aption for patent for any continuation-in-part a lications of, renewal tent"); any and all particular in the particular in th	ion rights, utility patent rights, pplications for patent of any limitation, said application for plication for patent for any or said Inventions directly or pplications (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 the conflict herewith;			
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 in number, and patent office of said application for patent, now identifithem;	or region or its legal repre	under any internati esentatives to inser	ional agreement, and further t the filing date, application
AND I HEREBY authorize and request the officials of all countr duty it is to issue patents, to issue to HPDC, its successors, or its a Patents, in accordance with the terms of this assignment and transfer	assigns, as as	ns and under all inte ssignee of my entire	ernational agreements whose right, title, and interest, said
AND I HEREBY covenant and agree that I will, each time a requisite such papers as may be necessary or desirable to perfect the title. HPDC, its successors, or its assigns; communicate to HPDC, its successor all known facts respecting said Inventions, Applications for Patent, and sign all lawful papers (including, without limitation, divisional applications) relating to said Inventions, Applications for Patent, and generally to do everything possible to aid HPDC, its successors, its maintain, and enforce, for its or their own benefit, proper intellectual and Patents, provided the expenses which may be incurred by me in its successors, its assigns, its nominees, or its legal representatives.	e in said Invecessors, its a and Patents; al applications nd Patents; a assigns, its r property prote n lending such	entions, Applications assigns, its nomineer testify in any legal or s, continuation app and make all rightful nominees, and its le ection for said Inven	is for Patent, and Patents, to s, or its legal representatives or administrative proceedings lications, 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/-	Other	- 2010
Inventor's Signature	<i>IQ</i> Day	Month	Year
Kevin P. DeKam	•		
Given (First and Middle) Name(s) Family Name	-		

Rev 8/2018 (HPDC Assignment)

### **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):
THREE-DIMENSIONAL PRINTING
Filing Date: October 19, 2018 Application No.: PCT/US2018/056616 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.
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;
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IN WITNESS WHEREOF, I hereunto set my hand and seal:
Day Month   Pear   2018   Year   Pear   Pe
David C. Woodlock

Ped Woodle		16	October	2018
Inventor's Signature		Day	Month	Year
David C. Woodlock				
Given (First and Middle) Name(s)	Family Name			

PΔ	TE	JT	ΔP	PI	ICA	TI	ON

RECORD ID:	<u>85006170</u>	
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# **ASSIGNMENT OF PATENT APPLICATION**

I, the undersigned, for good and valuable consideral transfer and hereby assign and transfer to HEWLETT-PA having its principal place of business in Houston, Texastitle, and interest, including all rights of priority, in, to, parentheses if said application for patent is in another land	ACKARD DEV s, (hereinafter and under a	ELOPMENT "HPDC"), its	COMPANY, L.P., a successors, and its	Texas Limited Partnership assigns, my entire right.
THREE-DIMENSIONAL PRINTING  Filing Date: October 19, 2018 Applic	adiam Na	PCT/HS	2018/056616	
	-		······································	Patent Office: <u>US</u> ;
the subject matter, including any and all inventions, improherein "patent" refers to any form of intellectual property patents, and utility model rights) (hereinafter "Invecountry or region or under any international agreement for patent, any and all applications for patent directly or indirectly claims priority or benefit, and any and all continuor, divisional applications of, national-phase applications application for patent for any of said Inventions) (hereination or as a result of said Applications for Patent (hereinations) said Applications for Patents.	protection incluentions"); any or any of said rectly claiming a which any a uation applicas of, regional-pifter "Application"	ading, without and all exist Inventions (in priority to or application for tions of, continues applications for Patel	It limitation, invention sting and future applications; without liming the benefit of any applications of any of attinuation-in-part applications of, renewals ont"); any and all pate	rights, utility patent rights, lications for patent of any itation, said application for cation for patent for any of said Inventions directly or ications (hereinafter CIPs) of, and substitutes for any nts which may be granted
I HEREBY represent that I convey my full rights in entire right, title, and interest herein assigned and transfe conflict herewith;	all countries rred, and that	and regions I have not e	and under all intern executed and will not	ational agreements to the execute any agreement in
AND I HEREBY authorize HPDC, its successors, Applications for Patent in its name or in my name in a authorize HPDC, its successors, its assigns, its nomin number, and patent office of said application for patent, rethem;	ny country or ees, and its	region or u legal repres	nder any internation entatives to insert t	al agreement, and further he filing date, application
AND I HEREBY authorize and request the officials of duty it is to issue patents, to issue to HPDC, its successor Patents, in accordance with the terms of this assignment at	ors, or its assi	and regions gns, as assi	and under all interna gnee of my entire rig	ational agreements whose tht, 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 WITNESS WHEREOF, I hereunto set my hand ar	nd seal:			
Inventor's Signature		// Day	Oct Month	<u>2018</u> Year

Lee Dockstader

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

Rev 8/2018 (HPDC Assignment)

**RECORDED: 10/14/2020**