506485194 02/03/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6531970

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

CONVEYING PARTY DATA

| Name | Execution Date |
|--|----------------|
| VERIZON BUSINESS NETWORK SERVICES INC. | 08/01/2009 |

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 | |
|----------------|---------|--|
| Patent Number: | 8171350 | |

CORRESPONDENCE DATA

Fax Number:

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: 202-920-5397

Email: eddy.valverde@verizon.com

Correspondent Name: VERIZON PATENT MANAGEMENT GROUP

Address Line 1: 1300 | STREET NW

Address Line 2: 5TH FLOOR

Address Line 4: WASHINGTON, D.C. 20005

| ATTORNEY DOCKET NUMBER: | 20070126C1 | | |
|-------------------------|---------------------------------------|--|--|
| NAME OF SUBMITTER: | JOSEPH R. PALMIERI | | |
| SIGNATURE: | /Joseph R. Palmieri, Reg. No. 40,760/ | | |
| DATE SIGNED: | 02/03/2021 | | |

Total Attachments: 6

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PATENT REEL: 055133 FRAME: 0678

ASSIGNMENT

This ASSIGNMENT is effective as of August 1, 2009 between Verizon Business Network Services Inc., a corporation existing under the laws of Delaware and having an office located at 22001 Loudoun County Parkway, Ashburn, Virginia 20147 (hereinafter "ASSIGNOR"), and Verizon Patent and Licensing Inc., a corporation existing under the laws of Delaware and having an office located at One Verizon Way, Basking Ridge, New Jersey 07920 (hereinafter "ASSIGNEE").

WHEREAS, ASSIGNEE is desirous of acquiring ownership of the United States and/or foreign Letters Patent and Applications for Letters Patent identified in Schedule A, as well as any legal equivalents and counterparts thereof in all countries or jurisdictions worldwide (whether listed on Schedule A or not), and the inventions disclosed therein (all hereinafter referred to as the "Patent Assets").

WHEREAS, ASSIGNOR is desirous of granting to ASSIGNEE its ownership of the aforesaid Patent Assets.

NOW, THEREFORE, in consideration of the premises and the mutual covenants set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by ASSIGNOR and ASSIGNEE, and subject to any rights and licenses under the Patent Assets granted to third parties on or before the effective date hereof, ASSIGNOR does hereby assign unto ASSIGNEE (a) all worldwide right, title and interest of ASSIGNOR in and to the Patent Assets (subject, however, to applicable patent laws in the respective countries or jurisdictions issuing such Patent Assets), the right to claim priority therefrom, and in and to all additional Letters Patent worldwide to be obtained from such Patent Assets and from any future applications, continuations, divisions, renewals, extensions, substitutes, reissues or re-examinations which claim priority therefrom, each and all to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the terms for which any such Letters Patent are granted, plus any extensions, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this assignment not been made; and (b) all claims for past and future infringements of said Patent Assets, with the right to sue for and obtain all remedies for such infringements (including past and future damages and equitable relief) for its own use and enjoyment, and for the use and enjoyment of its successors, assigns or other legal representatives.

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ASSIGNOR authorizes and requests the United States Commissioner of Patents and Trademarks (or similar official) to issue any and all United States Letters Patent resulting from the Patent Assets or any divisions, reissues, continuations, renewals, extensions, substitutes or re-examinations thereof to ASSIGNEE as assignee of ASSIGNOR's interest therein.

Verizon Business Network Services Inc.

Ву:

Name:

Title:

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SCHEDULE A

| Docket Number | Ctry | / Appl Num | File Date | |
|---------------|------|------------|-------------|---|
| | | | Minic Date | ApplicationTitle MANAGING MULTIPLE MEDIA CONTENT |
| 20070017 | US | 11694441 | 30-Mar-2007 | SOURCES |
| 20070044 | US | 11693283 | 29-Mar-2007 | INTERCONNECTING MULTIPLE MPLS NETWORKS |
| 20070070 | US | 11694035 | 30-Mar-2007 | SECURITY DEVICE WITH DISPLAY |
| 20070071 | us | 11694037 | 30-Mar-2007 | Security Device Reader |
| 20070086 | us | 11873827 | 17-Oct-2007 | System, Method and Computer-Readable Storage Medium for Calculating Addressing and Bandwith Requirements of a Network |
| 20070087 | US | 11873877 | 17-Oct-2007 | Apparatus, Method and Computer-Readable Storage Medium for Calculating Throughput Requirements of a Network |
| 20070094 | US | 11849034 | 31-Aug-2007 | INSTANT MESSENGER LOCATION BUDDY |
| 20070122 | US | 11769836 | 28-Jun-2007 | Methods and Computer Program Products For Route Determination |
| 20070123 | US | 11769816 | 28-Jun-2007 | Methods and Computer Program Products For Route Determination |
| 20070124 | US | 11943067 | 20-Nov-2007 | Display of End-to-End Physical Layer Signal Flow |
| 20070126 | US | 11772403 | 02-Jul-2007 | METHOD AND SYSTEM FOR PROVIDING AUTOMATIC DISABLING OF NETWORK DEBUGGING |
| 20070129 | US | 11765112 | 19-Jun-2007 | NETWORK CONFIGURATION AND ROUTING |
| 20070134 | US | 11772053 | 29-Jun-2007 | INTELLIGENT NETWORK RESTORATION |
| 20070136 | US | 11769975 | 28-Jun-2007 | Systems and Methods For Verification of IP Device Location |
| 20070146 | US | 11769295 | 27-Jun-2007 | Methods and Systems For Secure Voice- Authenticated Electronic Payment |
| 20070147 | us | 11766383 | 21-Jun-2007 | FLEXIBLE LIFESTYLE PORTABLE COMMUNICATIONS DEVICE |
| 20070177 | US | 11770561 | 28-Jun-2007 | METHOD AND SYSTEM FOR MONITORING AND ANALYZING OF ROUTING IN IP NETWORKS |
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PATENT REEL: 055260 FRANCE: 06815

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| 20070198 | | 11760395 | 08-Jun-2007 | METHOD AND SYSTEM FOR PROVIDING INTELLIGENT CALL REJECTION AND CALL ROLLOVER IN A TELEPHONY NETWORK |
| 20070202 | US | 11760419 | 08-Jun-2007 | METHOD AND SYSTEM FOR PROVIDING INTELLIGENT CALL REJECTION AND CALL ROLLOVER IN A DATA NETWORK |
| 20070207 | US | 12016260 | 18-Jan-2008 | Method and System for SMS/MMS Messaging to a Connected Device |
| 20070208 | HK | 09105292.5 | 23-Jun-2008 | Path Testing and Switching |
| 20070208 | CN | 200810128689.0 | 23-Jun-2008 | Path Testing and Switching |
| 20070208 | ບຣ | 11862418 | 27-Sep-2007 | Path Testing and Switching |
| 20070209 | wo | US08081304 | 27-Oct-2008 | Methods and Systems for Providing Efficient Provisioning of Data Flows |
| 20070209 | US | 11925246 | 26-Oct-2007 | Methods and Systems for Providing Efficient Provisioning of Data Flows |
| 20070210 | US | 11960240 | 19-Dec-2007 | Dynamic Radius |
| 20070211 | us | 11959025 | 18-Dec-2007 | Dynamic Authentication Gateway |
| 20070227 | US | 12055410 | 26-Mar-2008 | Outage Analysis System |
| 20070251 | US | 11935066 | 05-Nov-2007 | Data Structure Versioning for Data Management Systems and Methods |
| 20070295 | US | 11862659 | 27-Sep-2007 | Systems and Methods for Providing Multiple Simultaneous Calls From the Same Prepaid Account |
| 20070301 | us | 11957692 | 17-Dec-2007 | Grammer Weighting Voice Recognition Information |
| 20070310 | wo | US08084716 | 25-Nov-2008 | System and Method for Dual-Mode Handoff |
| 20070310 | US | 11960358 | 19-Dec-2007 | System and Method for Dual-Mode Handoff |
| 20070328 | US | 11965173 | 27-Dec-2007 Page 4 o | Method and System for Keying and Securely Storing Data |

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| 20070329 | US | 11965373 | 27-Dec-2007 | Method and System for Providing Centralized Data Field Encryption, and Distributed Storage and Retrieval |
| 20070336 | US | 11933700 | 01-Nov-2007 | Data Migration |
| 20070337 | US | 11965449 | 27-Dec-2007 | Method and System for Providing Data Field Encryption and Storage |
| 20070380 | US | 11964616 | 26-Dec-2007 | Method and System for Monitoring and Analyzing of IP Networks Elements |
| 20070390 | US | 11961243 | 20-Dec-2007 | Vendor Facility Customer Assignment |
| 20070409 | US | 12126571 | 23-May-2008 | Malware Detection Device |
| 20070410 | US | 12190072 | 12-Aug-2008 | Unauthorized Data Transfer Detection and Prevention |
| 20070412 | us_ | 11957738 | 17-Dec-2007 | Piracy Prevention, Detection, and Content Management |
| 20070423 | us | 11955844 | 13-Dec-2007 | MULTIMODAL RESOURCE MANAGEMENT SYSTEM |
| 20070435 | ປຣ | 11961339 | 20-Dec-2007 | Multimedia Personal Assistant |
| 20070436 | US | 11961194 | 20-Dec-2007 | Multimedia Portal |
| 20070438 | US | 11936479 | 07-Nov-2007 | Multifactor Multimedia Biometric Authentication |
| 20070441 | US | 11961397 | 20-Dec-2007 | Automated Multimedia Call Center Agent |
| 20070443 | US | 11957851 | 17-Dec-2007 | Method and Apparatus for Providing an Interface for Managing Network Switches |
| 20070444 | Us | 11960911 | 20-Dec-2007 | Method and System for Managing Telephone Number Allocation |
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| 20070490 | US | 11945017 | 26-Nov-2007 | Hierarchical Segmented Label Switched Paths |

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| 20070490 | wo | US08084155 | 20-Nov-2008 | Hierarchical Segmented Label Switched Paths |
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| 20070498 | US | 11961028 | 20-Dec-2007 | Purchase Trending Manager |
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| 20070501 | us | 11961003 | 20-Dec-2007 | Personal Inventory Manager |
| 20070509 | US | 12182746 | 30-Jul-2008 | Method and System for Providing Assisted Communications |
| 20070537 | US | 12164616 | 30-Jun-2008 | Automated Response System Tuning |
| 20070538 | US | 12051474 | 19-Mar-2008 | Compliance Policy Management Systems and Methods |
| 20070544 | US | 12099408 | 08-Apr-2008 | Session Initiation Protocol (SIP) Overload Protection |

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