PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4002477

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| STERLING CHAFFINS | 01/27/2014 |
| KEVIN P DEKAM | 01/27/2014 |
| CHIEN-HUA CHEN | 01/27/2014 |

RECEIVING PARTY DATA

| Name: Hewlett-Packard Development Company, L.P. | |
|---|---------|
| Street Address: 11445 Compaq Center Drive West | |
| City: | Houston |
| State/Country: | TEXAS |
| Postal Code: | 77070 |

PROPERTY NUMBERS Total: 1

| Property Type | Number | |
|---------------|-----------|--|
| PCT Number: | US1413538 | |

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)715-8443 Email: ipa.mail@hp.com

HP INC. **Correspondent Name:**

Address Line 1: 3390 E. HARMONY ROAD MS 35 Address Line 2: INTELLECTUAL PROPERTY

Address Line 4: FORT COLLINS, COLORADO 80528

| ATTORNEY DOCKET NUMBER: | 84496444 |
|-------------------------|-------------|
| NAME OF SUBMITTER: | KUBAE KIM |
| SIGNATURE: | /Kubae Kim/ |
| DATE SIGNED: | 08/11/2016 |

Total Attachments: 2

source=Assignment84496444#page1.tif source=Assignment84496444#page2.tif

> **PATENT** REEL: 039403 FRAME: 0496 503955821

HEWLETT-PACKARD COMPANY Intellectual Property Administrator 3404 E. Harmony Road Mail Stop 35 Fort Collins, Colorado 80528

| | | | | | ON | |
|--|--|--|--|--|----|--|
| | | | | | | |
| | | | | | | |

| RECORD ID: | 83777260 |
|------------|----------|
|------------|----------|

ASSIGNMENT OF PATENT APPLICATION

I/We, the undersigned (each) have agreed and hereby agree, that for good and valuable consideration, the receipt of which is hereby acknowledged, and in furtherance of my/our obligations to HEWLETT-PACKARD

Rev 1/2013 (Assignment)

| Texas, (hereinaf | fter HPDC), and to its subsidi | Limited Partnership having its aries and affiliates, to assign ar | principal place of business in Houston, nd transfer to HPDC, its successors and to and under an application for Patent |
|---|---|--|--|
| FLUID DIRECTI | NG ASSEMBLY | | |
| Filing Date: | 01-29-2014 | Application No | .:PCT/US2014/013538 |
| divisionals, and | renewals of and substitutes for | or said application for said Pate | ntinuations, continuations-in-part (C-I-P's), ent, and any and all other Patent of any , or reexaminations, or extensions of said |
| by HPDC, its suc Patent respective | ccessors, assigns, nominees o | or legal representatives, to the fur or extended, as fully and entirely | ent in any country, to be held and enjoyed il end of the term or terms for which said as the same would have been held and |
| executed and will time a request is perfect the title to nominees or lega said invention(s) papers, to execu- rightful oaths and and legal represe improvement(s) | I not execute any agreement in made, and without undue dela a said invention(s) or improvemal representatives, and I/we agrie or improvement(s), said applicate all disclaimers and division disclarations, and generally tentatives to obtain and enforce, | n conflict herewith, and I/we furth y, execute and deliver all such patient(s), said application and said ree to communicate to HPDC, or lation and said Patent, to testify in last, continuations, C-I-P's, reiss to do everything possible to aid I for its or their own benefit, prope | est herein assigned, and that I/we have not er covenant and agree that I/we will, each apers as may be necessary or desirable to Patent, to HPDC, its successors, assigns, to its nominee, all known facts respecting in any legal proceedings, to sign all lawful sue and foreign applications, to make all HPDC, its successors, assigns, nominees er patent protection for said invention(s) or be incurred by me/us in lending such |
| applications as a invention(s) or in | foresaid, to issue to HPDC, as | s assignee of the entire right, title | tries whose duty it is to issue patents on e and interest, any and all Patent for said a result of the application aforesaid, in |
| | | | ng date and application number of said s soon as the same shall have been made |
| IN WITNES | S WHEREOF/I/wg/hereunto s | et my/our hand(s) and seal(s): | |
| the | CUI() | Ja | nuary 27, 2014 |
| Inventor's Signatul | fe U | Date | |
| Sterling Chaffins | | | · |
| Inventor's Typed N | lame | AND THE PROPERTY OF THE PROPER | |
| | | and the second | mare. |
| Inventor's Signatur | e | | May 27, 2014 |
| · | | | |
| Kevin P. DeKam Inventor's Typed N | ame | | |
| "" and a choosis | · | | |

Page 1 of 2

HEWLETT-PACKARD COMPANY Intellectual Property Administrator 3404 E. Harmony Road Mail Stop 35

PATENT APPLICATION

| Mail Stop 35 | RECORD ID: | 83777260 |
|------------------------------|-----------------------------|----------|
| Fort Collins, Colorado 80528 | | 14 |
| ASSIGNMEN | FOF PATENT APPLICATION (cor | it.) |
| C 733 | Tom | 27,2014 |
| Inventor's Signature | Date | <u> </u> |
| Chien-Hua Chen | | |
| Inventor's Typed Name | | |
| | | |
| • | | |
| | | |
| Inventor's Signature | Date | |
| | | |
| Inventor's Typed Name | | |
| | | |
| | | |
| ` | | |
| Inventor's Signature | Date | |
| | | |
| Inventor's Typed Name | | |
| | | |
| | | |
| Inventor's Signature | Date | |
| mys)ilor a dignature | Date | |
| Inventor's Typed Name | | |
| antono a Typod Italie | | |
| | • | |
| | | |
| Inventor's Signature | Date | M4-4 |
| inventor a dignature | Daio | |
| Inventor's Typed Name | | |
| пторшель сувам тапты | | |
| | | |
| | | |
| Inventor's Signature | Date | |
| | | |
| Inventor's Typed Name | | |

Page 2 of 2

Rev 1/2013 (Assignment)

RECORDED: 08/11/2016

PATENT REEL: 039403 FRAME: 0498