505300891 01/29/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

EPAS ID: PAT5347669

CONVEYING PARTY DATA

| Name | Execution Date |
|----------------|----------------|
| PRISCILLA LAU | 07/31/2012 |
| MINGXING S. LI | 07/31/2012 |

RECEIVING PARTY DATA

| Name: | VERIZON PATENT AND LICENSING INC. |
|-----------------|-----------------------------------|
| Street Address: | ONE VERIZON WAY |
| City: | BASKING RIDGE |
| State/Country: | NEW JERSEY |
| Postal Code: | 07920 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16260283 |

CORRESPONDENCE DATA

Fax Number: (703)439-2658

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: 571-297-0007
Email: pto@snyderllp.com

Correspondent Name: SNYDER, CLARK, LESCH & CHUNG, LLP

Address Line 1: 205 VAN BUREN STREET

Address Line 2: SUITE 110

Address Line 4: HERNDON, VIRGINIA 20170

ATTORNEY DOCKET NUMBER: 20120254C1

NAME OF SUBMITTER: MEAGAN S. WALLING

SIGNATURE: /Meagan S. Walling, Reg. No. 60,112/

DATE SIGNED: 01/29/2019

Total Attachments: 1

source=20120254_S_Assignment_1_0021_0529#page1.tif

PATENT 505300891 REEL: 048163 FRAME: 0868

9259526910

Verizon Inventorio tysisgerment for Verizon Reference (See 2017/0384

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I/We, the undersigned:

have sold, assigned and transferred, and by the presents do hereby sell, assign, and transfer, to the Verban ergo entity identified below ("Assignee") and its successors and assigns, the entire worldwide right. The are interest in and to any and all improvements which are described in the application for United States in the United States

| USER DEVICE SELECTION |
|---|
| Which has been executed by the undersigned concurrently herewith, and in what this I/we hereby authorize and request the Assignee, its successors, assigns and/or legal representatives insert here in the parentheses (Application Number 13/599.066, filed August 30, 2012) the flare date and application number of said application when known. |
| which was filed on and assigned Application No. |
| and in and to said application, and all divisional, continuing (in whole or in part), substitute, applications reissue, provisional, and all other applications for Letters Patent which have been or shall be filled to the United States and all foreign countries on any of said improvements or based on or claiming priorities as and application; and in and to all original and reissued patents which have been or shall be issued in the lettered States and foreign countries from any of said applications, and in and to all rights of priority resulting from the filing of any of said applications; and in and to all rights which may exist under the International Convention for the Protection of Industrial Property to any of the foregoing; |
| II. agree that said Assignee may apply for and receive Letters Patent for said improvements in its own name and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the understanded will execute all divisional, continuing (in whole or in part), substitute, renewal, reissue, and all other or or applications on any and all said improvements; execute all rightful oaths, declarations, assignments proved of attorney and other papers; communicate to said Assignee, its successors, assigns, and representatives in facts known to undersigned relating to said improvements and the history thereof; and generally deverything possible which said Assignee, its successors, assigns or representatives shall consider destroble for aiding in securing and maintaining proper patent protection for said improvements and for ves and title to said improvements and all applications for Letters Patent and all Letters Patent on said improvements. |
| III. covenant with said Assignee, its successors, assigns and legal representatives that no assignment grant mortgage, license, or other agreement affecting the rights and property herein identified has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed in the undersigned. |
| IN WITNESS to my/our agreement to the foregoing, I/we have executed this Assignment as set forth below |
| Verizon entity (Assignee): Verizon Patent and Licensing Inc., having a place of business at One Verizon War Basking Ridge, New Jersey 07920. |
| ASSIGNOR: Signature: Date: 7/31/20/2 Priscilla Lau Signature: Date: 7/3 / 20/2 |
| Signature: Date: 7/3/128/2 Mingxing S. Li |
| |

PATENT REEL: 048163 FRAME: 0869

RECORDED: 01/29/2019