506663244 05/14/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6710058

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|------------------------|----------------|
| DANIEL JAMES MAGNUSSON | 12/21/2018 |
| ROBERT YRACEBURU | 12/21/2018 |
| TIMOTHY JACOB LUEDEMAN | 12/21/2018 |

RECEIVING PARTY DATA

| Name: | Hewlett-Packard Development Company, L.P. | |
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| Street Address: | 10300 Energy Drive | |
| City: | Spring | |
| State/Country: | TEXAS | |
| Postal Code: | 77389 | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 17294033 |

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 fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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

Correspondent Name: HP INC.

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

| ATTORNEY DOCKET NUMBER: | 86008443 |
|-------------------------|--------------------|
| NAME OF SUBMITTER: | CARRIE A. MILANO |
| SIGNATURE: | /Carrie A. Milano/ |
| DATE SIGNED: | 05/14/2021 |

Total Attachments: 3

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PATENT 506663244 REEL: 056241 FRAME: 0840

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

| RECORD ID:_ | 85058232 |
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| | |

ASSIGNMENT OF PATENT APPLICATION

| transfer and hereby assign and transfer to H having its principal place of business in Ho title, and interest, including all rights of pri parentheses if said application for patent is in | EWLETT-PACKARD DEV uston, Texas, (hereinafter iority, in, to, and under a | ÉLOPMEN' "HPDC"), i | T COMPÁNY, L.P., a ts successors, and it | Texas Limited Partnership s assigns, my entire right, |
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| SIGNALS CONTROLLERS | | | | |
| Filing Date: 21 Dec 2018 | Application No.: _ | PCT/U | S2018/067226 | Patent Office: US |
| the subject matter, including any and all inveherein "patent" refers to any form of intellectudesign rights, and utility model rights) (here country or region or under any international patent, any and all applications for patent disaid Inventions, any and all applications for indirectly claims priority or benefit, and any a of, divisional applications of, national-phase application for patent for any of said Invention or as a result of said Applications for Patent of said Applications for Patent or said Patent | ual property protection incleinafter "Inventions"); any agreement for any of said rectly or indirectly claiming reatent from which any and all continuation applications of, regionalons) (hereinafter "Applicationt (hereinafter "Patents") | uding, withon and all extending and all extending and an invertions of the policy and allows of, complete applications for Paternal and allows for Paternal end | ut limitation, invention isting and future app (including, without limor benefit of any applifor patent for any of ntinuation-in-part app cations 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 |
| I HEREBY represent that I convey my entire right, title, and interest herein assigned conflict herewith; | | | | |
| AND I HEREBY authorize HPDC, its Applications for Patent in its name or in m authorize HPDC, its successors, its assign number, and patent office of said application them; | y name in any country or ns, its nominees, and its | region or legal repre | under any internation sentatives to insert | ial agreement, and further the filing date, application |
| AND I HEREBY authorize and request duty it is to issue patents, to issue to HPDC Patents, in accordance with the terms of this | , its successors, or its ass | | | |
| AND I HEREBY covenant and agree that such papers as may be necessary or desired. HPDC, its successors, or its assigns; commutall known facts respecting said Inventions, A and sign all lawful papers (including, with applications) relating to said Inventions, Ap generally to do everything possible to aid HI maintain, and enforce, for its or their own being and Patents, provided the expenses which no its successors, its assigns, its nominees, or its successors. | rable to perfect the title in unicate to HPDC, its succe applications for Patent, an iout limitation, divisional plications for Patent, and PDC, its successors, its as mefit, proper intellectual proper in the proper intellectual proper in the proper in t | n said Inversesors, its as d Patents; t applications Patents; ar assigns, its no operty prote | ntions, Applications fissigns, its nominees, estify in any legal or continuation application make all rightful oominees, and its legaction for said Inventio | 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 WITNESS WHEREOF, I hereunto se | et my hand and seal: | 21 | 12 | 2018 |
| Inventor's Signature | | Day | Month | Year |
| Daniel James Magnusson Given (First and Middle) Name(s) Family I | Vame | | | |

Rev 8/2018 (HPDC Assignment)

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

| | RECORD ID: | 85058232 |
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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 princ title, and intere | cipal place of business in H | HEWLETT-PACKARD DEV louston, Texas, (hereinafter priority, in, to, and under a in another language): | "HPDC") | its successors, and | its assigns, my entire right |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SIGNALS CO | NTROLLERS | | | | |
| Filing Date: _ | 21 Dec 2018 | Application No.: _ | PCT/U | JS2018/067226 | Patent Office: US |
| herein "patent" r design rights, a country or regio patent, any and said Inventions, indirectly claims of, divisional ap application for p on or as a resul | refers to any form of intellect and utility model rights) (he in or under any international all applications for patent of any and all applications for priority or benefit, and any aplications of, national-phas patent for any of said Invent | rentions, improvements, and tual property protection included in a green after "Inventions"); any all agreement for any of said directly or indirectly claiming for patent from which any a land all continuation applicate applications of, regional-itions) (hereinafter "Patents") its. | uding, with and all e Inventions priority to application tions of, co phase app ons for Pa | nout limitation, invention existing and future apply is (including, without limited or benefit of any apply for patent for any of continuation-in-part apply dications of, renewals atent"); any and all part of the par | on rights, utility patent rights plications for patent of any mitation, said application for patent for any of said Inventions directly of plications (hereinafter CIPs of, and substitutes for any tents which may be granted |
| I HEREBY entire right, title, conflict herewith | and interest herein assigne | y full rights in all countries ed and transferred, and that | and region I have no | ns and under all inter t executed and will no | mational agreements to the it execute any agreement in |
| Applications for authorize HPDC | Patent in its name or in n c, its successors, its assig | s successors, its assigns, my name in any country or ins, its nominees, and its on for patent, now identified | region or legal repr | under any internatio esentatives to insert | nal agreement, and further the filing date, application |
| duty it is to issue | EBY authorize and request e patents, to issue to HPDC rdance with the terms of this | the officials of all countries C, its successors, or its assi s assignment and transfer; | and regio gns, as as | ns and under all inter ssignee of my entire r | national agreements whose ight, title, and interest, said |
| such papers as HPDC, its succe all known facts r and sign all law applications) relations generally to do e maintain, and en and Patents, pro | may be necessary or des ssors, or its assigns; comm respecting said Inventions, vful papers (including, with ating to said Inventions, Ap everything possible to aid H force, for its or their own be | irable to perfect the title in unicate to HPDC, its success Applications for Patent, and nout limitation, divisional applications for Patent, and PDC, its successors, its assenefit, proper intellectual promay be incurred by me in leits legal representatives. | said Invessors, its a Patents; pplications Patents; a signs, its reports | entions, Applications assigns, its nominees, testify in any legal or s, continuation applicand make all rightful of the cominees, and its legal ection for said Inventications. | 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 WITNES | S WHEREOF, I hereunto s | et my hand and seal; | | | |
| Calrest | July n | | ٦ ₁ | Dec | 2019 |
| Inventor's Signat | ture | | Day | Month | Year |
| Robert Yracebu | | | | | |
| Given (First and A | Middle) Name(s) Family I | Name | | | |

Rev 8/2018 (HPDC Assignment)

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

SIGNALS CONTROLLERS

| RECORD ID: | 85058232 |
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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):

| Filing Date: | 21 Dec 2018 | Application No.: | PCT/US2018/067226 | Patent Office: US; |
|-------------------|-------------------------------|-------------------------------|------------------------------------------------------------------------|------------------------------|
| the subject matte | er, including any and all inv | entions, improvements, and | discoveries, set forth in said appuding, without limitation, invention | lication for patent (as used |
| design rights, a | nd utility model rights) (he | ereinafter "Inventions"); any | and all existing and future app | lications for patent of any |

the subject matter, including any and all inventions, improvements, and discoveries, set forth in said application for patent (as used heren "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 tending 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 seat | | | |
|-----------------------------------------------------|-----|-------|------|
| | 2/ | DEC | 2018 |
| Inventor's Signature | Day | Month | Year |
| Timothy Jacob Luedeman | | | |
| Giver (First and Middle) Name(s) Family Name | | | |

Rev. 8/2018 (HPDC Assignment)

PATENT REEL: 056241 FRAME: 0843