

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6635395

|                                                                                                                                                                                                                                                                         |                             |                       |
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| <b>SUBMISSION TYPE:</b>                                                                                                                                                                                                                                                 | NEW ASSIGNMENT              |                       |
| <b>NATURE OF CONVEYANCE:</b>                                                                                                                                                                                                                                            | ASSIGNMENT                  |                       |
| <b>CONVEYING PARTY DATA</b>                                                                                                                                                                                                                                             |                             |                       |
| <b>Name</b>                                                                                                                                                                                                                                                             |                             | <b>Execution Date</b> |
| SPRINT COMMUNICATIONS COMPANY L.P.                                                                                                                                                                                                                                      |                             | 03/03/2021            |
| <b>RECEIVING PARTY DATA</b>                                                                                                                                                                                                                                             |                             |                       |
| <b>Name:</b>                                                                                                                                                                                                                                                            | T-MOBILE INNOVATIONS LLC    |                       |
| <b>Street Address:</b>                                                                                                                                                                                                                                                  | 6360 SPRINT PARKWAY         |                       |
| <b>City:</b>                                                                                                                                                                                                                                                            | OVERLAND PARK               |                       |
| <b>State/Country:</b>                                                                                                                                                                                                                                                   | KANSAS                      |                       |
| <b>Postal Code:</b>                                                                                                                                                                                                                                                     | 66251-2100                  |                       |
| <b>PROPERTY NUMBERS Total: 1</b>                                                                                                                                                                                                                                        |                             |                       |
| <b>Property Type</b>                                                                                                                                                                                                                                                    | <b>Number</b>               |                       |
| <b>Application Number:</b>                                                                                                                                                                                                                                              | 16904280                    |                       |
| <b>CORRESPONDENCE DATA</b>                                                                                                                                                                                                                                              |                             |                       |
| <b>Fax Number:</b>                                                                                                                                                                                                                                                      | (816)421-5547               |                       |
| <i>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.</i>                                                                         |                             |                       |
| <b>Phone:</b>                                                                                                                                                                                                                                                           | 8165592891                  |                       |
| <b>Email:</b>                                                                                                                                                                                                                                                           | tlparker@shb.com            |                       |
| <b>Correspondent Name:</b>                                                                                                                                                                                                                                              | SHOOK, HARDY & BACON LLP    |                       |
| <b>Address Line 1:</b>                                                                                                                                                                                                                                                  | 2555 GRAND BLVD.            |                       |
| <b>Address Line 4:</b>                                                                                                                                                                                                                                                  | KANSAS CITY, MISSOURI 64108 |                       |
| <b>ATTORNEY DOCKET NUMBER:</b>                                                                                                                                                                                                                                          | 12517US01/21211.339437      |                       |
| <b>NAME OF SUBMITTER:</b>                                                                                                                                                                                                                                               | ELENA K. MCFARLAND          |                       |
| <b>SIGNATURE:</b>                                                                                                                                                                                                                                                       | /ELENA K. MCFARLAND/        |                       |
| <b>DATE SIGNED:</b>                                                                                                                                                                                                                                                     | 04/01/2021                  |                       |
| <b>Total Attachments: 195</b><br>source=ExecutedAssignment#page1.tif<br>source=ExecutedAssignment#page2.tif<br>source=ExecutedAssignment#page3.tif<br>source=ExecutedAssignment#page4.tif<br>source=ExecutedAssignment#page5.tif<br>source=ExecutedAssignment#page6.tif |                             |                       |

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## **PATENT ASSIGNMENT**

WHEREAS, SPRINT COMMUNICATIONS COMPANY L.P., (hereinafter "SPRINT"), a corporation duly organized under the laws of the State of Delaware, and having its principal place of business at 6391 Sprint Parkway, Overland Park, Kansas 66251-2100, the exclusive owner of record of the entire and exclusive right, title, and interest in and to the U.S. patents and patent applications shown in the attached Schedule A, and the foreign patents and patent applications shown in the attached Schedule B; and

WHEREAS, T-MOBILE INNOVATIONS LLC (hereinafter "T-MOBILE"), a corporation duly organized under the laws of the State of Delaware, and having a principal place of business at 6360 Sprint Parkway, Overland Park, Kansas, 66251-2100, is desirous of acquiring the entire and exclusive right, title, and interest in and to said U.S. and foreign patents and patent applications shown in the attached Schedule A and Schedule B (if applicable), and to the inventions therein disclosed and granted for or upon said inventions in the United States of America and all countries foreign thereto;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged,

SPRINT has sold, assigned and transferred, and by these presents does hereby sell, assign and transfer unto T-MOBILE, its successors, assigns, and nominees, as the assignee, without any restriction, reservations, or limitations:

ITS ENTIRE RIGHT, TITLE, AND INTEREST in and to said U.S. and foreign patents and patent applications and all refilings, divisions, continuations, continuations-in-part, renewals, substitutes, reissues, and extensions thereof and the inventions therein disclosed;

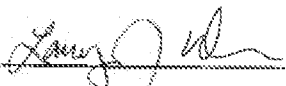
INCLUDING ALL PRIORITY RIGHTS derived from said U.S. and foreign patents and applications therefor by virtue of the International Convention for the Protection of Industrial Property for any and all member countries of the aforesaid International Convention;

AND THE SOLE RIGHT to file applications for patents under the patent laws of any country in the world in its name, and the sole right to have patents granted on said U.S. and foreign patents and applications in its name to the full end of the term for which same would have been held by SPRINT, had this assignment not been made, and to enforce said patents with the right to sue for and recover for its own use accrued profits or damages for any and all infringements thereof, including, but not limited to, past infringements with respect to which SPRINT hereby waives any rights to receive any portion thereof.

[Remainder of Page Intentionally Left Blank; Signature Page Follows]

WHEREOF, SPRINT has caused this assignment to be duly authorized and executed as of the date hereof, and accepted by T-MOBILE and executed as of the date hereof.

EXECUTED this 3<sup>rd</sup> day of March, 2021.

|                                                                                             |                                                                                              |
|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <b>SPRINT COMMUNICATIONS COMPANY L.P.</b>                                                   | <b>T-MOBILE INNOVATIONS LLC</b>                                                              |
| By <u></u> | By <u></u> |
| Name: Larry Weians                                                                          | Name: Melissa Jobe                                                                           |
| Title: Vice President, Tax                                                                  | Title: Director, Corporate Intellectual Property                                             |

**SCHEDULE A**

**U.S. PATENTS AND APPLICATIONS**

| <b><u>Number</u></b> | <b><u>Application No.</u></b> | <b><u>Application Date</u></b> | <b><u>Patent No.</u></b> | <b><u>Grant Date</u></b> | <b><u>Title</u></b>                                                                                      |
|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------|
| 1                    | 29/305,876                    | 2008-03-28                     | D615,546                 | 2010-05-11               | Mobile device user interface                                                                             |
| 2                    | 29/337,880                    | 2009-06-01                     | D616,851                 | 2010-06-01               | Circular mobile phone                                                                                    |
| 3                    | 29/321,979                    | 2008-07-28                     | D618,673                 | 2010-06-29               | Mobile device housing                                                                                    |
| 4                    | 29/321,978                    | 2008-07-28                     | D635,110                 | 2011-03-29               | Mobile phone                                                                                             |
| 5                    | 29/367,505                    | 2010-08-09                     | D648,714                 | 2011-11-15               | Cellular communications device                                                                           |
| 6                    | 29/367,507                    | 2010-08-09                     | D648,715                 | 2011-11-15               | Cellular communications device with wrap-in flaps                                                        |
| 7                    | 29/367,511                    | 2010-08-09                     | D648,716                 | 2011-11-15               | Cellular communications device with multiple bottom data ports                                           |
| 8                    | 29/367,502                    | 2010-08-09                     | D649,143                 | 2011-11-22               | Cellular communications device with side slot                                                            |
| 9                    | 29/367,501                    | 2010-08-09                     | D649,963                 | 2011-12-06               | Cellular communications device with elongated bottom                                                     |
| 10                   | 29/367,498                    | 2010-08-09                     | D650,375                 | 2011-12-13               | Cellular communications device with rear power button                                                    |
| 11                   | 29/367,500                    | 2010-08-09                     | D656,926                 | 2012-04-03               | Cellular communications device with side data port                                                       |
| 12                   | 29/367,508                    | 2010-08-09                     | D656,927                 | 2012-04-03               | Cellular communications device with reset button                                                         |
| 13                   | 29/367,510                    | 2010-08-09                     | D656,928                 | 2012-04-03               | Cellular communications device with bottom data port                                                     |
| 14                   | 09/933,324                    | 2001-08-20                     | 6,522,733                | 2003-02-18               | Communication gateway system                                                                             |
| 15                   | 09/596,874                    | 2000-06-19                     | 6,535,727                | 2003-03-18               | Method and apparatus for providing pre-pay and post-pay communication services using the same integrated |
| 16                   | 09/978,616                    | 2001-10-16                     | 6,545,697                | 2003-04-08               | Video telephony                                                                                          |

| <b><u>Number</u></b> | <b><u>Application No.</u></b> | <b><u>Application Date</u></b> | <b><u>Patent No.</u></b> | <b><u>Grant Date</u></b> | <b><u>Title</u></b>                                                                                                 |
|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------|
| 17                   | 09/699,841                    | 2000-10-30                     | 6,570,963                | 2003-05-27               | Call center for handling video calls from the hearing impaired                                                      |
| 18                   | 09/784,759                    | 2001-02-15                     | 6,724,886                | 2004-04-20               | System and method for assuring connection of tty telephone calls to a call center                                   |
| 19                   | 09/947,807                    | 2001-09-05                     | 6,751,216                | 2004-06-15               | Providing end-user communication services over peer-to-peer internet protocol connections between service providers |
| 20                   | 09/585,530                    | 2000-06-01                     | 6,751,646                | 2004-06-15               | Method and apparatus for implementing corba compliant name services incorporating load balancing features           |
| 21                   | 10/289,030                    | 2002-11-06                     | 6,767,253                | 2004-07-27               | Media-component docking system                                                                                      |
| 22                   | 10/151,444                    | 2002-05-20                     | 6,784,845                | 2004-08-31               | Antenna system for receiving and/or transmitting signals of multiple polarizations                                  |
| 23                   | 09/592,698                    | 2000-06-13                     | 6,788,666                | 2004-09-07               | Hybrid fiber wireless communication system                                                                          |
| 24                   | 10/400,824                    | 2003-03-27                     | 6,788,770                | 2004-09-07               | Intelligent voice response system with navigator database                                                           |
| 25                   | 10/390,307                    | 2003-03-17                     | 6,810,321                | 2004-10-26               | Vehicle traffic monitoring using cellular telephone location and velocity data                                      |
| 26                   | 10/274,934                    | 2002-10-21                     | 6,810,480                | 2004-10-26               | Verification of identity and continued presence of computer users                                                   |
| 27                   | 10/244,579                    | 2002-09-16                     | 6,819,757                | 2004-11-16               | Information transfer to a call agent using a portal system                                                          |
| 28                   | 09/699,864                    | 2000-10-30                     | 6,831,974                | 2004-12-14               | System and method for providing a caller identification to a called party for calls relayed through a call center   |
| 29                   | 10/335,321                    | 2002-12-31                     | 6,836,798                | 2004-12-28               | Network model reconciliation using state analysis                                                                   |
| 30                   | 09/624,778                    | 2000-07-25                     | 6,836,805                | 2004-12-28               | Scheduled alias resolution                                                                                          |
| 31                   | 09/871,304                    | 2001-05-31                     | 6,874,099                | 2005-03-29               | Method and software for testing and performance monitoring                                                          |

| <b><u>Number</u></b> | <b><u>Application No.</u></b> | <b><u>Application Date</u></b> | <b><u>Patent No.</u></b> | <b><u>Grant Date</u></b> | <b><u>Title</u></b>                                                                                                        |
|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 32                   | 10/886,345                    | 2004-07-07                     | 6,879,052                | 2005-04-12               | Power system for a telecommunication facility                                                                              |
| 33                   | 10/648,634                    | 2003-08-25                     | 6,885,112                | 2005-04-26               | Proton exchange membrane based power system for a telecommunication facility                                               |
| 34                   | 10/298,770                    | 2002-11-18                     | 6,904,136                | 2005-06-07               | Secure method of payment                                                                                                   |
| 35                   | 10/051,903                    | 2002-01-17                     | 6,910,036                | 2005-06-21               | Database performance monitoring method and tool                                                                            |
| 36                   | 10/623,982                    | 2003-07-21                     | 6,914,572                | 2005-07-05               | Antenna control system in a wireless communication system                                                                  |
| 37                   | 10/439,204                    | 2003-05-15                     | 6,930,402                | 2005-08-16               | Power system for a telecommunication facility                                                                              |
| 38                   | 09/695,109                    | 2000-10-24                     | 6,944,167                | 2005-09-13               | Method and apparatus for dynamic allocation of private address space based upon domain name service queries                |
| 39                   | 10/274,736                    | 2002-10-21                     | 6,947,411                | 2005-09-20               | Digital data communication system using video telephony                                                                    |
| 40                   | 09/723,780                    | 2000-11-28                     | 6,950,500                | 2005-09-27               | Internet-based and network-based relay center access for the hearing and speech impaired                                   |
| 41                   | 09/723,790                    | 2000-11-28                     | 6,950,501                | 2005-09-27               | Internet-based message translation for the hearing and speech impaired                                                     |
| 42                   | 10/757,080                    | 2004-01-14                     | 6,956,931                | 2005-10-18               | Location evaluation for callers that place emergency telephone calls over packet networks                                  |
| 43                   | 10/298,074                    | 2002-11-15                     | 6,960,838                | 2005-11-01               | Power system for a telecommunication facility                                                                              |
| 44                   | 09/790,956                    | 2001-02-22                     | 6,964,020                | 2005-11-08               | Method and system for facilitating construction of a canned message in a microbrowser environment                          |
| 45                   | 09/671,981                    | 2000-09-28                     | 6,971,108                | 2005-11-29               | Computer software framework and method for managing communication flow between a user interface and a computer application |
| 46                   | 09/772,545                    | 2001-01-30                     | 6,973,657                | 2005-12-06               | Method for middle-tier optimization in corba ots                                                                           |

| <b><u>Number</u></b> | <b><u>Application No.</u></b> | <b><u>Application Date</u></b> | <b><u>Patent No.</u></b> | <b><u>Grant Date</u></b> | <b><u>Title</u></b>                                                                                                                                                      |
|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 47                   | 09/924,910                    | 2001-08-08                     | 6,975,330                | 2005-12-13               | Graphic display of network performance information                                                                                                                       |
| 48                   | 10/436,625                    | 2003-05-13                     | 6,978,002                | 2005-12-20               | Dynamic routing for a telephone conference call                                                                                                                          |
| 49                   | 10/224,149                    | 2002-08-20                     | 6,983,155                | 2006-01-03               | Providing geographic directions to a destination using a mobile wireless communication device                                                                            |
| 50                   | 10/314,850                    | 2002-12-09                     | 6,985,070                | 2006-01-10               | Biometric authentication of hospitality-site customers                                                                                                                   |
| 51                   | 10/790,891                    | 2004-03-02                     | 6,987,850                | 2006-01-17               | Communication system for telecommunication relay services                                                                                                                |
| 52                   | 11/079,984                    | 2005-03-15                     | 6,992,401                | 2006-01-31               | Power system for a telecommunication facility                                                                                                                            |
| 53                   | 09/966,168                    | 2001-09-28                     | 6,993,013                | 2006-01-31               | Method and apparatus for proactive analysis of signaling messages exchanged between a call processing telecommunications system and voice-over-internet protocol devices |
| 54                   | 10/882,742                    | 2004-07-01                     | 6,996,308                | 2006-02-07               | Polarization mode dispersion outage mitigation                                                                                                                           |
| 55                   | 10/027,966                    | 2001-12-20                     | 6,999,688                | 2006-02-14               | Optical systems with diversity detection                                                                                                                                 |
| 56                   | 09/981,173                    | 2001-10-17                     | 7,002,937                | 2006-02-21               | Access based on termination in a wireless communication system                                                                                                           |
| 57                   | 10/223,135                    | 2002-08-19                     | 7,003,295                | 2006-02-21               | Short-range wireless transmitter registration for a mobile user of a communications system                                                                               |
| 58                   | 10/054,052                    | 2002-01-22                     | 7,003,526                | 2006-02-21               | System and method for loading commercial web sites                                                                                                                       |
| 59                   | 10/128,036                    | 2002-04-23                     | 7,016,883                | 2006-03-21               | Reverse caching for residential end-users to reduce usage of access links to a core communication network                                                                |
| 60                   | 10/867,937                    | 2004-06-14                     | 7,038,574                | 2006-05-02               | Packet differentiation services                                                                                                                                          |
| 61                   | 10/885,180                    | 2004-07-06                     | 7,038,628                | 2006-05-02               | Antenna system for receiving and/or transmitting signals of multiple polarizations                                                                                       |

| <b><u>Number</u></b> | <b><u>Application No.</u></b> | <b><u>Application Date</u></b> | <b><u>Patent No.</u></b> | <b><u>Grant Date</u></b> | <b><u>Title</u></b>                                                                                                                 |
|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 62                   | 10/103,107                    | 2002-03-21                     | 7,039,706                | 2006-05-02               | Session admission control for communication systems that use point-to-point protocol over ethernet                                  |
| 63                   | 10/058,882                    | 2002-01-28                     | 7,046,269                | 2006-05-16               | Sharing of prerecorded motion video over an internetwork                                                                            |
| 64                   | 10/134,828                    | 2002-04-29                     | 7,058,664                | 2006-06-06               | Method and system for data recovery                                                                                                 |
| 65                   | 10/835,040                    | 2004-04-29                     | 7,062,030                | 2006-06-13               | Method and system for handling calls in a communication network                                                                     |
| 66                   | 10/370,754                    | 2003-02-20                     | 7,062,259                | 2006-06-13               | Configuration of wireless control systems for broadband wireless communications                                                     |
| 67                   | 10/896,535                    | 2004-07-22                     | 7,081,687                | 2006-07-25               | Power system for a telecommunications facility                                                                                      |
| 68                   | 11/263,736                    | 2005-11-01                     | 7,098,548                | 2006-08-29               | Power system for a telecommunication facility                                                                                       |
| 69                   | 10/033,813                    | 2001-12-20                     | 7,099,288                | 2006-08-29               | Telephonic addressing for establishing simultaneous voice and computer network connections                                          |
| 70                   | 10/099,729                    | 2002-03-15                     | 7,099,825                | 2006-08-29               | User mobility in a voice recognition environment                                                                                    |
| 71                   | 10/135,605                    | 2002-04-30                     | 7,103,642                | 2006-09-05               | System and method for personalizing a home page                                                                                     |
| 72                   | 10/109,483                    | 2002-03-28                     | 7,106,759                | 2006-09-12               | Network timing reference for an integrated services hub                                                                             |
| 73                   | 10/047,341                    | 2002-01-15                     | 7,106,847                | 2006-09-12               | Telecommunication network that provides caller-entered information to a call destination                                            |
| 74                   | 10/706,707                    | 2003-11-12                     | 7,107,187                | 2006-09-12               | Method for modeling system performance                                                                                              |
| 75                   | 10/083,418                    | 2002-02-26                     | 7,111,063                | 2006-09-19               | Distributed computer network having a rotating message delivery system suitable for use in load balancing and/or messaging failover |
| 76                   | 11/123,548                    | 2005-05-05                     | 7,112,891                | 2006-09-26               | Mobile-power system with solar-powered hydrogen liberator, fuel cell, turbine, and capacitors                                       |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------------------------------|
| 77                   | 10/688,349                    | 2003-10-17                     | 7,113,577                | 2006-09-26               | Caller identification employing a digital content set                                          |
| 78                   | 09/943,281                    | 2001-08-30                     | 7,123,586                | 2006-10-17               | Bandwidth sharing between devices in a communication system                                    |
| 79                   | 10/077,149                    | 2002-02-15                     | 7,123,934                | 2006-10-17               | Telecommunications overlay system                                                              |
| 80                   | 09/965,255                    | 2001-09-27                     | 7,127,507                | 2006-10-24               | Method and apparatus for network-level monitoring of queue-based messaging systems             |
| 81                   | 10/874,831                    | 2004-06-23                     | 7,133,514                | 2006-11-07               | Premise-based voice bridge extension                                                           |
| 82                   | 10/411,761                    | 2003-04-11                     | 7,133,984                | 2006-11-07               | Method and system for migrating data                                                           |
| 83                   | 10/601,791                    | 2003-06-23                     | 7,136,156                | 2006-11-14               | Optical time domain reflectometer (otdr) data storage and retrieval                            |
| 84                   | 10/744,169                    | 2003-12-23                     | 7,146,159                | 2006-12-05               | Over-the-air card provisioning system and method                                               |
| 85                   | 10/951,691                    | 2004-09-29                     | 7,149,303                | 2006-12-12               | System and method for optimized distribution of calls to call center resources                 |
| 86                   | 10/217,917                    | 2002-08-13                     | 7,154,900                | 2006-12-26               | Method and system for establishing a cross-carrier, multilayer communications path             |
| 87                   | 11/089,667                    | 2005-03-25                     | 7,157,803                | 2007-01-02               | Power system including lithium-metal-polymer batteries                                         |
| 88                   | 10/368,526                    | 2003-02-18                     | 7,164,756                | 2007-01-16               | Data communication system for supplementing telephone calls                                    |
| 89                   | 10/226,797                    | 2002-08-23                     | 7,178,108                | 2007-02-13               | System and method for development, maintenance and modification of multiple web sites          |
| 90                   | 10/134,810                    | 2002-04-29                     | 7,184,439                | 2007-02-27               | Method and system for optimizing switch-transaction processing in a telecommunications network |
| 91                   | 10/245,457                    | 2002-09-18                     | 7,184,526                | 2007-02-27               | Telephone-based selection, ordering, and billing of digital content delivered via a network    |
| 92                   | 10/762,420                    | 2004-01-22                     | 7,187,265                | 2007-03-06               | Equipment housing with interfacing computer                                                    |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------|
| 93                   | 10/441,748                    | 2003-05-20                     | 7,191,332                | 2007-03-13               | Digital rights management for multicasting content distribution                 |
| 94                   | 10/185,920                    | 2002-06-28                     | 7,194,767                | 2007-03-20               | Screened subnet having a secured utility vlan                                   |
| 95                   | 10/092,241                    | 2002-03-06                     | 7,197,009                | 2007-03-27               | Delay variation based routing in communication systems                          |
| 96                   | 10/949,794                    | 2004-09-24                     | 7,197,133                | 2007-03-27               | Information transfer to a call agent using a portal system                      |
| 97                   | 11/344,502                    | 2006-01-31                     | 7,197,428                | 2007-03-27               | Method for performance monitoring and modeling                                  |
| 98                   | 09/941,326                    | 2001-08-29                     | 7,200,865                | 2007-04-03               | Method and system for communication control in a computing environment          |
| 99                   | 11/343,722                    | 2006-01-31                     | 7,203,304                | 2007-04-10               | Call progress tone generation in a communication system                         |
| 100                  | 10/099,079                    | 2002-03-15                     | 7,209,975                | 2007-04-24               | Area based sub-path protection for communication networks                       |
| 101                  | 10/452,897                    | 2003-06-02                     | 7,215,742                | 2007-05-08               | Troubleshooting interface for client-routed toll-free telephone calls           |
| 102                  | 09/919,436                    | 2001-07-31                     | 7,216,181                | 2007-05-08               | Middleware brokering system                                                     |
| 103                  | 10/307,110                    | 2002-11-27                     | 7,222,360                | 2007-05-22               | Continuous biometric authentication using frame preamble for biometric data     |
| 104                  | 10/405,422                    | 2003-04-02                     | 7,224,965                | 2007-05-29               | Telecommunications service control point with digit collection logic            |
| 105                  | 11/144,341                    | 2005-06-03                     | 7,236,767                | 2007-06-26               | Wireless cell site finder and customer service system                           |
| 106                  | 10/896,583                    | 2004-07-22                     | 7,240,492                | 2007-07-10               | Fuel system used for cooling purposes                                           |
| 107                  | 11/459,753                    | 2006-07-25                     | 7,242,104                | 2007-07-10               | Power system for a telecommunication facility                                   |
| 108                  | 11/243,942                    | 2005-10-05                     | 7,242,755                | 2007-07-10               | Dynamic routing for a telephone conference call                                 |
| 109                  | 11/214,133                    | 2005-08-29                     | 7,245,032                | 2007-07-17               | Mobile-power system utilizing propane generator, fuel cell and super capacitors |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------|
| 110                  | 11/287,774                    | 2005-11-28                     | 7,245,034                | 2007-07-17               | Power system for a telecommunications facility                                                                  |
| 111                  | 10/983,823                    | 2004-11-08                     | 7,245,913                | 2007-07-17               | Handset mode selection based on user preferences                                                                |
| 112                  | 11/079,975                    | 2005-03-15                     | 7,256,506                | 2007-08-14               | Backup power hierarchy for a facility system                                                                    |
| 113                  | 11/116,739                    | 2005-04-28                     | 7,259,666                | 2007-08-21               | Method and system for displaying status indications from communications network                                 |
| 114                  | 09/928,610                    | 2001-08-13                     | 7,260,616                | 2007-08-21               | Communication hub with automatic device registration                                                            |
| 115                  | 10/738,244                    | 2003-12-17                     | 7,263,717                | 2007-08-28               | Integrated security framework and privacy database scheme                                                       |
| 116                  | 09/792,322                    | 2001-02-23                     | 7,281,263                | 2007-10-09               | System and method for managing security access for users to network systems                                     |
| 117                  | 11/124,697                    | 2005-05-09                     | 7,298,053                | 2007-11-20               | Power system for a telecommunication facility                                                                   |
| 118                  | 10/988,075                    | 2004-11-12                     | 7,298,626                | 2007-11-20               | Computing asset management system and method                                                                    |
| 119                  | 11/168,206                    | 2005-06-28                     | 7,299,040                | 2007-11-20               | E-band wireless extensions to a remote service area                                                             |
| 120                  | 11/116,714                    | 2005-04-28                     | 7,301,448                | 2007-11-27               | Method and system for deduplicating status indications in a communications network                              |
| 121                  | 11/464,901                    | 2006-08-16                     | 7,301,503                | 2007-11-27               | Wireless communication device with a patch antenna supporting cross-polarized active elements                   |
| 122                  | 11/055,314                    | 2005-02-10                     | 7,310,523                | 2007-12-18               | Wireline terminal accessing mobile telephone services                                                           |
| 123                  | 10/696,099                    | 2003-10-29                     | 7,310,659                | 2007-12-18               | Interface and method for extending a target application over an instant message link of a communication network |
| 124                  | 10/631,190                    | 2003-07-31                     | 7,313,528                | 2007-12-25               | Distributed network based message processing system for text-to-speech streaming data                           |
| 125                  | 11/088,660                    | 2005-03-24                     | 7,313,657                | 2007-12-25               | Conflict avoidance in data store replication                                                                    |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 126                  | 10/003,816                    | 2001-10-25                     | 7,316,029                | 2008-01-01               | Network security services architecture                                                                                |
| 127                  | 10/832,028                    | 2004-04-26                     | 7,317,717                | 2008-01-08               | Integrated wireline and wireless end-to-end virtual private networking                                                |
| 128                  | 10/754,016                    | 2004-01-08                     | 7,327,737                | 2008-02-05               | Method and apparatus to control cell substitution                                                                     |
| 129                  | 10/631,984                    | 2003-07-31                     | 7,334,254                | 2008-02-19               | Business-to-business security integration                                                                             |
| 130                  | 10/284,680                    | 2002-10-31                     | 7,346,930                | 2008-03-18               | Security framework bridge                                                                                             |
| 131                  | 11/224,614                    | 2005-09-12                     | 7,352,578                | 2008-04-01               | Fuel cell system with inverter and phase change material                                                              |
| 132                  | 10/608,261                    | 2003-06-27                     | 7,356,307                | 2008-04-08               | Ip telephony with user localization for call control management                                                       |
| 133                  | 10/999,733                    | 2004-11-30                     | 7,360,690                | 2008-04-22               | Product advisor                                                                                                       |
| 134                  | 09/947,811                    | 2001-09-05                     | 7,362,745                | 2008-04-22               | End-user systems for communication services over peer-to-peer internet protocol connections between service providers |
| 135                  | 11/225,987                    | 2005-09-14                     | 7,370,666                | 2008-05-13               | Power system with computer-controlled fuel system                                                                     |
| 136                  | 10/626,813                    | 2003-07-23                     | 7,382,879                | 2008-06-03               | Digital rights management negotiation for streaming media over a network                                              |
| 137                  | 10/058,549                    | 2002-01-28                     | 7,385,621                | 2008-06-10               | Private sharing of computer resources over an internetwork                                                            |
| 138                  | 10/790,653                    | 2004-03-01                     | 7,386,483                | 2008-06-10               | Electronic marketplace system and method for selling web services                                                     |
| 139                  | 10/400,112                    | 2003-03-26                     | 7,389,345                | 2008-06-17               | Filtering approach for network system alarms                                                                          |
| 140                  | 11/459,419                    | 2006-07-24                     | 7,394,168                | 2008-07-01               | Power system for a telecommunication facility                                                                         |
| 141                  | 10/390,250                    | 2003-03-17                     | 7,394,756                | 2008-07-01               | Secure hidden route in a data network                                                                                 |
| 142                  | 11/535,637                    | 2006-09-27                     | 7,407,416                | 2008-08-05               | Multi-stage multi-pole connector                                                                                      |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 143                  | 10/657,024                    | 2003-09-05                     | 7,411,905                | 2008-08-12               | Segmented ip backbone network access                                                                                                                |
| 144                  | 10/413,345                    | 2003-04-14                     | 7,412,392                | 2008-08-12               | Conference multi-tasking system and method                                                                                                          |
| 145                  | 10/901,630                    | 2004-07-28                     | 7,413,113                | 2008-08-19               | Context-based card selection device                                                                                                                 |
| 146                  | 09/919,430                    | 2001-07-31                     | 7,424,526                | 2008-09-09               | Internet service node incorporating a bandwidth measurement device and associated methods for evaluating data transfers                             |
| 147                  | 10/943,083                    | 2004-09-16                     | 7,424,608                | 2008-09-09               | Mechanism for layered authentication                                                                                                                |
| 148                  | 10/285,884                    | 2002-11-01                     | 7,424,702                | 2008-09-09               | Data integration techniques for use in enterprise architecture modeling                                                                             |
| 149                  | 10/351,795                    | 2003-01-27                     | 7,433,970                | 2008-10-07               | Method for providing performance cues for a server-based software application                                                                       |
| 150                  | 11/138,563                    | 2005-05-26                     | 7,434,723                | 2008-10-14               | Mobile payment authorization system and method                                                                                                      |
| 151                  | 11/567,451                    | 2006-12-06                     | 7,436,079                | 2008-10-14               | Power system for a telecommunications site                                                                                                          |
| 152                  | 10/435,808                    | 2003-05-12                     | 7,436,778                | 2008-10-14               | Related-packet identification                                                                                                                       |
| 153                  | 10/762,598                    | 2004-01-22                     | 7,437,712                | 2008-10-14               | Software build tool with revised code version based on description of revisions and authorizing build based on change report that has been approved |
| 154                  | 10/910,871                    | 2004-08-04                     | 7,441,188                | 2008-10-21               | Web construction framework presentation tier                                                                                                        |
| 155                  | 09/702,644                    | 2000-10-31                     | 7,444,148                | 2008-10-28               | Temporary wireless number communication system                                                                                                      |
| 156                  | 10/935,877                    | 2004-09-08                     | 7,447,194                | 2008-11-04               | Application server update message processing                                                                                                        |
| 157                  | 11/187,067                    | 2005-07-22                     | 7,453,488                | 2008-11-18               | Sharing of prerecorded motion video over an internet work                                                                                           |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------|
| 158                  | 10/999,243                    | 2004-11-30                     | 7,453,803                | 2008-11-18               | Congestion control for packet communications                                                                  |
| 159                  | 10/896,402                    | 2004-07-22                     | 7,460,493                | 2008-12-02               | Video conferencing system with dynamic call management and set-up                                             |
| 160                  | 10/697,396                    | 2003-10-30                     | 7,460,526                | 2008-12-02               | System and method for establishing a carrier virtual network inverse multiplexed telecommunication connection |
| 161                  | 11/315,958                    | 2005-12-22                     | 7,461,033                | 2008-12-02               | Computation linguistics engine                                                                                |
| 162                  | 11/067,162                    | 2005-02-24                     | 7,463,634                | 2008-12-09               | Quality correlation testing                                                                                   |
| 163                  | 10/897,492                    | 2004-07-23                     | 7,467,267                | 2008-12-16               | Method and system for backing up or restoring data in remote devices over a communications network            |
| 164                  | 11/119,567                    | 2005-05-02                     | 7,480,773                | 2009-01-20               | Virtual machine use and optimization of hardware configurations                                               |
| 165                  | 10/897,860                    | 2004-07-23                     | 7,480,803                | 2009-01-20               | System and method for securing system content by automated device authentication                              |
| 166                  | 11/221,172                    | 2005-09-07                     | 7,494,067                | 2009-02-24               | Alternate authorization for proximity card                                                                    |
| 167                  | 10/738,763                    | 2003-12-17                     | 7,496,191                | 2009-02-24               | Integrated privacy rules engine and application                                                               |
| 168                  | 11/316,288                    | 2005-12-22                     | 7,496,349                | 2009-02-24               | Device driven system for activating a wireless device                                                         |
| 169                  | 10/994,997                    | 2004-11-22                     | 7,496,954                | 2009-02-24               | Single sign-on system and method                                                                              |
| 170                  | 10/020,030                    | 2001-10-30                     | 7,500,261                | 2009-03-03               | Multi-point multi-channel data distribution system                                                            |
| 171                  | 12/021,458                    | 2008-01-29                     | 7,506,515                | 2009-03-24               | Method for regulating fuel flow into a turbine                                                                |
| 172                  | 11/766,306                    | 2007-06-21                     | 7,508,666                | 2009-03-24               | Cooling system for electronic equipment                                                                       |
| 173                  | 10/863,940                    | 2004-06-09                     | 7,509,343                | 2009-03-24               | System and method of collecting and reporting system performance                                              |

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|---------------|------------------------|-------------------------|-------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|               |                        |                         |                   |                   | metrics                                                                                                                             |
| 174           | 10/814,422             | 2004-03-31              | 7,509,626         | 2009-03-24        | Demonstrating proof of concept of a project with requirements component providing weights on importance and tracking with use cases |
| 175           | 10/219,650             | 2002-08-15              | 7,509,667         | 2009-03-24        | Broadband content jukebox with profile-based caching                                                                                |
| 176           | 10/020,062             | 2001-10-30              | 7,512,094         | 2009-03-31        | System and method for selecting spectrum                                                                                            |
| 177           | 11/222,392             | 2005-09-08              | 7,519,293         | 2009-04-14        | Optical communication system having ring-based restoration using shared protect links                                               |
| 178           | 10/616,795             | 2003-07-10              | 7,519,705         | 2009-04-14        | Method for computing aggregate traffic between adjacent points of presence in an internet protocol backbone network                 |
| 179           | 10/464,922             | 2003-06-19              | 7,522,518         | 2009-04-21        | Wireless lan communication system with in-zone user preferences                                                                     |
| 180           | 10/837,795             | 2004-05-03              | 7,522,579         | 2009-04-21        | Cable system providing sip-based proxy services                                                                                     |
| 181           | 10/764,910             | 2004-01-26              | 7,522,607         | 2009-04-21        | Congestion handling in a packet communication system                                                                                |
| 182           | 11/222,717             | 2005-09-09              | 7,522,904         | 2009-04-21        | Customer premises equipment alternate path architecture for configuration and troubleshooting                                       |
| 183           | 09/920,489             | 2001-08-01              | 7,522,914         | 2009-04-21        | Communication system for call alerting                                                                                              |
| 184           | 10/794,658             | 2004-03-05              | 7,523,486         | 2009-04-21        | User administration tool                                                                                                            |
| 185           | 10/648,973             | 2003-08-27              | 7,525,217         | 2009-04-28        | Rectifier-super capacitor device for use in a power system for a telecommunication facility                                         |
| 186           | 10/886,244             | 2004-07-07              | 7,533,385         | 2009-05-12        | Virtualization and server imaging system for allocation of computer hardware and software                                           |
| 187           | 11/026,784             | 2004-12-30              | 7,535,847         | 2009-05-19        | Remote testing for service provider networks                                                                                        |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------|
| 188                  | 10/647,935                    | 2003-08-26                     | 7,536,100                | 2009-05-19               | Pop-to-pop optical wavelength protection in a communication system                                                   |
| 189                  | 10/150,852                    | 2002-05-17                     | 7,536,111                | 2009-05-19               | Optical communication with phase encoding and optical filtering                                                      |
| 190                  | 10/083,165                    | 2002-02-26                     | 7,536,204                | 2009-05-19               | Communication system with two antennas and two receivers                                                             |
| 191                  | 11/313,142                    | 2005-12-19                     | 7,557,531                | 2009-07-07               | Power system utilizing flow batteries                                                                                |
| 192                  | 09/998,569                    | 2001-11-16                     | 7,559,077                | 2009-07-07               | Video system for use where the network transfer rate is slower than the video display rate                           |
| 193                  | 10/812,532                    | 2004-03-30                     | 7,565,438                | 2009-07-21               | Digital rights management integrated service solution                                                                |
| 194                  | 10/770,782                    | 2004-02-03                     | 7,565,448                | 2009-07-21               | Network control system for a communication network                                                                   |
| 195                  | 11/302,303                    | 2005-12-13                     | 7,566,989                | 2009-07-28               | Back-up power system for a cooling system                                                                            |
| 196                  | 11/409,191                    | 2006-04-21                     | 7,571,123                | 2009-08-04               | Web services management architecture                                                                                 |
| 197                  | 11/149,923                    | 2005-06-10                     | 7,571,473                | 2009-08-04               | Identity management system and method                                                                                |
| 198                  | 11/001,472                    | 2004-12-01                     | 7,573,498                | 2009-08-11               | System and method for providing video conferencing services to a television-service subscriber                       |
| 199                  | 11/132,003                    | 2005-05-18                     | 7,590,404                | 2009-09-15               | Surface wave communications between a remote antenna and a base station that is co-located with another base station |
| 200                  | 11/425,631                    | 2006-06-21                     | 7,590,420                | 2009-09-15               | Intelligent home agent selection mechanism (ihasm) for dynamic home agent (ha) assignment                            |
| 201                  | 10/978,708                    | 2004-11-01                     | 7,590,430                | 2009-09-15               | Architecture and applications to support device-driven firmware upgrades and configurable menus                      |
| 202                  | 10/952,405                    | 2004-09-28                     | 7,590,727                | 2009-09-15               | System and method for software failover on a bladed system                                                           |
| 203                  | 11/755,242                    | 2007-05-30                     | 7,592,959                | 2009-09-22               | Radio frequency interference suppression enclosure                                                                   |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------|
| 204                  | 10/406,171                    | 2003-04-03                     | 7,594,027                | 2009-09-22               | Data access using a machine-readable card                                                  |
| 205                  | 10/721,372                    | 2003-11-25                     | 7,596,612                | 2009-09-29               | Interface system for carrier virtual network system                                        |
| 206                  | 11/115,490                    | 2005-04-27                     | 7,599,399                | 2009-10-06               | Jitter buffer management                                                                   |
| 207                  | 10/963,199                    | 2004-10-12                     | 7,600,674                | 2009-10-13               | Integrated prepaid system and method                                                       |
| 208                  | 11/225,988                    | 2005-09-14                     | 7,602,073                | 2009-10-13               | Power system with fuel cell and localized air-conditioning for computing equipment         |
| 209                  | 11/302,663                    | 2005-12-14                     | 7,606,529                | 2009-10-20               | Wireless-signal distribution system via set-top box                                        |
| 210                  | 11/147,932                    | 2005-06-08                     | 7,613,747                | 2009-11-03               | Tiered database storage and replication                                                    |
| 211                  | 11/670,585                    | 2007-02-02                     | 7,615,875                | 2009-11-10               | Power system for a telecommunications facility                                             |
| 212                  | 11/744,038                    | 2007-05-03                     | 7,615,877                | 2009-11-10               | Power generation system for mobile power supply                                            |
| 213                  | 11/120,053                    | 2005-05-02                     | 7,615,889                | 2009-11-10               | Modular cell site                                                                          |
| 214                  | 11/022,955                    | 2004-12-27                     | 7,617,313                | 2009-11-10               | Metric transport and database load                                                         |
| 215                  | 11/099,100                    | 2005-04-05                     | 7,617,336                | 2009-11-10               | Blade computing system                                                                     |
| 216                  | 10/657,579                    | 2003-09-08                     | 7,617,504                | 2009-11-10               | Computer method and system for integrating enterprise javabeans into non-java environments |
| 217                  | 10/838,798                    | 2004-05-04                     | 7,623,784                | 2009-11-24               | Network connection verification in optical communication networks                          |
| 218                  | 11/403,579                    | 2006-04-13                     | 7,623,851                | 2009-11-24               | Configuration of wireless control systems for broadband wireless communications            |
| 219                  | 10/700,187                    | 2003-11-03                     | 7,624,175                | 2009-11-24               | Update messaging system                                                                    |
| 220                  | 12/116,607                    | 2008-05-07                     | 7,626,284                | 2009-12-01               | Power system                                                                               |
| 221                  | 10/900,569                    | 2004-07-28                     | 7,626,979                | 2009-12-01               | Packet voice network border control                                                        |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------|
| 222                  | 11/153,806                    | 2005-06-15                     | 7,629,707                | 2009-12-08               | Power system with hydrogen on demand                                                               |
| 223                  | 11/875,102                    | 2007-10-19                     | 7,629,708                | 2009-12-08               | Redundant power system having a photovoltaic array                                                 |
| 224                  | 10/881,984                    | 2004-06-30                     | 7,630,319                | 2009-12-08               | Method and system for decoding tokenized session initiated protocol packets                        |
| 225                  | 09/997,946                    | 2001-11-30                     | 7,634,446                | 2009-12-15               | Method and system for providing prepaid data service                                               |
| 226                  | 11/173,246                    | 2005-07-01                     | 7,634,542                | 2009-12-15               | System and method to manage service instances for request processing                               |
| 227                  | 11/744,015                    | 2007-05-03                     | 7,635,926                | 2009-12-22               | Redundant mobile power supply system                                                               |
| 228                  | 10/435,800                    | 2003-05-12                     | 7,636,321                | 2009-12-22               | Method and system for measuring round-trip time of packets in a communications network             |
| 229                  | 11/116,778                    | 2005-04-28                     | 7,636,424                | 2009-12-22               | Method and system for selectively displaying alarms in a communications network                    |
| 230                  | 11/117,205                    | 2005-04-28                     | 7,636,578                | 2009-12-22               | Method and system to provide text messages via a host device connected to a media-delivery network |
| 231                  | 10/054,539                    | 2001-10-25                     | 7,636,790                | 2009-12-22               | Service-based network packet routing redirection using an address server                           |
| 232                  | 10/960,535                    | 2004-10-07                     | 7,636,852                | 2009-12-22               | Call center dashboard                                                                              |
| 233                  | 11/611,735                    | 2006-12-15                     | 7,636,902                | 2009-12-22               | Report validation tool                                                                             |
| 234                  | 11/061,241                    | 2005-02-18                     | 7,639,627                | 2009-12-29               | System and method for trace replay using parallelized streams                                      |
| 235                  | 11/612,930                    | 2006-12-19                     | 7,642,961                | 2010-01-05               | Remote control antenna positioning system                                                          |
| 236                  | 11/471,042                    | 2006-06-19                     | 7,642,988                | 2010-01-05               | Multi-link antenna array configured for cellular site placement                                    |
| 237                  | 11/384,693                    | 2006-03-20                     | 7,643,616                | 2010-01-05               | Method for testing an assigned location routing number (lrn)                                       |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 238                  | 10/642,024                    | 2003-08-15                     | 7,644,008                | 2010-01-05               | Web-based system and method for user role assignment in an enterprise                                                             |
| 239                  | 11/760,993                    | 2007-06-11                     | 7,644,061                | 2010-01-05               | Managing resource indexes in a networking environment                                                                             |
| 240                  | 10/842,400                    | 2004-05-10                     | 7,644,270                | 2010-01-05               | Web services security architecture                                                                                                |
| 241                  | 12/172,813                    | 2008-07-14                     | 7,644,859                | 2010-01-12               | Context-based card selection device                                                                                               |
| 242                  | 10/812,299                    | 2004-03-29                     | 7,647,612                | 2010-01-12               | Wireless set-top unit and related methods                                                                                         |
| 243                  | 11/530,176                    | 2006-09-08                     | 7,649,848                | 2010-01-19               | Ability to apply different levels of quality of service (qos) to different sessions in an ipsec tunnel                            |
| 244                  | 10/697,779                    | 2003-10-30                     | 7,653,730                | 2010-01-26               | System and method for latency assurance and dynamic re-provisioning of telecommunication connections in a carrier virtual network |
| 245                  | 11/245,593                    | 2005-10-07                     | 7,664,756                | 2010-02-16               | Configuration management database implementation with end-to-end cross-checking system and method                                 |
| 246                  | 11/144,258                    | 2005-06-03                     | 7,665,135                | 2010-02-16               | Detecting and addressing network attacks                                                                                          |
| 247                  | 11/225,697                    | 2005-09-13                     | 7,672,680                | 2010-03-02               | Web services architecture system and method                                                                                       |
| 248                  | 10/927,454                    | 2004-08-26                     | 7,673,302                | 2010-03-02               | System and method for managing messages in a queuing system                                                                       |
| 249                  | 11/020,761                    | 2004-12-23                     | 7,676,032                | 2010-03-09               | Method and system for determining maximum transactions within a communications network                                            |
| 250                  | 11/467,226                    | 2006-08-25                     | 7,676,490                | 2010-03-09               | Project predictor                                                                                                                 |
| 251                  | 11/003,816                    | 2004-12-02                     | 7,681,038                | 2010-03-16               | Method and system for facilitating packet-based communications                                                                    |
| 252                  | 10/633,800                    | 2003-08-04                     | 7,688,733                | 2010-03-30               | System and method for bandwidth selection in a communication network                                                              |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------|
| 253                  | 10/083,064                    | 2002-02-26                     | 7,688,960                | 2010-03-30               | Method and system for separating business and device logic in a computing network system               |
| 254                  | 11/561,439                    | 2006-11-20                     | 7,689,200                | 2010-03-30               | Control system for emergency calls placed by mobile communication devices                              |
| 255                  | 11/556,930                    | 2006-11-06                     | 7,689,209                | 2010-03-30               | Wireless communication network with software modification locking                                      |
| 256                  | 10/903,755                    | 2004-07-30                     | 7,693,840                | 2010-04-06               | Method and system for distribution of common elements                                                  |
| 257                  | 11/620,959                    | 2007-01-08                     | 7,694,034                | 2010-04-06               | Data flow manager for device mobility                                                                  |
| 258                  | 11/182,266                    | 2005-07-15                     | 7,694,308                | 2010-04-06               | Enterprise application mapping tool and datastore with target state dimension                          |
| 259                  | 11/144,259                    | 2005-06-03                     | 7,694,338                | 2010-04-06               | Shared tap dos-attack protection                                                                       |
| 260                  | 11/234,541                    | 2005-09-23                     | 7,697,667                | 2010-04-13               | Voicemail recall feature                                                                               |
| 261                  | 10/926,672                    | 2004-08-26                     | 7,701,852                | 2010-04-20               | Method for analyzing performance of a network through measuring and reporting delay in routing devices |
| 262                  | 11/188,557                    | 2005-07-25                     | 7,701,980                | 2010-04-20               | Predetermined jitter buffer settings                                                                   |
| 263                  | 11/358,273                    | 2006-02-21                     | 7,702,081                | 2010-04-20               | Call back number provisioning for emergency call services                                              |
| 264                  | 11/311,030                    | 2005-12-16                     | 7,703,133                | 2010-04-20               | Secure authentication curtain system and method                                                        |
| 265                  | 10/840,317                    | 2004-05-06                     | 7,703,142                | 2010-04-20               | Software license authorization system                                                                  |
| 266                  | 11/863,632                    | 2007-09-28                     | 7,707,113                | 2010-04-27               | Method and system for setting levels of electronic wallet security                                     |
| 267                  | 11/857,033                    | 2007-09-18                     | 7,710,824                | 2010-05-04               | Location monitoring and sonar determination of presence                                                |
| 268                  | 11/005,813                    | 2004-12-07                     | 7,711,266                | 2010-05-04               | Pmd measurements for an in-service fiber span                                                          |
| 269                  | 10/844,682                    | 2004-05-13                     | 7,715,366                | 2010-05-11               | User based message prioritization                                                                      |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------------------|
| 270                  | 11/986,874                    | 2007-11-27                     | 7,715,373                | 2010-05-11               | Ip telephony with user localization for call control management                                         |
| 271                  | 11/534,066                    | 2006-09-21                     | 7,715,397                | 2010-05-11               | Data communications method and structure                                                                |
| 272                  | 11/426,229                    | 2006-06-23                     | 7,715,873                | 2010-05-11               | Wearable accessories providing visual indicia of incoming events for wireless telecommunications device |
| 273                  | 11/292,978                    | 2005-12-02                     | 7,716,467                | 2010-05-11               | Encryption gateway service                                                                              |
| 274                  | 10/875,539                    | 2004-06-24                     | 7,716,716                | 2010-05-11               | Method and system for architecting enterprise data security                                             |
| 275                  | 10/280,289                    | 2002-10-25                     | 7,720,211                | 2010-05-18               | Customer want date (cwd) oriented telecommunications service provisioning system and method             |
| 276                  | 10/231,640                    | 2002-08-30                     | 7,720,715                | 2010-05-18               | Method and system for providing retail-item purchasing data in a computer network environment           |
| 277                  | 10/331,376                    | 2002-12-30                     | 7,720,818                | 2010-05-18               | On-line account management system having a tiered account information storage system                    |
| 278                  | 11/326,257                    | 2006-01-05                     | 7,728,458                | 2010-06-01               | Telecommunications megasite with backup power system                                                    |
| 279                  | 11/388,673                    | 2006-03-24                     | 7,729,948                | 2010-06-01               | Systems and methods for enabling customer care assistance with self-service transactions                |
| 280                  | 11/760,370                    | 2007-06-08                     | 7,733,777                | 2010-06-08               | Adaptive rate allocation for multiple tcp sources in wireless networks                                  |
| 281                  | 11/769,558                    | 2007-06-27                     | 7,738,485                | 2010-06-15               | Parallel wireless scheduler                                                                             |
| 282                  | 11/255,747                    | 2005-10-21                     | 7,738,636                | 2010-06-15               | Message-indication testing                                                                              |
| 283                  | 11/186,229                    | 2005-07-21                     | 7,739,680                | 2010-06-15               | Application server production software upgrading with high availability staging software                |
| 284                  | 11/345,419                    | 2006-02-01                     | 7,742,413                | 2010-06-22               | Utilizing a null jitter buffer to monitor session traffic                                               |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 285                  | 11/428,153                    | 2006-06-30                     | 7,742,414                | 2010-06-22               | Lightweight indexing for fast retrieval of data from a flow-level compressed packet trace                                        |
| 286                  | 11/205,809                    | 2005-08-17                     | 7,742,428                | 2010-06-22               | Dynamic gateway selection                                                                                                        |
| 287                  | 11/369,055                    | 2006-03-06                     | 7,742,578                | 2010-06-22               | Location determination capabilities for emergency call services                                                                  |
| 288                  | 11/556,562                    | 2006-11-03                     | 7,742,762                | 2010-06-22               | Systems and methods for remote notification, diagnostics and remedy management                                                   |
| 289                  | 11/193,608                    | 2005-07-29                     | 7,743,369                | 2010-06-22               | Enhanced function point analysis                                                                                                 |
| 290                  | 11/049,142                    | 2005-02-01                     | 7,747,277                | 2010-06-29               | Termination routing based on Inp redirection                                                                                     |
| 291                  | 11/093,607                    | 2005-03-30                     | 7,748,026                | 2010-06-29               | Transparent interceptors for privacy policy implementation                                                                       |
| 292                  | 11/620,140                    | 2007-01-05                     | 7,751,392                | 2010-07-06               | Customer link diversity monitoring                                                                                               |
| 293                  | 11/375,649                    | 2006-03-14                     | 7,751,549                | 2010-07-06               | Tandem switch migration method                                                                                                   |
| 294                  | 11/637,575                    | 2006-12-12                     | 7,751,996                | 2010-07-06               | Measurement system for determining desired/undesired ratio of wireless video signals                                             |
| 295                  | 11/948,685                    | 2007-11-30                     | 7,752,292                | 2010-07-06               | System and method for provisioning personalized data into mobile device                                                          |
| 296                  | 12/052,150                    | 2008-03-20                     | 7,756,022                | 2010-07-13               | Secure hidden route in a data network                                                                                            |
| 297                  | 11/758,488                    | 2007-06-05                     | 7,761,098                | 2010-07-20               | Handset mode selection based on user preferences                                                                                 |
| 298                  | 11/339,190                    | 2006-01-25                     | 7,761,595                | 2010-07-20               | Dynamic server addition using virtual routing                                                                                    |
| 299                  | 12/053,785                    | 2008-03-24                     | 7,764,600                | 2010-07-27               | Providing an alternative service application to obtain a communication service when the current service application is inhibited |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------|
| 300                  | 11/294,162                    | 2005-12-05                     | 7,764,780                | 2010-07-27               | Key to correlate a call with call-handling information                                                           |
| 301                  | 11/609,233                    | 2006-12-11                     | 7,769,009                | 2010-08-03               | Automatic peer to peer mobile device data replication                                                            |
| 302                  | 11/539,546                    | 2006-10-06                     | 7,769,394                | 2010-08-03               | System and method for location-based device control                                                              |
| 303                  | 11/406,959                    | 2006-04-19                     | 7,769,412                | 2010-08-03               | Wearable wireless telecommunications systems                                                                     |
| 304                  | 12/104,420                    | 2008-04-16                     | 7,769,596                | 2010-08-03               | Intelligent service traffic management                                                                           |
| 305                  | 11/395,190                    | 2006-03-31                     | 7,769,805                | 2010-08-03               | Mobile device catalog and caching and architecture                                                               |
| 306                  | 10/034,012                    | 2001-12-20                     | 7,769,865                | 2010-08-03               | Configuring computer network communications in response to detected firewalls                                    |
| 307                  | 11/689,701                    | 2007-03-22                     | 7,769,882                | 2010-08-03               | Bandwidth projection for customer bandwidth usage                                                                |
| 308                  | 11/277,241                    | 2006-03-23                     | 7,769,887                | 2010-08-03               | Opportunistic data transfer over heterogeneous wireless networks                                                 |
| 309                  | 11/103,206                    | 2005-04-11                     | 7,773,555                | 2010-08-10               | Extension of an ethernet backhaul system for wireless base stations over a cable television distribution network |
| 310                  | 11/951,708                    | 2007-12-06                     | 7,773,634                | 2010-08-10               | Algorithms for constructing sets of frequently occurring strings                                                 |
| 311                  | 10/755,512                    | 2004-01-12                     | 7,783,030                | 2010-08-24               | Graphical call-route scripting system and method                                                                 |
| 312                  | 12/041,023                    | 2008-03-03                     | 7,787,496                | 2010-08-31               | Packet fragmentation techniques for multiple t-1 lines                                                           |
| 313                  | 11/280,777                    | 2005-11-16                     | 7,787,856                | 2010-08-31               | Converged emergency service call handling                                                                        |
| 314                  | 11/272,224                    | 2005-11-10                     | 7,788,491                | 2010-08-31               | Use of encryption for secure communication exchanges                                                             |
| 315                  | 12/119,560                    | 2008-05-13                     | 7,788,547                | 2010-08-31               | Systems and methods for generation of communication channel fault information                                    |
| 316                  | 11/337,367                    | 2006-01-23                     | 7,788,568                | 2010-08-31               | System and method for characterizing error correction performance for digital data                               |

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|---------------|------------------------|-------------------------|-------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|               |                        |                         |                   |                   | transport over an ip network                                                                                                                             |
| 317           | 11/208,794             | 2005-08-22              | 7,792,021         | 2010-09-07        | Solutions for preventing routing loops and load balancing when connected to a multihomed autonomous system                                               |
| 318           | 11/026,979             | 2004-12-30              | 7,792,094         | 2010-09-07        | System and method to provide services from a communication network to a media-delivery network via a host device connected to the media-delivery network |
| 319           | 11/468,254             | 2006-08-29              | 7,796,581         | 2010-09-14        | Automated route control for a communication network                                                                                                      |
| 320           | 12/399,148             | 2009-03-06              | 7,796,601         | 2010-09-14        | Internet protocol data transfer over diverse paths                                                                                                       |
| 321           | 11/682,923             | 2007-03-07              | 7,796,643         | 2010-09-14        | Source and event based parameter determination                                                                                                           |
| 322           | 11/049,120             | 2005-02-01              | 7,796,890         | 2010-09-14        | Hybrid pon/surface wave terrestrial access                                                                                                               |
| 323           | 11/464,002             | 2006-08-11              | 7,796,980         | 2010-09-14        | Remote mobile voice control of digital/personal video recorder                                                                                           |
| 324           | 10/307,865             | 2002-12-02              | 7,797,190         | 2010-09-14        | Prepaid internet service                                                                                                                                 |
| 325           | 12/172,085             | 2008-07-11              | 7,797,248         | 2010-09-14        | Automated confirmation of transit card fund replenishment                                                                                                |
| 326           | 11/335,354             | 2006-01-19              | 7,797,395         | 2010-09-14        | Assignment of data flows to storage systems in a data storage infrastructure for a communication network                                                 |
| 327           | 11/436,683             | 2006-05-18              | 7,797,441         | 2010-09-14        | Methods and systems for streaming advertising content                                                                                                    |
| 328           | 11/449,078             | 2006-06-08              | 7,801,518         | 2010-09-21        | Communication device usage event profiling                                                                                                               |
| 329           | 11/621,563             | 2007-01-10              | 7,801,972         | 2010-09-21        | Mobile device access to back office data store                                                                                                           |
| 330           | 11/335,314             | 2006-01-19              | 7,801,973         | 2010-09-21        | Classification of information in data flows in a data storage infrastructure for a                                                                       |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------|
|                      |                               |                                |                          |                          | communication network                                                  |
| 331                  | 09/594,070                    | 2000-06-14                     | 7,802,010                | 2010-09-21               | Computer network method and system for guaranteed messaging service    |
| 332                  | 11/427,389                    | 2006-06-29                     | 7,817,607                | 2010-10-19               | Private mobile ip connection in a shared-pool environment              |
| 333                  | 12/167,389                    | 2008-07-03                     | 7,817,615                | 2010-10-19               | Cross-network quality-of-service verification                          |
| 334                  | 11/491,435                    | 2006-07-21                     | 7,818,288                | 2010-10-19               | Etom enhancement of functional requirements modeling                   |
| 335                  | 12/015,354                    | 2008-01-16                     | 7,818,372                | 2010-10-19               | Web portal framework for open innovation                               |
| 336                  | 11/235,830                    | 2005-09-27                     | 7,818,410                | 2010-10-19               | System and method of implementing major application migration          |
| 337                  | 11/116,856                    | 2005-04-28                     | 7,818,631                | 2010-10-19               | Method and system for automatically generating network trouble tickets |
| 338                  | 10/815,518                    | 2004-04-01                     | 7,823,192                | 2010-10-26               | Application-to-application security in enterprise security services    |
| 339                  | 12/131,218                    | 2008-06-02                     | 7,823,779                | 2010-11-02               | Complimentary optical image and radio frequency signal processing      |
| 340                  | 12/043,293                    | 2008-03-06                     | 7,826,189                | 2010-11-02               | Battery swell triggered override system                                |
| 341                  | 11/449,077                    | 2006-06-08                     | 7,827,548                | 2010-11-02               | Environment-neutral application build                                  |
| 342                  | 11/626,087                    | 2007-01-23                     | 7,827,615                | 2010-11-02               | Hybrid role-based discretionary access control                         |
| 343                  | 11/838,175                    | 2007-08-13                     | 7,830,816                | 2010-11-09               | Network access and quality of service troubleshooting                  |
| 344                  | 12/032,901                    | 2008-02-18                     | 7,831,695                | 2010-11-09               | System and method for it system migration management                   |
| 345                  | 12/036,289                    | 2008-02-24                     | 7,831,709                | 2010-11-09               | Flexible grouping for port analysis                                    |
| 346                  | 11/690,291                    | 2007-03-23                     | 7,832,634                | 2010-11-16               | Customer care intelligent routing                                      |
| 347                  | 11/942,098                    | 2007-11-19                     | 7,835,272                | 2010-11-16               | Backhaul path diversity for wireless networks                          |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------|
| 348                  | 11/530,159                    | 2006-09-08                     | 7,835,275                | 2010-11-16               | Dynamic assignment of quality of service (qos) to an active session in an ipsec tunnel      |
| 349                  | 11/671,590                    | 2007-02-06                     | 7,839,787                | 2010-11-23               | Delay-based overflow routing in communication systems                                       |
| 350                  | 12/116,046                    | 2008-05-06                     | 7,843,327                | 2010-11-30               | Proximity detection and alerting                                                            |
| 351                  | 09/981,015                    | 2001-10-17                     | 7,843,963                | 2010-11-30               | Probe device for determining channel information in a broadband wireless system             |
| 352                  | 11/459,498                    | 2006-07-24                     | 7,844,043                | 2010-11-30               | Telecommunication network that provides caller-entered information to a call destination    |
| 353                  | 11/946,039                    | 2007-11-27                     | 7,850,067                | 2010-12-14               | Color bar codes                                                                             |
| 354                  | 10/738,598                    | 2003-12-17                     | 7,853,786                | 2010-12-14               | Rules engine architecture and implementation                                                |
| 355                  | 11/862,768                    | 2007-09-27                     | 7,864,048                | 2011-01-04               | Device location transition awareness in a wireless modem                                    |
| 356                  | 11/416,536                    | 2006-05-03                     | 7,864,941                | 2011-01-04               | Modifying call system identifiers to indicate keys associated with user information         |
| 357                  | 10/035,620                    | 2001-12-28                     | 7,865,185                | 2011-01-04               | System and method for multiple access communications                                        |
| 358                  | 12/133,501                    | 2008-06-05                     | 7,870,274                | 2011-01-11               | Plug-in file sharing                                                                        |
| 359                  | 11/962,253                    | 2007-12-21                     | 7,873,042                | 2011-01-18               | Multi-layered packet security                                                               |
| 360                  | 12/116,598                    | 2008-05-07                     | 7,875,995                | 2011-01-25               | Power system for a device                                                                   |
| 361                  | 11/839,946                    | 2007-08-16                     | 7,876,728                | 2011-01-25               | Maintaining path optimization during foreign agent handoff                                  |
| 362                  | 12/114,534                    | 2008-05-02                     | 7,877,525                | 2011-01-25               | Resuming media objects delivered via progressive downloading services upon data loss events |
| 363                  | 11/612,084                    | 2006-12-18                     | 7,878,008                | 2011-02-01               | Smart rack and intelligent wireless climate sensors                                         |
| 364                  | 10/884,129                    | 2004-07-02                     | 7,881,281                | 2011-02-01               | Border control system, method, and software                                                 |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------|
| 365                  | 11/471,045                    | 2006-06-19                     | 7,881,752                | 2011-02-01               | Hybrid architecture that combines a metropolitan-area network fiber system with a multi-link antenna array    |
| 366                  | 12/169,630                    | 2008-07-08                     | 7,886,047                | 2011-02-08               | Audience measurement of wireless web subscribers                                                              |
| 367                  | 11/951,952                    | 2007-12-06                     | 7,890,870                | 2011-02-15               | Monitoring network functions concurrently utilizing a performance display                                     |
| 368                  | 11/951,329                    | 2007-12-05                     | 7,894,361                | 2011-02-22               | System and method for network capacity engineering                                                            |
| 369                  | 10/964,769                    | 2004-10-15                     | 7,894,587                | 2011-02-22               | System and method for dynamic assignment of dialed number identification services in call distribution system |
| 370                  | 12/613,860                    | 2009-11-06                     | 7,895,631                | 2011-02-22               | Wireless set-top unit and related methods                                                                     |
| 371                  | 11/751,722                    | 2007-05-22                     | 7,895,642                | 2011-02-22               | Tiered security services                                                                                      |
| 372                  | 12/399,255                    | 2009-03-06                     | 7,899,037                | 2011-03-01               | Voice session and data session coordination in a communication device                                         |
| 373                  | 10/755,520                    | 2004-01-12                     | 7,899,177                | 2011-03-01               | Call-routing system and method                                                                                |
| 374                  | 11/432,188                    | 2006-05-11                     | 7,899,706                | 2011-03-01               | Systems and methods for dynamic privacy management                                                            |
| 375                  | 11/875,573                    | 2007-10-19                     | 7,899,998                | 2011-03-01               | Conflict avoidance in data store replication                                                                  |
| 376                  | 09/981,977                    | 2001-10-17                     | 7,904,542                | 2011-03-08               | Probe device for testing broadband wireless system                                                            |
| 377                  | 12/273,537                    | 2008-11-18                     | 7,904,553                | 2011-03-08               | Translating network data into customer availability                                                           |
| 378                  | 11/840,211                    | 2007-08-16                     | 7,904,689                | 2011-03-08               | Just in time storage allocation analysis systems and methods                                                  |
| 379                  | 11/374,650                    | 2006-03-13                     | 7,907,213                | 2011-03-15               | Wireless multimedia content at television host device                                                         |
| 380                  | 11/830,470                    | 2007-07-30                     | 7,907,616                | 2011-03-15               | Dynamically modifiable quality of service indicator                                                           |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 381                  | 11/493,888                    | 2006-07-26                     | 7,908,167                | 2011-03-15               | System and method for analysis of project variances                                                                              |
| 382                  | 11/204,821                    | 2005-08-16                     | 7,908,655                | 2011-03-15               | Connectionless port scan detection on a network                                                                                  |
| 383                  | 11/265,480                    | 2005-11-02                     | 7,911,964                | 2011-03-22               | Entity based quality of service response for packet service sessions                                                             |
| 384                  | 11/531,576                    | 2006-09-13                     | 7,916,166                | 2011-03-29               | Wireless video conferencing with mobility                                                                                        |
| 385                  | 12/368,059                    | 2009-02-09                     | 7,916,693                | 2011-03-29               | System and method for selecting spectrum                                                                                         |
| 386                  | 11/126,566                    | 2005-05-11                     | 7,916,742                | 2011-03-29               | Dynamic jitter buffer calibration                                                                                                |
| 387                  | 11/175,421                    | 2005-07-06                     | 7,917,407                | 2011-03-29               | Computer-implemented system and method for defining architecture of a computer system                                            |
| 388                  | 11/036,311                    | 2005-01-14                     | 7,917,625                | 2011-03-29               | Predictive processing resource level control                                                                                     |
| 389                  | 11/346,019                    | 2006-02-02                     | 7,920,679                | 2011-04-05               | Communication system and method for notifying persons of an emergency telephone call                                             |
| 390                  | 11/531,022                    | 2006-09-12                     | 7,920,688                | 2011-04-05               | Service variation selection                                                                                                      |
| 391                  | 12/131,560                    | 2008-06-02                     | 7,924,738                | 2011-04-12               | Selecting a differential treatment field value                                                                                   |
| 392                  | 11/205,807                    | 2005-08-17                     | 7,924,741                | 2011-04-12               | Session quality information collection and correlation                                                                           |
| 393                  | 11/697,139                    | 2007-04-05                     | 7,924,789                | 2011-04-12               | Foreign agent address assignment for mobile ip path optimization                                                                 |
| 394                  | 10/858,915                    | 2004-06-02                     | 7,924,812                | 2011-04-12               | Domain and service based update messaging                                                                                        |
| 395                  | 11/867,398                    | 2007-10-04                     | 7,924,853                | 2011-04-12               | Method of maintaining a communication network                                                                                    |
| 396                  | 10/790,459                    | 2004-03-01                     | 7,924,997                | 2011-04-12               | Method and apparatus for transferring services for a first location to a different location in response to a predetermined event |

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| 397                  | 11/624,891                    | 2007-01-19                     | 7,925,270                | 2011-04-12               | Antenna-to-base station selection system                                                   |
| 398                  | 11/621,562                    | 2007-01-10                     | 7,925,304                | 2011-04-12               | Audio manipulation systems and methods                                                     |
| 399                  | 12/566,746                    | 2009-09-25                     | 7,925,961                | 2011-04-12               | Adaptive error correction                                                                  |
| 400                  | 11/359,280                    | 2006-02-22                     | 7,925,974                | 2011-04-12               | Distribution of computation linguistics                                                    |
| 401                  | 12/631,372                    | 2009-12-04                     | 7,926,714                | 2011-04-19               | Context-based card selection device                                                        |
| 402                  | 11/138,573                    | 2005-05-26                     | 7,929,465                | 2011-04-19               | Method of providing digital data service to users of video telephony calls                 |
| 403                  | 12/235,330                    | 2008-09-22                     | 7,930,421                | 2011-04-19               | Automated network source changes for real-time streaming media                             |
| 404                  | 12/195,815                    | 2008-08-21                     | 7,933,221                | 2011-04-26               | Regulating dataflow between a mobile device and a wireless telecommunications network      |
| 405                  | 11/734,575                    | 2007-04-12                     | 7,933,994                | 2011-04-26               | Extracting embedded nais (network access identifiers)                                      |
| 406                  | 12/030,445                    | 2008-02-13                     | 7,934,028                | 2011-04-26               | Managing queue capacity in a messaging queue in a computing environment                    |
| 407                  | 12/370,262                    | 2009-02-12                     | 7,941,550                | 2011-05-10               | Multiple cookie handling                                                                   |
| 408                  | 11/779,900                    | 2007-07-19                     | 7,945,271                | 2011-05-17               | Location inference using radio frequency fingerprinting                                    |
| 409                  | 12/018,194                    | 2008-01-22                     | 7,945,556                | 2011-05-17               | Web log filtering                                                                          |
| 410                  | 12/028,927                    | 2008-02-11                     | 7,945,573                | 2011-05-17               | Dynamic transcoding to stitch streaming digital content                                    |
| 411                  | 11/117,115                    | 2005-04-28                     | 7,945,817                | 2011-05-17               | Method and system for automatically recognizing alarm patterns in a communications network |
| 412                  | 11/857,480                    | 2007-09-19                     | 7,948,978                | 2011-05-24               | Packet processing in a communication network element with stacked applications             |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 413                  | 12/251,201                    | 2008-10-14                     | 7,952,512                | 2011-05-31               | Mobile device enabled radar tags                                                                                        |
| 414                  | 11/623,975                    | 2007-01-17                     | 7,953,099                | 2011-05-31               | Fully integrated joined line records                                                                                    |
| 415                  | 12/634,063                    | 2009-12-09                     | 7,953,870                | 2011-05-31               | Dynamic http service timeout adjustment                                                                                 |
| 416                  | 11/945,076                    | 2007-11-26                     | 7,957,691                | 2011-06-07               | Distributing content to mobile devices                                                                                  |
| 417                  | 12/485,102                    | 2009-06-16                     | 7,961,611                | 2011-06-14               | System and method for traffic allocation                                                                                |
| 418                  | 12/778,720                    | 2010-05-12                     | 7,966,387                | 2011-06-21               | System and method for provisioning personalized data into mobile device                                                 |
| 419                  | 12/058,529                    | 2008-03-28                     | 7,967,196                | 2011-06-28               | Electronic wallet ready to pay timer                                                                                    |
| 420                  | 12/139,593                    | 2008-06-16                     | 7,969,987                | 2011-06-28               | Internet service node incorporating a bandwidth measurement device and associated methods for evaluating data transfers |
| 421                  | 11/534,633                    | 2006-09-22                     | 7,970,436                | 2011-06-28               | Wireless interface extension for mobile devices                                                                         |
| 422                  | 12/173,205                    | 2008-07-15                     | 7,974,205                | 2011-07-05               | Method and system for the distribution of internet protocol traffic in a communication system                           |
| 423                  | 12/844,688                    | 2010-07-27                     | 7,974,616                | 2011-07-05               | Communication device usage event profiling                                                                              |
| 424                  | 12/192,738                    | 2008-08-15                     | 7,974,620                | 2011-07-05               | Selection of roaming partners based on load value                                                                       |
| 425                  | 11/623,507                    | 2007-01-16                     | 7,974,622                | 2011-07-05               | Provisioning system for fixed vs. nomadic wireless services                                                             |
| 426                  | 10/272,423                    | 2002-10-16                     | 7,979,297                | 2011-07-12               | Order tracking and reporting tool                                                                                       |
| 427                  | 11/949,498                    | 2007-12-03                     | 7,979,564                | 2011-07-12               | Traffic differentiated network services                                                                                 |
| 428                  | 12/757,514                    | 2010-04-09                     | 7,982,340                | 2011-07-19               | Telecommunications megasite with backup power system                                                                    |
| 429                  | 11/289,896                    | 2005-11-30                     | 7,983,277                | 2011-07-19               | System and method for creating a secure connection over an mpls                                                         |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------------|
|                      |                               |                                |                          |                          | network                                                                                             |
| 430                  | 11/924,860                    | 2007-10-26                     | 7,986,935                | 2011-07-26               | Service plan optimizer                                                                              |
| 431                  | 11/183,581                    | 2005-07-18                     | 7,987,493                | 2011-07-26               | Method and system for mitigating distributed denial of service attacks using centralized management |
| 432                  | 12/107,406                    | 2008-04-22                     | 7,991,156                | 2011-08-02               | Digital rights management negotiation for streaming media over a network                            |
| 433                  | 12/351,615                    | 2009-01-09                     | 7,991,422                | 2011-08-02               | Dynamically adjusting a power level utilizing reverse activity bits efficiently                     |
| 434                  | 12/060,313                    | 2008-04-01                     | 7,995,117                | 2011-08-09               | Methods and systems for associating an image with a location                                        |
| 435                  | 11/248,688                    | 2005-10-12                     | 7,995,756                | 2011-08-09               | Mobile device playback and control of media content from a personal media host device               |
| 436                  | 11/747,995                    | 2007-05-14                     | 7,996,696                | 2011-08-09               | Updating kernel affinity for applications executing in a multiprocessor system                      |
| 437                  | 11/531,864                    | 2006-09-14                     | 8,000,317                | 2011-08-16               | Vop (voice over packet) automatic call distribution                                                 |
| 438                  | 11/764,665                    | 2007-06-18                     | 8,000,678                | 2011-08-16               | Information provisioning for emergency calls                                                        |
| 439                  | 11/853,293                    | 2007-09-11                     | 8,000,708                | 2011-08-16               | Seamless inter-network handoff                                                                      |
| 440                  | 11/249,195                    | 2005-10-13                     | 8,001,217                | 2011-08-16               | Prediction-based adaptive content broadcasting over a network                                       |
| 441                  | 12/390,406                    | 2009-02-20                     | 8,005,644                | 2011-08-23               | Application transaction analysis                                                                    |
| 442                  | 11/548,965                    | 2006-10-12                     | 8,009,575                | 2011-08-30               | Network capacity forecasting and maintenance                                                        |
| 443                  | 11/686,179                    | 2007-03-14                     | 8,010,134                | 2011-08-30               | Architecture for mobile advertising with location                                                   |
| 444                  | 11/617,709                    | 2006-12-28                     | 8,010,418                | 2011-08-30               | System and method for identifying and managing social circles                                       |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------|
| 445                  | 12/259,584                    | 2008-10-28                     | 8,011,002                | 2011-08-30               | Forcing a mobile browser to access web content through a proxy                                                      |
| 446                  | 12/416,732                    | 2009-04-01                     | 8,014,292                | 2011-09-06               | Dynamic location routing protocol                                                                                   |
| 447                  | 11/417,376                    | 2006-05-04                     | 8,014,298                | 2011-09-06               | Delayed service restoration                                                                                         |
| 448                  | 11/627,623                    | 2007-01-26                     | 8,014,733                | 2011-09-06               | Wearable system for enabling mobile communications                                                                  |
| 449                  | 12/907,014                    | 2010-10-18                     | 8,018,334                | 2011-09-13               | Proximity detection and alerting                                                                                    |
| 450                  | 11/620,831                    | 2007-01-08                     | 8,027,305                | 2011-09-27               | Communication network and method employing state information in providing communication services to a mobile device |
| 451                  | 11/925,263                    | 2007-10-26                     | 8,027,308                | 2011-09-27               | Method of optimizing handoff time in a wireless telecommunication network through dynamic data source control       |
| 452                  | 11/450,794                    | 2006-06-08                     | 8,027,357                | 2011-09-27               | Broadband wireless communications using multiple contention channels                                                |
| 453                  | 10/075,336                    | 2002-02-13                     | 8,027,921                | 2011-09-27               | Method and software for migrating protected authentication data                                                     |
| 454                  | 10/619,296                    | 2003-07-14                     | 8,027,922                | 2011-09-27               | Integration infrastructure                                                                                          |
| 455                  | 12/567,293                    | 2009-09-25                     | 8,028,197                | 2011-09-27               | Problem ticket cause allocation                                                                                     |
| 456                  | 11/463,723                    | 2006-08-10                     | 8,028,337                | 2011-09-27               | Profile-aware filtering of network traffic                                                                          |
| 457                  | 12/977,171                    | 2010-12-23                     | 8,032,671                | 2011-10-04               | Resuming media objects delivered via progressive downloading services upon data loss events                         |
| 458                  | 11/457,964                    | 2006-07-17                     | 8,036,172                | 2011-10-11               | Stateful home agent recovery protocol (sharp)                                                                       |
| 459                  | 11/858,112                    | 2007-09-19                     | 8,036,598                | 2011-10-11               | Peer-to-peer transfer of files with back-office completion                                                          |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------|
| 460                  | 12/109,537                    | 2008-04-25                     | 8,036,636                | 2011-10-11               | Access gateway record suppression                                                                      |
| 461                  | 12/124,885                    | 2008-05-21                     | 8,036,646                | 2011-10-11               | Right-sized multimedia content distribution over a cellular network                                    |
| 462                  | 12/133,351                    | 2008-06-04                     | 8,036,690                | 2011-10-11               | Download prioritization for intelligent content distribution                                           |
| 463                  | 11/492,319                    | 2006-07-25                     | 8,037,406                | 2011-10-11               | Dynamic screen generation and navigation engine                                                        |
| 464                  | 11/851,949                    | 2007-09-07                     | 8,037,511                | 2011-10-11               | Utilizing a mobile device to operate an electronic locking mechanism                                   |
| 465                  | 11/116,742                    | 2005-04-28                     | 8,041,799                | 2011-10-18               | Method and system for managing alarms in a communications network                                      |
| 466                  | 11/617,707                    | 2006-12-28                     | 8,046,803                | 2011-10-25               | Contextual multimedia metatagging                                                                      |
| 467                  | 12/114,528                    | 2008-05-02                     | 8,050,715                | 2011-11-01               | Modular mobile device                                                                                  |
| 468                  | 12/265,338                    | 2008-11-05                     | 8,051,200                | 2011-11-01               | Forming multi-user packet based groups using response behavior                                         |
| 469                  | 11/288,705                    | 2005-11-29                     | 8,051,298                | 2011-11-01               | Integrated fingerprinting in configuration audit and management                                        |
| 470                  | 12/022,903                    | 2008-01-30                     | 8,055,184                | 2011-11-08               | System and method for active jamming of confidential information transmitted at a point-of-sale reader |
| 471                  | 12/265,424                    | 2008-11-05                     | 8,055,238                | 2011-11-08               | Prepaid handset credit activation                                                                      |
| 472                  | 11/614,183                    | 2006-12-21                     | 8,055,247                | 2011-11-08               | Mobile audible data services                                                                           |
| 473                  | 12/352,966                    | 2009-01-13                     | 8,055,287                | 2011-11-08               | Adaptive retry algorithm for short message service message delivery                                    |
| 474                  | 12/367,348                    | 2009-02-06                     | 8,055,295                | 2011-11-08               | Load-based selection of a frequency band class for a wireless communication device                     |
| 475                  | 11/936,074                    | 2007-11-06                     | 8,055,296                | 2011-11-08               | Head-up display communication system and method                                                        |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------|
| 476                  | 12/418,974                    | 2009-04-06                     | 8,055,790                | 2011-11-08               | Assignment of domain name system (dns) servers                                          |
| 477                  | 11/756,836                    | 2007-06-01                     | 8,058,969                | 2011-11-15               | Biopresence based keyguard mechanism                                                    |
| 478                  | 10/973,640                    | 2004-10-26                     | 8,059,548                | 2011-11-15               | Automatic displaying of alarms in a communications network                              |
| 479                  | 11/696,480                    | 2007-04-04                     | 8,059,599                | 2011-11-15               | Gateway assignment function                                                             |
| 480                  | 12/787,251                    | 2010-05-25                     | 8,059,616                | 2011-11-15               | Parallel wireless scheduler                                                             |
| 481                  | 12/463,852                    | 2009-05-11                     | 8,059,643                | 2011-11-15               | Ipv4 and ipv6 single session on a home agent                                            |
| 482                  | 11/131,884                    | 2005-05-18                     | 8,059,672                | 2011-11-15               | Internet communications between wireless base stations and service nodes                |
| 483                  | 11/840,044                    | 2007-08-16                     | 8,059,799                | 2011-11-15               | Algorithm to make optimal use of network resources during a mass calling event          |
| 484                  | 11/066,094                    | 2005-02-24                     | 8,059,811                | 2011-11-15               | System and method for controlling a call processing system                              |
| 485                  | 12/249,073                    | 2008-10-10                     | 8,059,958                | 2011-11-15               | Measurement of polarization dependent loss in an optical transmission system            |
| 486                  | 12/186,181                    | 2008-08-05                     | 8,060,060                | 2011-11-15               | Selectively limiting communications through a port of a mobile communications device    |
| 487                  | 11/851,668                    | 2007-09-07                     | 8,060,063                | 2011-11-15               | Presenting messages on a mobile device that is currently presenting other media content |
| 488                  | 12/060,692                    | 2008-04-01                     | 8,060,065                | 2011-11-15               | Managing outgoing voicemail messages                                                    |
| 489                  | 11/870,112                    | 2007-10-10                     | 8,060,068                | 2011-11-15               | Interactive mobile caller-identification information on a television                    |
| 490                  | 12/060,707                    | 2008-04-01                     | 8,060,069                | 2011-11-15               | Mobile call outcome display                                                             |
| 491                  | 12/368,096                    | 2009-02-09                     | 8,060,073                | 2011-11-15               | System and method for provisioning a communication device based upon device capability  |

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| 492                  | 12/412,146                    | 2009-03-26                     | 8,060,154                | 2011-11-15               | Conserving power on a mobile device                                                 |
| 493                  | 11/850,029                    | 2007-09-04                     | 8,060,407                | 2011-11-15               | Method for providing personalized, targeted advertisements during playback of media |
| 494                  | 12/348,371                    | 2009-01-05                     | 8,060,449                | 2011-11-15               | Partially delegated over-the-air provisioning of a secure element                   |
| 495                  | 10/186,852                    | 2002-07-01                     | 8,060,598                | 2011-11-15               | Computer network multicasting traffic monitoring and compensation                   |
| 496                  | 11/734,570                    | 2007-04-12                     | 8,060,612                | 2011-11-15               | Nai (network access identifier) embedding                                           |
| 497                  | 11/209,578                    | 2005-08-23                     | 8,060,624                | 2011-11-15               | Initiating a communication session from a presence enabled media host device        |
| 498                  | 12/040,031                    | 2008-02-29                     | 8,060,655                | 2011-11-15               | User interface for customer premises communications gateway                         |
| 499                  | 12/212,862                    | 2008-09-18                     | 8,060,697                | 2011-11-15               | Dynamically allocated secondary browser cache                                       |
| 500                  | 12/351,460                    | 2009-01-09                     | 8,064,893                | 2011-11-22               | Preventing spam messages                                                            |
| 501                  | 12/179,921                    | 2008-07-25                     | 8,069,469                | 2011-11-29               | Addressing security in asymmetrical networks                                        |
| 502                  | 12/357,000                    | 2009-01-21                     | 8,073,455                | 2011-12-06               | Resource allocation through bouncing-busy hour traffic modeling                     |
| 503                  | 12/026,224                    | 2008-02-05                     | 8,083,140                | 2011-12-27               | System and method of over-the-air provisioning                                      |
| 504                  | 12/266,867                    | 2008-11-07                     | 8,103,304                | 2012-01-24               | Determining presence status using heat and motion detection                         |
| 505                  | 12/015,336                    | 2008-01-16                     | 8,107,375                | 2012-01-31               | Bandwidth projection for customer bandwidth usage                                   |
| 506                  | 12/512,431                    | 2009-07-30                     | 8,107,380                | 2012-01-31               | System and method for operating a communication system                              |
| 507                  | 12/239,140                    | 2008-09-26                     | 8,107,452                | 2012-01-31               | Customizing a browsing experience on a mobile communications device                 |

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| 508                  | 12/437,300                    | 2009-05-07                     | 8,107,475                | 2012-01-31               | Method and procedure for increasing ipv4 address space                                             |
| 509                  | 12/186,219                    | 2008-08-05                     | 8,107,923                | 2012-01-31               | Restricting access to system-provider information stored in a mobile communications device         |
| 510                  | 12/496,412                    | 2009-07-01                     | 8,108,349                | 2012-01-31               | Directory services integration and replication system                                              |
| 511                  | 12/633,438                    | 2009-12-08                     | 8,108,569                | 2012-01-31               | Data flow manager for device mobility                                                              |
| 512                  | 11/530,154                    | 2006-09-08                     | 8,111,620                | 2012-02-07               | Ability to provide quality of service (qos) to an ipsec tunnel in a foreign network                |
| 513                  | 12/512,287                    | 2009-07-30                     | 8,111,705                | 2012-02-07               | Providing access-network information to an ip-core portion of a wireless telecommunication network |
| 514                  | 12/854,666                    | 2010-08-11                     | 8,116,761                | 2012-02-14               | Modifying wireless network paging zone broadcast based on wireless access congestion               |
| 515                  | 12/349,510                    | 2009-01-06                     | 8,117,123                | 2012-02-14               | Local storage and presentation of self-help information                                            |
| 516                  | 12/635,176                    | 2009-12-10                     | 8,117,285                | 2012-02-14               | System and method for bundled content delivery                                                     |
| 517                  | 12/037,627                    | 2008-02-26                     | 8,117,550                | 2012-02-14               | Real to virtual telecommunications                                                                 |
| 518                  | 12/348,362                    | 2009-01-05                     | 8,120,460                | 2012-02-21               | Electronic key provisioning                                                                        |
| 519                  | 11/324,671                    | 2006-01-03                     | 8,121,028                | 2012-02-21               | Quality of service provisioning for packet service sessions in communication networks              |
| 520                  | 13/045,306                    | 2011-03-10                     | 8,123,128                | 2012-02-28               | Context-based card selection device                                                                |
| 521                  | 11/978,834                    | 2007-10-30                     | 8,126,439                | 2012-02-28               | Persona management for mobile enabling services                                                    |
| 522                  | 11/539,538                    | 2006-10-06                     | 8,126,782                | 2012-02-28               | Method and device for location integrated ordering and queue placement                             |
| 523                  | 11/949,759                    | 2007-12-03                     | 8,126,806                | 2012-02-28               | Method for launching an electronic wallet                                                          |

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| 524                  | 12/139,937                    | 2008-06-16                     | 8,127,305                | 2012-02-28               | Rerouting messages to parallel queue instances                                            |
| 525                  | 12/180,264                    | 2008-07-25                     | 8,127,308                | 2012-02-28               | System and method for asynchronous processing in cobol                                    |
| 526                  | 11/835,639                    | 2007-08-08                     | 8,130,722                | 2012-03-06               | Access technology agnostic foreign agent                                                  |
| 527                  | 12/394,252                    | 2009-02-27                     | 8,131,283                | 2012-03-06               | Controlling mobile device roaming in association with monitoring an active event duration |
| 528                  | 11/253,890                    | 2005-10-19                     | 8,132,001                | 2012-03-06               | Secure telephony service appliance                                                        |
| 529                  | 12/132,599                    | 2008-06-03                     | 8,135,382                | 2012-03-13               | Billing and oam function integration in a mixed-switching environment                     |
| 530                  | 12/350,066                    | 2009-01-07                     | 8,135,388                | 2012-03-13               | Managing communication network capacity                                                   |
| 531                  | 12/395,902                    | 2009-03-02                     | 8,135,672                | 2012-03-13               | Deleting website-specific data at a wireless-network gateway                              |
| 532                  | 12/100,742                    | 2008-04-10                     | 8,136,139                | 2012-03-13               | Receiving over-the-air licenses to high-quality media content                             |
| 533                  | 12/236,921                    | 2008-09-24                     | 8,139,564                | 2012-03-20               | Configuring guest users for a voip device of a primary user                               |
| 534                  | 11/467,594                    | 2006-08-28                     | 8,139,750                | 2012-03-20               | Early media service control                                                               |
| 535                  | 12/417,002                    | 2009-04-02                     | 8,140,072                | 2012-03-20               | Border zone paging in wireless communication networks                                     |
| 536                  | 13/109,119                    | 2011-05-17                     | 8,144,678                | 2012-03-27               | Mobile device handoff while maintaining connectivity with multiple access points          |
| 537                  | 11/748,343                    | 2007-05-14                     | 8,144,859                | 2012-03-27               | Integrated enum and number portability translation in a communication system              |
| 538                  | 12/348,378                    | 2009-01-05                     | 8,145,561                | 2012-03-27               | Phone usage pattern as credit card fraud detection trigger                                |
| 539                  | 12/512,292                    | 2009-07-30                     | 8,149,788                | 2012-04-03               | Wireless handoffs based upon activity correlation                                         |
| 540                  | 12/136,209                    | 2008-06-10                     | 8,150,015                | 2012-04-03               | System and method of phone bridging                                                       |

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| 541                  | 12/212,981                    | 2008-09-18                     | 8,150,373                | 2012-04-03               | Suppression of short message service communications from a trusted domain                                    |
| 542                  | 12/362,146                    | 2009-01-29                     | 8,151,325                | 2012-04-03               | Optimizing device authentication by discovering internet protocol version authorizations                     |
| 543                  | 11/781,040                    | 2007-07-20                     | 8,151,328                | 2012-04-03               | Accessing secure network areas by utilizing mobile-device authentication                                     |
| 544                  | 12/613,898                    | 2009-11-06                     | 8,151,354                | 2012-04-03               | Detecting and addressing network attacks                                                                     |
| 545                  | 12/340,175                    | 2008-12-19                     | 8,154,244                | 2012-04-10               | Power management of device with modular components                                                           |
| 546                  | 12/816,948                    | 2010-06-16                     | 8,155,655                | 2012-04-10               | Assigning an access channel based on a timer in a wireless communication system                              |
| 547                  | 12/276,566                    | 2008-11-24                     | 8,156,340                | 2012-04-10               | System and method for securing system content by automated device authentication                             |
| 548                  | 12/507,799                    | 2009-07-23                     | 8,156,374                | 2012-04-10               | Problem management for outsized queues                                                                       |
| 549                  | 12/171,451                    | 2008-07-11                     | 8,159,520                | 2012-04-17               | Ensuring quality of a video stream through a telecommunications network                                      |
| 550                  | 12/277,011                    | 2008-11-24                     | 8,159,966                | 2012-04-17               | Packet processing profile selection and delivery in wireless communication systems                           |
| 551                  | 11/349,650                    | 2006-02-08                     | 8,160,231                | 2012-04-17               | Aggregation onto a signaling tunnel of signaling for telephone calls through a digital communication network |
| 552                  | 12/511,490                    | 2009-07-29                     | 8,160,539                | 2012-04-17               | Location provisioning for 911 calls received at a telecommunications relay service                           |
| 553                  | 12/020,341                    | 2008-01-25                     | 8,160,615                | 2012-04-17               | Method and system for generating associations between a user profile and wireless devices                    |
| 554                  | 12/423,701                    | 2009-04-14                     | 8,160,623                | 2012-04-17               | Redirection of sms messages to satellite radio for delivery                                                  |

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| 555                  | 11/851,200                    | 2007-09-06                     | 8,160,812                | 2012-04-17               | Tracking and guidance architecture and method                                       |
| 556                  | 11/757,531                    | 2007-06-04                     | 8,161,174                | 2012-04-17               | Deriving time attributes for a device                                               |
| 557                  | 12/612,484                    | 2009-11-04                     | 8,161,417                | 2012-04-17               | Enhancing usability of a moving touch screen                                        |
| 558                  | 13/292,877                    | 2011-11-09                     | 8,164,205                | 2012-04-24               | Power generation for a cellular tower                                               |
| 559                  | 11/434,844                    | 2006-05-16                     | 8,165,559                | 2012-04-24               | Dynamic access mode determination for emergency service calls                       |
| 560                  | 12/702,270                    | 2010-02-08                     | 8,165,961                | 2012-04-24               | Method and system for setting levels of electronic wallet security                  |
| 561                  | 12/176,776                    | 2008-07-21                     | 8,166,019                | 2012-04-24               | Providing suggested actions in response to textual communications                   |
| 562                  | 12/393,273                    | 2009-02-26                     | 8,169,904                | 2012-05-01               | Feedback for downlink sensitivity                                                   |
| 563                  | 12/186,941                    | 2008-08-06                     | 8,169,907                | 2012-05-01               | Method and system for delivering a multi-user packet                                |
| 564                  | 12/016,070                    | 2008-01-17                     | 8,170,547                | 2012-05-01               | Dynamic adjustment of a base transceiver station in a wireless communication system |
| 565                  | 12/247,285                    | 2008-10-08                     | 8,175,614                | 2012-05-08               | Method and system for associating a location with a wireless modem                  |
| 566                  | 11/830,408                    | 2007-07-30                     | 8,176,431                | 2012-05-08               | Overlay menus for web interaction                                                   |
| 567                  | 11/857,488                    | 2007-09-19                     | 8,179,906                | 2012-05-15               | Communication network elements with application stacking                            |
| 568                  | 12/251,680                    | 2008-10-15                     | 8,180,357                | 2012-05-15               | Frequency band class control for a wireless communication device                    |
| 569                  | 12/543,451                    | 2009-08-18                     | 8,180,371                | 2012-05-15               | System and method for mobile device self-location                                   |
| 570                  | 13/095,422                    | 2011-04-27                     | 8,180,399                | 2012-05-15               | Wireless interface extension for mobile devices                                     |
| 571                  | 13/152,142                    | 2011-06-02                     | 8,180,825                | 2012-05-15               | Traffic differentiated network services                                             |
| 572                  | 11/530,191                    | 2006-09-08                     | 8,184,530                | 2012-05-22               | Providing quality of service (qos) using multiple service set                       |

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|               |                        |                         |                   |                   | identifiers (ssid) simultaneously                                                                       |
| 573           | 12/029,987             | 2008-02-12              | 8,185,127         | 2012-05-22        | Method and system for allocating network resources for a single user operating multiple devices         |
| 574           | 11/870,470             | 2007-10-11              | 8,185,139         | 2012-05-22        | Presenting mobile-device message information on a television                                            |
| 575           | 12/245,229             | 2008-10-03              | 8,185,912         | 2012-05-22        | Rerouting messages to parallel queue instances                                                          |
| 576           | 12/502,018             | 2009-07-13              | 8,185,936         | 2012-05-22        | Automatic device-profile updates based on authentication failures                                       |
| 577           | 12/365,187             | 2009-02-04              | 8,189,465         | 2012-05-29        | Deep packet inspection policy enforcement                                                               |
| 578           | 12/510,435             | 2009-07-28              | 8,189,487         | 2012-05-29        | Determination of application latency in a network node                                                  |
| 579           | 12/109,562             | 2008-04-25              | 8,190,120         | 2012-05-29        | Method and system for the creation of location based records                                            |
| 580           | 12/060,320             | 2008-04-01              | 8,190,126         | 2012-05-29        | Covert mode communication                                                                               |
| 581           | 12/368,391             | 2009-02-10              | 8,190,128         | 2012-05-29        | Covert and non-covert mode communication                                                                |
| 582           | 12/163,321             | 2008-06-27              | 8,191,163         | 2012-05-29        | Hybrid streaming and downloading drm in mobile networks                                                 |
| 583           | 12/042,006             | 2008-03-04              | 8,195,152         | 2012-06-05        | Eri (enhanced roaming indicator) implementation                                                         |
| 584           | 12/252,873             | 2008-10-16              | 8,195,169         | 2012-06-05        | Methods and systems for automatically forwarding data messages in a wireless telecommunications network |
| 585           | 12/554,265             | 2009-09-04              | 8,195,218         | 2012-06-05        | Wireless-signal distribution system via set-top box                                                     |
| 586           | 12/275,283             | 2008-11-21              | 8,195,227         | 2012-06-05        | Optical image processing for image set decoding from a wireless communication device                    |
| 587           | 11/951,743             | 2007-12-06              | 8,195,635         | 2012-06-05        | Indicating related but absent media content                                                             |
| 588           | 11/777,655             | 2007-07-13              | 8,195,812         | 2012-06-05        | System and method for establishing a secure wireless                                                    |

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|               |                        |                         |                   |                   | communication path                                                                            |
| 589           | 12/369,293             | 2009-02-11              | 8,195,817         | 2012-06-05        | Authentication of the geographic location of wireless communication devices                   |
| 590           | 12/502,227             | 2009-07-13              | 8,195,819         | 2012-06-05        | Application single sign on leveraging virtual local area network identifier                   |
| 591           | 12/025,478             | 2008-02-04              | 8,200,200         | 2012-06-12        | Localized mobile digital tv                                                                   |
| 592           | 12/755,174             | 2010-04-06              | 8,200,551         | 2012-06-12        | Method and system for providing retail-item-purchasing data in a computer network environment |
| 593           | 12/348,377             | 2009-01-05              | 8,200,582         | 2012-06-12        | Mobile device password system                                                                 |
| 594           | 12/562,836             | 2009-09-18              | 8,200,626         | 2012-06-12        | Mobile device file management                                                                 |
| 595           | 11/466,643             | 2006-08-23              | 8,204,073         | 2012-06-19        | Personalized television                                                                       |
| 596           | 12/628,879             | 2009-12-01              | 8,204,548         | 2012-06-19        | System and method for mobile device application pre-emption                                   |
| 597           | 11/232,699             | 2005-09-22              | 8,204,941         | 2012-06-19        | Presence updating with preferred service determination                                        |
| 598           | 12/335,602             | 2008-12-16              | 8,204,998         | 2012-06-19        | Allocation of connection persistence to mobile browsers                                       |
| 599           | 12/483,127             | 2009-06-11              | 8,205,001         | 2012-06-19        | Digital rights management integrated service solution                                         |
| 600           | 10/737,922             | 2003-12-18              | 8,213,323         | 2012-07-03        | System and method for network performance monitoring                                          |
| 601           | 12/407,563             | 2009-03-19              | 8,213,358         | 2012-07-03        | Reducing communication latency by utilizing a quick-paging channel                            |
| 602           | 12/407,582             | 2009-03-19              | 8,213,371         | 2012-07-03        | Using a synchronized access channel to track a mobile device                                  |
| 603           | 12/108,989             | 2008-04-24              | 8,213,423         | 2012-07-03        | Unique session id sharing                                                                     |
| 604           | 11/364,245             | 2006-02-28              | 8,213,444         | 2012-07-03        | Adaptively adjusting jitter buffer characteristics                                            |
| 605           | 12/370,293             | 2009-02-12              | 8,213,915         | 2012-07-03        | Http session management                                                                       |

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| 606                  | 11/687,791                    | 2007-03-19                     | 8,213,919                | 2012-07-03               | Caller id handling system for calls placed to a mobile phone                                     |
| 607                  | 12/686,188                    | 2010-01-12                     | 8,214,454                | 2012-07-03               | Seamless retrieval of non-standard items for a mobile device                                     |
| 608                  | 12/135,716                    | 2008-06-09                     | 8,214,518                | 2012-07-03               | Dynamic multimedia presentations                                                                 |
| 609                  | 13/022,280                    | 2011-02-07                     | 8,214,520                | 2012-07-03               | Automated network source changes for real-time streaming media                                   |
| 610                  | 13/294,790                    | 2011-11-11                     | 8,214,594                | 2012-07-03               | Dynamically allocated secondary browser cache                                                    |
| 611                  | 12/233,703                    | 2008-09-19                     | 8,219,067                | 2012-07-10               | Delayed display of message                                                                       |
| 612                  | 12/606,537                    | 2009-10-27                     | 8,223,711                | 2012-07-17               | Efficient message delivery to wireless communication devices                                     |
| 613                  | 12/496,563                    | 2009-07-01                     | 8,223,741                | 2012-07-17               | Acting on data packets in a mobile telecommunications network based on inner headers             |
| 614                  | 12/367,382                    | 2009-02-06                     | 8,224,667                | 2012-07-17               | Therapy adherence methods and architecture                                                       |
| 615                  | 12/180,335                    | 2008-07-25                     | 8,228,196                | 2012-07-24               | Displaying advertisements based on electronic tags                                               |
| 616                  | 12/058,390                    | 2008-03-28                     | 8,228,300                | 2012-07-24               | Physical feedback to indicate object directional slide                                           |
| 617                  | 13/250,985                    | 2011-09-30                     | 8,228,933                | 2012-07-24               | Internet communications between wireless base stations and service nodes                         |
| 618                  | 11/442,460                    | 2006-05-26                     | 8,228,957                | 2012-07-24               | Differential delay mitigation in diverse backhaul environments                                   |
| 619                  | 12/511,400                    | 2009-07-29                     | 8,229,414                | 2012-07-24               | Release of temporarily allocated number triggered by voice disconnect at mobile switching center |
| 620                  | 13/215,099                    | 2011-08-22                     | 8,229,415                | 2012-07-24               | Wireless communication data store construction and analysis                                      |
| 621                  | 12/968,351                    | 2010-12-15                     | 8,229,430                | 2012-07-24               | Power adjustment based upon distribution of devices                                              |
| 622                  | 12/701,382                    | 2010-02-05                     | 8,229,477                | 2012-07-24               | Multiple paging channels in wireless communication systems                                       |

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| 623                  | 13/154,094                    | 2011-06-06                     | 8,229,493                | 2012-07-24               | Dynamically adjusting a power level                                                                                 |
| 624                  | 12/704,810                    | 2010-02-12                     | 8,230,504                | 2012-07-24               | Shared tap dos-attack protection                                                                                    |
| 625                  | 12/426,096                    | 2009-04-17                     | 8,233,879                | 2012-07-31               | Mobile device personalization based on previous mobile device usage                                                 |
| 626                  | 12/845,466                    | 2010-07-28                     | 8,233,887                | 2012-07-31               | Covert message redaction and recovery in a wireless communication device                                            |
| 627                  | 12/909,448                    | 2010-10-21                     | 8,233,888                | 2012-07-31               | Leveraging mobile-device analytics for informing and call handling                                                  |
| 628                  | 12/116,644                    | 2008-05-07                     | 8,234,158                | 2012-07-31               | Analyzing text streams for cue points of advertisements in a media stream                                           |
| 629                  | 12/563,307                    | 2009-09-21                     | 8,237,617                | 2012-08-07               | Surface wave antenna mountable on existing conductive structures                                                    |
| 630                  | 11/747,517                    | 2007-05-11                     | 8,238,913                | 2012-08-07               | Wireless network augmentation using other wireless networks                                                         |
| 631                  | 12/686,471                    | 2010-01-13                     | 8,243,656                | 2012-08-14               | Efficient access identifier utilization in wireless access systems                                                  |
| 632                  | 11/950,777                    | 2007-12-05                     | 8,243,679                | 2012-08-14               | Initiating a handover in a communication network                                                                    |
| 633                  | 12/275,820                    | 2008-11-21                     | 8,243,740                | 2012-08-14               | Using domain name server response and internet protocol version 6 to conserve internet protocol version 4 addresses |
| 634                  | 12/358,734                    | 2009-01-23                     | 8,243,911                | 2012-08-14               | Failover mechanism based on historical usage data                                                                   |
| 635                  | 13/207,645                    | 2011-08-11                     | 8,244,169                | 2012-08-14               | System and method for active jamming of confidential information transmitted at a point-of-sale reader              |
| 636                  | 13/029,103                    | 2011-02-16                     | 8,244,277                | 2012-08-14               | Device experience adaptation based on schedules and events                                                          |
| 637                  | 11/445,007                    | 2006-06-01                     | 8,244,832                | 2012-08-14               | Providing location information to website providers                                                                 |

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| 638                  | 12/345,816                    | 2008-12-30                     | 8,244,898                | 2012-08-14               | Single message media session control                                                                 |
| 639                  | 12/273,535                    | 2008-11-18                     | 8,245,192                | 2012-08-14               | Independent software development zones                                                               |
| 640                  | 12/397,993                    | 2009-03-04                     | 8,249,552                | 2012-08-21               | Pre and post-paid service plan manager                                                               |
| 641                  | 12/609,307                    | 2009-10-30                     | 8,249,563                | 2012-08-21               | Location specific content for mobile communication devices                                           |
| 642                  | 12/962,611                    | 2010-12-07                     | 8,249,582                | 2012-08-21               | Self-care client integration with diagnostic client                                                  |
| 643                  | 12/423,172                    | 2009-04-14                     | 8,249,643                | 2012-08-21               | Dual-mode capacity reallocation                                                                      |
| 644                  | 11/863,228                    | 2007-09-27                     | 8,249,654                | 2012-08-21               | Dynamic smart card application loading                                                               |
| 645                  | 12/342,064                    | 2008-12-22                     | 8,249,918                | 2012-08-21               | Context based content adjacency filtering                                                            |
| 646                  | 11/863,229                    | 2007-09-27                     | 8,249,935                | 2012-08-21               | Method and system for blocking confidential information at a point-of-sale reader from eavesdropping |
| 647                  | 12/501,198                    | 2009-07-10                     | 8,250,166                | 2012-08-21               | System and method for software failover on a bladed system                                           |
| 648                  | 12/693,793                    | 2010-01-26                     | 8,250,189                | 2012-08-21               | Employing ip version fields to determine data-link layer addresses                                   |
| 649                  | 13/009,766                    | 2011-01-19                     | 8,250,313                | 2012-08-21               | Conflict avoidance in data store replication                                                         |
| 650                  | 12/173,077                    | 2008-07-15                     | 8,250,584                | 2012-08-21               | Device location application programming interface                                                    |
| 651                  | 13/158,091                    | 2011-06-10                     | 8,250,644                | 2012-08-21               | Forcing a mobile browser to access web content through a proxy                                       |
| 652                  | 13/270,205                    | 2011-10-10                     | 8,250,662                | 2012-08-21               | Partially delegated over-the-air provisioning of a secure element                                    |
| 653                  | 12/021,453                    | 2008-01-29                     | 8,250,849                | 2012-08-28               | Power system with computer-controlled fuel system                                                    |
| 654                  | 12/043,239                    | 2008-03-06                     | 8,251,290                | 2012-08-28               | Bar code validation using a wireless communication device                                            |

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| 655                  | 12/689,081                    | 2010-01-18                     | 8,254,305                | 2012-08-28               | System and method for bridging media local area networks                            |
| 656                  | 12/471,636                    | 2009-05-26                     | 8,254,406                | 2012-08-28               | Early termination in wireless communication overhead cycles                         |
| 657                  | 12/193,103                    | 2008-08-18                     | 8,254,441                | 2012-08-28               | Video streaming based upon wireless quality                                         |
| 658                  | 12/120,749                    | 2008-05-15                     | 8,254,785                | 2012-08-28               | Optical image processing to wirelessly transfer a voice message                     |
| 659                  | 12/480,679                    | 2009-06-08                     | 8,254,910                | 2012-08-28               | Network management based on mobility agent binding tables                           |
| 660                  | 12/340,992                    | 2008-12-22                     | 8,254,943                | 2012-08-28               | Method for backhaul transport recovery                                              |
| 661                  | 11/383,571                    | 2006-05-16                     | 8,254,991                | 2012-08-28               | External interface for a mobile device                                              |
| 662                  | 11/610,328                    | 2006-12-13                     | 8,255,357                | 2012-08-28               | Systems and methods of configuration management for enterprise software             |
| 663                  | 12/195,109                    | 2008-08-20                     | 8,255,994                | 2012-08-28               | Detection and suppression of short message service denial of service attacks        |
| 664                  | 12/510,391                    | 2009-07-28                     | 8,260,260                | 2012-09-04               | Visual voicemail client authentication                                              |
| 665                  | 12/962,620                    | 2010-12-07                     | 8,260,281                | 2012-09-04               | System and method of wireless communication                                         |
| 666                  | 12/136,810                    | 2008-06-11                     | 8,260,950                | 2012-09-04               | Real-time transport protocol ad cue extensions                                      |
| 667                  | 11/937,488                    | 2007-11-08                     | 8,264,422                | 2012-09-11               | Safe head-up display of information                                                 |
| 668                  | 12/476,807                    | 2009-06-02                     | 8,264,499                | 2012-09-11               | Enhancing viewability of information presented on a mobile device                   |
| 669                  | 12/126,090                    | 2008-05-23                     | 8,264,958                | 2012-09-11               | Tiered subscriber service with advanced header compression methods in a voip system |
| 670                  | 12/554,268                    | 2009-09-04                     | 8,264,966                | 2012-09-11               | Overload management on backhaul links based on packet loss on rf links              |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 671                  | 12/572,797                    | 2009-10-02                     | 8,264,978                | 2012-09-11               | System and method for operating a wireless communication system to process packet payloads to determine rf signal adjustments                            |
| 672                  | 12/396,198                    | 2009-03-02                     | 8,265,042                | 2012-09-11               | Ethernet backhaul architecture                                                                                                                           |
| 673                  | 12/262,423                    | 2008-10-31                     | 8,265,167                | 2012-09-11               | Application specific video format                                                                                                                        |
| 674                  | 12/787,434                    | 2010-05-26                     | 8,265,251                | 2012-09-11               | System and method to provide services from a communication network to a media-delivery network via a host device connected to the media-delivery network |
| 675                  | 12/698,496                    | 2010-02-02                     | 8,265,591                | 2012-09-11               | Blocking subscribers defaulting payment from network access                                                                                              |
| 676                  | 12/362,597                    | 2009-01-30                     | 8,265,595                | 2012-09-11               | Managing application permissions on a mobile device                                                                                                      |
| 677                  | 12/715,197                    | 2010-03-01                     | 8,265,610                | 2012-09-11               | Sponsored keyword usage in voice communication                                                                                                           |
| 678                  | 12/619,471                    | 2009-11-16                     | 8,265,619                | 2012-09-11               | Test call automation based on monitoring device state                                                                                                    |
| 679                  | 13/408,607                    | 2012-02-29                     | 8,265,645                | 2012-09-11               | Assigning an access channel based on a timer in a wireless communication system                                                                          |
| 680                  | 11/760,927                    | 2007-06-11                     | 8,265,693                | 2012-09-11               | Mobile device as a personal computer assistant                                                                                                           |
| 681                  | 11/104,942                    | 2005-04-13                     | 8,265,930                | 2012-09-11               | System and method for recording voice data and converting voice data to a text file                                                                      |
| 682                  | 12/625,890                    | 2009-11-25                     | 8,266,419                | 2012-09-11               | Fast restart on a virtual machine                                                                                                                        |
| 683                  | 12/013,008                    | 2008-01-11                     | 8,266,686                | 2012-09-11               | System and method for voip firewall security                                                                                                             |
| 684                  | 12/959,703                    | 2010-12-03                     | 8,269,371                | 2012-09-18               | Power system for a device                                                                                                                                |
| 685                  | 11/561,589                    | 2006-11-20                     | 8,270,330                | 2012-09-18               | System and method for communicating media data with targeted advertising to a mobile device                                                              |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 686                  | 12/620,190                    | 2009-11-17                     | 8,270,377                | 2012-09-18               | Multiple communication sessions in wireless communication devices                                                          |
| 687                  | 12/635,892                    | 2009-12-11                     | 8,270,411                | 2012-09-18               | Bandwidth allocation based on dormancy transitions                                                                         |
| 688                  | 12/843,884                    | 2010-07-27                     | 8,270,944                | 2012-09-18               | Pre-paid account balance notification                                                                                      |
| 689                  | 13/285,504                    | 2011-10-31                     | 8,270,956                | 2012-09-18               | Interactive mobile caller-identification information on a television                                                       |
| 690                  | 12/582,080                    | 2009-10-20                     | 8,270,962                | 2012-09-18               | Emergency calls on a wireless communication device during a device reboot                                                  |
| 691                  | 12/540,948                    | 2009-08-13                     | 8,271,006                | 2012-09-18               | Enhanced page messaging in short message service environments                                                              |
| 692                  | 09/947,819                    | 2001-09-05                     | 8,271,619                | 2012-09-18               | Establishing end-user communication services that use peer-to-peer internet protocol connections between service providers |
| 693                  | 12/581,353                    | 2009-10-19                     | 8,271,685                | 2012-09-18               | Intelligently assigning an ip address to a mobile device                                                                   |
| 694                  | 12/356,735                    | 2009-01-21                     | 8,272,030                | 2012-09-18               | Dynamic security management for mobile communications device                                                               |
| 695                  | 11/734,581                    | 2007-04-12                     | 8,276,197                | 2012-09-25               | Cascading network login                                                                                                    |
| 696                  | 12/605,935                    | 2009-10-26                     | 8,279,776                | 2012-10-02               | Network address translation based on a reverse domain name service                                                         |
| 697                  | 12/253,312                    | 2008-10-17                     | 8,279,799                | 2012-10-02               | Intelligent transmission of wireless communication overhead messages                                                       |
| 698                  | 11/780,018                    | 2007-07-19                     | 8,279,826                | 2012-10-02               | Presence based routing in an ip multimedia subsystem network                                                               |
| 699                  | 11/863,227                    | 2007-09-27                     | 8,279,848                | 2012-10-02               | Determining characteristics of a mobile user of a network                                                                  |
| 700                  | 11/869,904                    | 2007-10-10                     | 8,279,862                | 2012-10-02               | Centralized service control for a telecommunication system                                                                 |
| 701                  | 12/028,879                    | 2008-02-11                     | 8,280,342                | 2012-10-02               | Emergency services using path optimization                                                                                 |

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| 702                  | 12/352,891                    | 2009-01-13                     | 8,280,369                | 2012-10-02               | Controlling application modes on a mobile device                             |
| 703                  | 13/362,071                    | 2012-01-31                     | 8,281,021                | 2012-10-02               | Multiple cookie handling                                                     |
| 704                  | 11/695,344                    | 2007-04-02                     | 8,285,329                | 2012-10-09               | Mobile device-based control of smart card operation                          |
| 705                  | 11/746,273                    | 2007-05-09                     | 8,289,878                | 2012-10-16               | Virtual link mapping                                                         |
| 706                  | 13/093,477                    | 2011-04-25                     | 8,290,485                | 2012-10-16               | Selection of roaming partners based on load value                            |
| 707                  | 12/843,886                    | 2010-07-27                     | 8,295,811                | 2012-10-23               | System and method for mobile phone activation                                |
| 708                  | 12/905,205                    | 2010-10-15                     | 8,295,812                | 2012-10-23               | Reducing mobile-phone fraud                                                  |
| 709                  | 12/365,170                    | 2009-02-03                     | 8,296,375                | 2012-10-23               | Parallel management of load servers, cache servers, and feed servers         |
| 710                  | 12/871,502                    | 2010-08-30                     | 8,296,810                | 2012-10-23               | Wireless video uplink system that includes a reservation system              |
| 711                  | 11/942,833                    | 2007-11-20                     | 8,299,902                | 2012-10-30               | Ensuring an alarm activation of a mobile communications device               |
| 712                  | 12/345,195                    | 2008-12-29                     | 8,300,620                | 2012-10-30               | Dynamically tuning a timer mechanism according to radio frequency conditions |
| 713                  | 12/348,672                    | 2009-01-05                     | 8,300,637                | 2012-10-30               | Attribute assignment for ip dual stack devices                               |
| 714                  | 12/415,411                    | 2009-03-31                     | 8,301,132                | 2012-10-30               | Push registry application programming interface for capturing events         |
| 715                  | 12/868,954                    | 2010-08-26                     | 8,301,141                | 2012-10-30               | Automatic profile updating for a wireless communication device               |
| 716                  | 12/781,614                    | 2010-05-17                     | 8,301,180                | 2012-10-30               | System and methods for robust messaging                                      |
| 717                  | 12/263,688                    | 2008-11-03                     | 8,301,193                | 2012-10-30               | Differential planes for video i/o in a hearing impaired application          |
| 718                  | 12/568,708                    | 2009-09-29                     | 8,301,707                | 2012-10-30               | Predictive electronic mail addressing                                        |
| 719                  | 12/687,872                    | 2010-01-14                     | 8,305,951                | 2012-11-06               | Conditional media access control address filtering                           |

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| 720                  | 12/536,648                    | 2009-08-06                     | 8,305,963                | 2012-11-06               | Femto cell local breakout with ppp proxy                                                  |
| 721                  | 12/485,247                    | 2009-06-16                     | 8,305,976                | 2012-11-06               | Efficient wireless communication network entry for wireless communication devices         |
| 722                  | 12/488,729                    | 2009-06-22                     | 8,305,994                | 2012-11-06               | Access probe handoff between carriers for a multi-carrier scenario                        |
| 723                  | 12/640,699                    | 2009-12-17                     | 8,306,504                | 2012-11-06               | Determining access to a feature of a mobile device                                        |
| 724                  | 12/195,876                    | 2008-08-21                     | 8,306,508                | 2012-11-06               | Motion-based event notification                                                           |
| 725                  | 12/643,989                    | 2009-12-21                     | 8,306,518                | 2012-11-06               | Handset service migration automation and subscriber identity module tracking              |
| 726                  | 12/837,081                    | 2010-07-15                     | 8,307,074                | 2012-11-06               | Self-selected message queue monitoring                                                    |
| 727                  | 12/498,496                    | 2009-07-07                     | 8,307,110                | 2012-11-06               | Dynamic scheduling of electronic content updates                                          |
| 728                  | 12/349,936                    | 2009-01-07                     | 8,325,133                | 2012-12-04               | Secure opportunistic use of external interfaces                                           |
| 729                  | 12/330,808                    | 2008-12-09                     | 8,325,605                | 2012-12-04               | Managing media resources utilizing session initiation protocol                            |
| 730                  | 12/236,020                    | 2008-09-23                     | 8,325,783                | 2012-12-04               | Spreading code optimization based on quality factors                                      |
| 731                  | 12/336,244                    | 2008-12-16                     | 8,325,980                | 2012-12-04               | Providing indications of object attributes                                                |
| 732                  | 13/303,910                    | 2011-11-23                     | 8,326,311                | 2012-12-04               | Resource allocation through bouncing-busy hour traffic modeling                           |
| 733                  | 11/047,021                    | 2005-01-31                     | 8,326,767                | 2012-12-04               | Customer data privacy implementation                                                      |
| 734                  | 12/389,087                    | 2009-02-19                     | 8,327,372                | 2012-12-04               | Virtualization and server imaging system for allocation of computer hardware and software |
| 735                  | 12/535,346                    | 2009-08-04                     | 8,331,327                | 2012-12-11               | Dynamic wireless network registration window                                              |
| 736                  | 11/781,048                    | 2007-07-20                     | 8,331,912                | 2012-12-11               | Updateable messaging                                                                      |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------|
| 737                  | 13/402,658                    | 2012-02-22                     | 8,331,964                | 2012-12-11               | Suppression of short message service communications from a trusted domain                   |
| 738                  | 12/185,927                    | 2008-08-05                     | 8,331,974                | 2012-12-11               | Control of power level commands in wireless devices                                         |
| 739                  | 12/412,813                    | 2009-03-27                     | 8,335,495                | 2012-12-18               | Displaying business directory information on a mobile handset                               |
| 740                  | 10/929,305                    | 2004-08-30                     | 8,335,807                | 2012-12-18               | File distribution system and method                                                         |
| 741                  | 12/485,239                    | 2009-06-16                     | 8,339,259                | 2012-12-25               | System and method for setting an alarm by a third party                                     |
| 742                  | 11/159,013                    | 2005-06-22                     | 8,339,974                | 2012-12-25               | Method and system for detecting and mitigating rtp-based denial of service attacks          |
| 743                  | 12/683,259                    | 2010-01-06                     | 8,340,009                | 2012-12-25               | Systems and methods for disabling a quick paging channel in a wireless communication system |
| 744                  | 12/578,684                    | 2009-10-14                     | 8,340,083                | 2012-12-25               | Border control system, method, and software                                                 |
| 745                  | 11/972,926                    | 2008-01-11                     | 8,340,257                | 2012-12-25               | Switching modes in an interactive voice response system                                     |
| 746                  | 12/752,574                    | 2010-04-01                     | 8,340,292                | 2012-12-25               | Lawful intercept management by an authorization system                                      |
| 747                  | 11/758,946                    | 2007-06-06                     | 8,340,625                | 2012-12-25               | Alternative techniques for processing wireless communication backhaul                       |
| 748                  | 12/732,804                    | 2010-03-26                     | 8,340,651                | 2012-12-25               | Reconciling contact information between users                                               |
| 749                  | 12/782,507                    | 2010-05-18                     | 8,340,679                | 2012-12-25               | Adaptive power control with an overall power control command                                |
| 750                  | 12/842,707                    | 2010-07-23                     | 8,341,276                | 2012-12-25               | Negotiating internet protocol addresses in a network                                        |
| 751                  | 12/270,554                    | 2008-11-13                     | 8,341,717                | 2012-12-25               | Dynamic network policies based on device classification                                     |
| 752                  | 13/553,322                    | 2012-07-19                     | 8,345,061                | 2013-01-01               | Enhancing viewability of information presented on a mobile device                           |
| 753                  | 12/188,467                    | 2008-08-08                     | 8,345,595                | 2013-01-01               | Sector-based quality-of-service enforcement                                                 |

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| 754                  | 12/778,764                    | 2010-05-12                     | 8,345,670                | 2013-01-01               | Call transfer determination based on a geographic area served by a communication network             |
| 755                  | 12/771,070                    | 2010-04-30                     | 8,346,617                | 2013-01-01               | Merchandising of content in a prepaid environment                                                    |
| 756                  | 12/611,615                    | 2009-11-03                     | 8,346,955                | 2013-01-01               | Streaming content delivery management for a wireless communication device                            |
| 757                  | 12/480,677                    | 2009-06-08                     | 8,347,228                | 2013-01-01               | User interface screen presentation prioritization                                                    |
| 758                  | 12/353,739                    | 2009-01-14                     | 8,347,317                | 2013-01-01               | Strategically providing event notifications in light of multiple nearby devices                      |
| 759                  | 13/305,997                    | 2011-11-29                     | 8,347,353                | 2013-01-01               | Addressing security in asymmetrical networks                                                         |
| 760                  | 12/342,950                    | 2008-12-23                     | 8,351,911                | 2013-01-08               | Providing digital content usability for a mobile device user                                         |
| 761                  | 12/628,606                    | 2009-12-01                     | 8,351,934                | 2013-01-08               | Over the air passive downloads                                                                       |
| 762                  | 13/154,648                    | 2011-06-07                     | 8,351,939                | 2013-01-08               | Pseudo network signal for a wireless communication device                                            |
| 763                  | 13/173,721                    | 2011-06-30                     | 8,351,952                | 2013-01-08               | Seamless inter-network handoff                                                                       |
| 764                  | 13/441,340                    | 2012-04-06                     | 8,351,953                | 2013-01-08               | Frequency band class control for a wireless communication device                                     |
| 765                  | 11/461,247                    | 2006-07-31                     | 8,353,048                | 2013-01-08               | Application digital rights management (drm) and portability using a mobile device for authentication |
| 766                  | 12/639,906                    | 2009-12-16                     | 8,355,316                | 2013-01-15               | End-to-end network monitoring                                                                        |
| 767                  | 12/178,605                    | 2008-07-23                     | 8,355,344                | 2013-01-15               | Storage area network edge-core interswitch link optimization                                         |
| 768                  | 11/933,823                    | 2007-11-01                     | 8,355,396                | 2013-01-15               | Customized network congestion messaging for terminal adapters                                        |
| 769                  | 12/483,534                    | 2009-06-12                     | 8,355,406                | 2013-01-15               | Setting signal-power thresholds on nodes in a communications network                                 |

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| 770           | 11/759,660             | 2007-06-07              | 8,355,696         | 2013-01-15        | Automated device activation                                                                         |
| 771           | 12/704,380             | 2010-02-11              | 8,355,754         | 2013-01-15        | Operating a computing device with an operating system and a wireless data access on a mobile device |
| 772           | 12/635,261             | 2009-12-10              | 8,358,577         | 2013-01-22        | Using wireless links to offload backhaul communications                                             |
| 773           | 13/004,076             | 2011-01-11              | 8,358,620         | 2013-01-22        | Voice session and data session coordination in a communication device                               |
| 774           | 13/398,417             | 2012-02-16              | 8,358,628         | 2013-01-22        | Wireless handoffs based upon activity correlation                                                   |
| 775           | 12/402,256             | 2009-03-11              | 8,358,634         | 2013-01-22        | Dynamic assignment of wireless communication overhead messaging resources                           |
| 776           | 12/791,859             | 2010-06-01              | 8,358,640         | 2013-01-22        | Femtocell bridging in media local area networks                                                     |
| 777           | 12/634,299             | 2009-12-09              | 8,358,648         | 2013-01-22        | Allocating socket ranges to increase address space                                                  |
| 778           | 12/643,990             | 2009-12-21              | 8,359,003         | 2013-01-22        | Alternative text billing system and method                                                          |
| 779           | 12/615,840             | 2009-11-10              | 8,359,024         | 2013-01-22        | Notification and protection for wireless communication session drops                                |
| 780           | 13/542,632             | 2012-07-05              | 8,359,070         | 2013-01-22        | Dynamic smart card application loading                                                              |
| 781           | 12/683,035             | 2010-01-06              | 8,359,382         | 2013-01-22        | Personalized integrated audio services                                                              |
| 782           | 12/505,885             | 2009-07-20              | 8,359,470         | 2013-01-22        | Increased security during network entry of wireless communication devices                           |
| 783           | 12/562,647             | 2009-09-18              | 8,359,541         | 2013-01-22        | Distributing icons so that they do not overlap certain screen areas of a mobile device              |
| 784           | 12/871,549             | 2010-08-30              | 8,359,622         | 2013-01-22        | Wireless video device for use with a wireless video uplink system                                   |
| 785           | 12/823,435             | 2010-06-25              | 8,359,642         | 2013-01-22        | Restricting mature content                                                                          |

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| 786                  | 13/294,870                    | 2011-11-11                     | 8,362,874                | 2013-01-29               | Biopresence based keyguard mechanism                                                                    |
| 787                  | 12/270,537                    | 2008-11-13                     | 8,363,658                | 2013-01-29               | Dynamic firewall and dynamic host configuration protocol configuration                                  |
| 788                  | 12/435,009                    | 2009-05-04                     | 8,364,193                | 2013-01-29               | Forward link power control                                                                              |
| 789                  | 11/668,655                    | 2007-01-30                     | 8,365,249                | 2013-01-29               | Proxy registration and authentication for personal electronic devices                                   |
| 790                  | 11/757,117                    | 2007-06-01                     | 8,365,257                | 2013-01-29               | Secure web portal with delegated secure administration                                                  |
| 791                  | 12/722,244                    | 2010-03-11                     | 8,369,352                | 2013-02-05               | Scheduling access terminals via one or more wireless schedulers                                         |
| 792                  | 12/014,946                    | 2008-01-16                     | 8,369,353                | 2013-02-05               | Dynamic heterogeneous backhaul                                                                          |
| 793                  | 13/439,593                    | 2012-04-04                     | 8,369,871                | 2013-02-05               | System and method for mobile device self-location                                                       |
| 794                  | 12/608,304                    | 2009-10-29                     | 8,369,875                | 2013-02-05               | Web services architecture for providing federated data relating to a mobile device                      |
| 795                  | 13/458,641                    | 2012-04-27                     | 8,369,879                | 2013-02-05               | Methods and systems for automatically forwarding data messages in a wireless telecommunications network |
| 796                  | 13/186,594                    | 2011-07-20                     | 8,369,888                | 2013-02-05               | Determining presence status using motion detection                                                      |
| 797                  | 12/348,374                    | 2009-01-05                     | 8,369,894                | 2013-02-05               | Confirming certification of combinations of secure elements and mobile devices                          |
| 798                  | 12/938,207                    | 2010-11-02                     | 8,370,397                | 2013-02-05               | Enhanced data collection techniques                                                                     |
| 799                  | 12/768,865                    | 2010-04-28                     | 8,370,690                | 2013-02-05               | Custom defined call quality versus battery life                                                         |
| 800                  | 12/905,871                    | 2010-10-15                     | 8,379,528                | 2013-02-19               | Transfer of messages to user devices of a wireless local area network access point                      |
| 801                  | 12/476,453                    | 2009-06-02                     | 8,379,807                | 2013-02-19               | Providing a customized voicemail-retrieval announcement                                                 |

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| 802                  | 12/643,066                    | 2009-12-21                     | 8,379,829                | 2013-02-19               | System and method for incoming telephone call distribution among inbound links of service platforms |
| 803                  | 12/874,151                    | 2010-09-01                     | 8,380,172                | 2013-02-19               | Enhanced search user interface                                                                      |
| 804                  | 13/585,594                    | 2012-08-14                     | 8,380,185                | 2013-02-19               | Controlling application modes on a mobile device                                                    |
| 805                  | 12/409,614                    | 2009-03-24                     | 8,380,219                | 2013-02-19               | Controlling an amount of information disclosed by a position-determining system                     |
| 806                  | 12/775,270                    | 2010-05-06                     | 8,380,504                | 2013-02-19               | Generation of voice profiles                                                                        |
| 807                  | 12/369,327                    | 2009-02-11                     | 8,381,301                | 2013-02-19               | Split-flow attack detection                                                                         |
| 808                  | 13/204,644                    | 2011-08-06                     | 8,385,828                | 2013-02-26               | Peer-to-peer transfer of files with back-office completion                                          |
| 809                  | 13/427,066                    | 2012-03-22                     | 8,385,909                | 2013-02-26               | Dynamic adjustment of a base transceiver station in a wireless communication system                 |
| 810                  | 13/371,072                    | 2012-02-10                     | 8,386,386                | 2013-02-26               | Phone usage pattern as credit card fraud detection trigger                                          |
| 811                  | 12/861,277                    | 2010-08-23                     | 8,391,195                | 2013-03-05               | Assisted transport of communications for wireless communication devices                             |
| 812                  | 12/401,609                    | 2009-03-10                     | 8,391,208                | 2013-03-05               | Methods of setting mobile internet protocol timer value                                             |
| 813                  | 13/367,597                    | 2012-02-07                     | 8,391,264                | 2013-03-05               | Mobile device handoff while maintaining connectivity with multiple access points                    |
| 814                  | 12/233,399                    | 2008-09-18                     | 8,391,458                | 2013-03-05               | Emergency call prioritization                                                                       |
| 815                  | 12/968,850                    | 2010-12-15                     | 8,391,830                | 2013-03-05               | Mobile phone emergency services                                                                     |
| 816                  | 13/076,501                    | 2011-03-31                     | 8,391,836                | 2013-03-05               | Call detail record analysis to isolate and utilize subscriber data                                  |
| 817                  | 12/783,684                    | 2010-05-20                     | 8,391,870                | 2013-03-05               | Wireless handoffs based upon past handoff metrics                                                   |
| 818                  | 13/044,281                    | 2011-03-09                     | 8,392,451                | 2013-03-05               | Enhanced domain name query for user device domain name                                              |

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|               |                        |                         |                   |                   | information                                                                                                         |
| 819           | 12/363,342             | 2009-01-30              | 8,392,543         | 2013-03-05        | Synchronization of content change across multiple devices                                                           |
| 820           | 13/538,369             | 2012-06-29              | 8,396,069         | 2013-03-12        | Using domain name server response and internet protocol version 6 to conserve internet protocol version 4 addresses |
| 821           | 12/706,864             | 2010-02-17              | 8,396,451         | 2013-03-12        | Telecom fraud detection using social pattern                                                                        |
| 822           | 12/841,853             | 2010-07-22              | 8,397,280         | 2013-03-12        | Static packet address assignment for a wireless communication device by an authorization system                     |
| 823           | 11/832,154             | 2007-08-01              | 8,400,491         | 2013-03-19        | Use-based adaptive video client for a bandwidth-constrained network                                                 |
| 824           | 13/075,393             | 2011-03-30              | 8,401,481         | 2013-03-19        | Increased wireless communication transmissions in heterogeneous networks                                            |
| 825           | 13/549,390             | 2012-07-13              | 8,401,529         | 2013-03-19        | Sponsored keyword usage in voice communication                                                                      |
| 826           | 13/556,202             | 2012-07-24              | 8,401,538         | 2013-03-19        | System and method for generic mobile phone configuration                                                            |
| 827           | 11/321,506             | 2005-12-29              | 8,401,890         | 2013-03-19        | System and method for identifying one or more business transactions and/or business systems                         |
| 828           | 12/257,716             | 2008-10-24              | 8,405,610         | 2013-03-26        | Electrooculographical control for a mobile device                                                                   |
| 829           | 12/699,181             | 2010-02-03              | 8,406,120         | 2013-03-26        | Remedial measures for wireless communication device access request failure                                          |
| 830           | 12/201,483             | 2008-08-29              | 8,406,149         | 2013-03-26        | Method and system for the identification of potential internet service customers                                    |
| 831           | 12/861,408             | 2010-08-23              | 8,406,390         | 2013-03-26        | Pausing a live teleconference call                                                                                  |
| 832           | 12/813,197             | 2010-06-10              | 8,406,730         | 2013-03-26        | Possession confidence metric for a wireless communication device                                                    |
| 833           | 12/695,712             | 2010-01-28              | 8,406,745         | 2013-03-26        | Synchronization of voice mail greeting and email auto-reply by a                                                    |

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|               |                        |                         |                   |                   | wireless communication device                                                             |
| 834           | 11/870,520             | 2007-10-11              | 8,406,749         | 2013-03-26        | Operating a thin client in a device for communication                                     |
| 835           | 12/855,938             | 2010-08-13              | 8,406,756         | 2013-03-26        | Wireless network load balancing and roaming management system                             |
| 836           | 13/074,577             | 2011-03-29              | 8,406,757         | 2013-03-26        | Wireless device network rescan rate determination based on wireless coverage availability |
| 837           | 12/782,513             | 2010-05-18              | 8,406,773         | 2013-03-26        | Adaptive power control based on radio frequency conditions                                |
| 838           | 12/363,313             | 2009-01-30              | 8,407,599         | 2013-03-26        | Address book extension                                                                    |
| 839           | 13/464,054             | 2012-05-04              | 8,411,643         | 2013-04-02        | Controlling mobile-device roaming                                                         |
| 840           | 12/617,925             | 2009-11-13              | 8,411,666         | 2013-04-02        | Location-based geographical routing                                                       |
| 841           | 12/409,686             | 2009-03-24              | 8,411,671         | 2013-04-02        | Loss adjustment control in a tandem media communication network                           |
| 842           | 12/883,988             | 2010-09-16              | 8,411,685         | 2013-04-02        | Managing the allocation of internet protocol addresses in a wireless network              |
| 843           | 13/025,263             | 2011-02-11              | 8,412,204         | 2013-04-02        | Elevation-based control of a wireless communication device                                |
| 844           | 12/908,544             | 2010-10-20              | 8,412,229         | 2013-04-02        | Position determining entity request filter                                                |
| 845           | 13/313,741             | 2011-12-07              | 8,412,234         | 2013-04-02        | Clustering location and time for location prediction                                      |
| 846           | 12/775,579             | 2010-05-07              | 8,413,234         | 2013-04-02        | Communications-service fraud detection using special social connection                    |
| 847           | 11/945,054             | 2007-11-26              | 8,418,083         | 2013-04-09        | Applying a navigational mode to a device                                                  |
| 848           | 09/498,515             | 2000-02-04              | 8,418,195         | 2013-04-09        | Advertising insertion for a video-on-demand system                                        |
| 849           | 12/251,659             | 2008-10-15              | 8,421,592         | 2013-04-16        | Mediation of electric vehicle charging by wireless network provider                       |

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| 850                  | 12/633,195                    | 2009-12-08                     | 8,422,424                | 2013-04-16               | Identification of backhaul links for termination                                         |
| 851                  | 12/885,646                    | 2010-09-20                     | 8,422,428                | 2013-04-16               | Device management for a wireless communication device having and invalid user identifier |
| 852                  | 12/330,628                    | 2008-12-09                     | 8,422,989                | 2013-04-16               | Method and system for encoding telecommunications user information                       |
| 853                  | 12/204,028                    | 2008-09-04                     | 8,423,057                | 2013-04-16               | Activating a message blocking function from a mobile communication device                |
| 854                  | 12/323,263                    | 2008-11-25                     | 8,423,071                | 2013-04-16               | Resuming media objects delivered via live streaming services upon data reduction events  |
| 855                  | 11/405,195                    | 2006-04-17                     | 8,423,408                | 2013-04-16               | Dynamic advertising content distribution and placement systems and methods               |
| 856                  | 13/411,181                    | 2012-03-02                     | 8,423,577                | 2013-04-16               | Providing suggested actions in response to textual communications                        |
| 857                  | 12/613,185                    | 2009-11-05                     | 8,424,070                | 2013-04-16               | Dynamic network-centric generation of public service access identification               |
| 858                  | 13/023,286                    | 2011-02-08                     | 8,428,551                | 2013-04-23               | Contextual video voice message enhancement                                               |
| 859                  | 13/042,032                    | 2011-03-07                     | 8,428,552                | 2013-04-23               | System and method of wireless communication device provisioning for prepaid service      |
| 860                  | 13/248,878                    | 2011-09-29                     | 8,429,347                | 2013-04-23               | Emulating a removable mass storage device                                                |
| 861                  | 13/028,830                    | 2011-02-16                     | 8,437,713                | 2013-05-07               | Wireless transmit diversity control by location of a wireless communication device       |
| 862                  | 12/567,044                    | 2009-09-25                     | 8,437,746                | 2013-05-07               | Contact information rights management                                                    |
| 863                  | 12/040,434                    | 2008-02-29                     | 8,438,228                | 2013-05-07               | Computing device to broadcast mobile messages received by a mobile device                |
| 864                  | 11/538,142                    | 2006-10-03                     | 8,438,627                | 2013-05-07               | Access gateway                                                                           |

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| 865                  | 12/818,585                    | 2010-06-18                     | 8,442,012                | 2013-05-14               | Selecting wireless access resources based on past wireless activity                                                        |
| 866                  | 12/372,859                    | 2009-02-18                     | 8,442,467                | 2013-05-14               | Wireless communication device with a multi-band antenna                                                                    |
| 867                  | 13/479,589                    | 2012-05-24                     | 8,442,505                | 2013-05-14               | Caller id handling system for calls placed to a mobile phone                                                               |
| 868                  | 12/358,324                    | 2009-01-23                     | 8,442,527                | 2013-05-14               | Cellular authentication for authentication to a service                                                                    |
| 869                  | 12/204,041                    | 2008-09-04                     | 8,442,559                | 2013-05-14               | Methods and systems for paging in a communication system                                                                   |
| 870                  | 12/730,750                    | 2010-03-24                     | 8,442,570                | 2013-05-14               | Wireless tune away based upon wireless device state                                                                        |
| 871                  | 11/491,387                    | 2006-07-21                     | 8,442,858                | 2013-05-14               | Subscriber data insertion into advertisement requests                                                                      |
| 872                  | 13/012,163                    | 2011-01-24                     | 8,443,063                | 2013-05-14               | Determination of communication networks for a wireless communication device                                                |
| 873                  | 12/470,706                    | 2009-05-22                     | 8,443,109                | 2013-05-14               | Selection of a communication device for a user by a base station in response to receiving a communication session hand-off |
| 874                  | 12/786,277                    | 2010-05-24                     | 8,443,429                | 2013-05-14               | Integrated sign on                                                                                                         |
| 875                  | 12/787,163                    | 2010-05-25                     | 8,447,299                | 2013-05-21               | Handset mode selection based on user preferences                                                                           |
| 876                  | 12/239,110                    | 2008-09-26                     | 8,447,834                | 2013-05-21               | Wireless content loading                                                                                                   |
| 877                  | 12/755,556                    | 2010-04-07                     | 8,448,072                | 2013-05-21               | Interception of automatic status updates for a social networking system                                                    |
| 878                  | 12/573,970                    | 2009-10-06                     | 8,452,264                | 2013-05-28               | Presenting messaging prior to answering a call                                                                             |
| 879                  | 13/461,233                    | 2012-05-01                     | 8,452,879                | 2013-05-28               | Allocation of connection persistence to mobile browsers                                                                    |
| 880                  | 12/913,055                    | 2010-10-27                     | 8,457,038                | 2013-06-04               | Velocity based handoff determination in wireless communication system                                                      |
| 881                  | 12/561,363                    | 2009-09-17                     | 8,457,050                | 2013-06-04               | Selection of wireless communication overhead                                                                               |

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|                      |                               |                                |                          |                          | messaging resources based upon present conditions                                     |
| 882                  | 11/272,658                    | 2005-11-14                     | 8,458,295                | 2013-06-04               | Web content distribution devices to stage network device software                     |
| 883                  | 12/793,032                    | 2010-06-03                     | 8,458,777                | 2013-06-04               | Remote authentication login system                                                    |
| 884                  | 13/493,718                    | 2012-06-11                     | 8,461,995                | 2013-06-11               | Displaying advertisements based on electronic tags                                    |
| 885                  | 11/466,558                    | 2006-08-23                     | 8,462,677                | 2013-06-11               | Enabling communication between end points of different networks                       |
| 886                  | 12/940,194                    | 2010-11-05                     | 8,463,237                | 2013-06-11               | Using communications records to detect unauthorized use of telecommunication services |
| 887                  | 13/025,247                    | 2011-02-11                     | 8,463,239                | 2013-06-11               | Secure reconfiguration of wireless communication devices                              |
| 888                  | 12/188,659                    | 2008-08-08                     | 8,463,896                | 2013-06-11               | Dynamic portal creation based on personal usage                                       |
| 889                  | 12/685,383                    | 2010-01-11                     | 8,464,276                | 2013-06-11               | Channel monitoring in a messaging-middleware environment                              |
| 890                  | 12/687,529                    | 2010-01-14                     | 8,467,524                | 2013-06-18               | Mute indicator                                                                        |
| 891                  | 13/343,708                    | 2012-01-04                     | 8,468,095                | 2013-06-18               | Method for launching an electronic wallet                                             |
| 892                  | 11/946,095                    | 2007-11-28                     | 8,471,868                | 2013-06-25               | Projector and ultrasonic gesture-controlled communicator                              |
| 893                  | 12/722,323                    | 2010-03-11                     | 8,471,889                | 2013-06-25               | Adjusting an image for video conference display                                       |
| 894                  | 11/864,237                    | 2007-09-28                     | 8,472,589                | 2013-06-25               | Locally storing voicemails and communicating them to other wireless mobile devices    |
| 895                  | 12/058,400                    | 2008-03-28                     | 8,473,843                | 2013-06-25               | Correcting data inputted into a mobile communications device                          |
| 896                  | 12/207,176                    | 2008-09-09                     | 8,473,984                | 2013-06-25               | Dynamically switching between unicast and broadcas on a mobile communications network |
| 897                  | 12/170,966                    | 2008-07-10                     | 8,477,941                | 2013-07-02               | Maintaining secure communication while transitioning networks                         |

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| 898                  | 12/690,825                    | 2010-01-20                     | 8,478,891                | 2013-07-02               | Employing socket ranges to ascertain layer 2 addresses                                              |
| 899                  | 12/977,225                    | 2010-12-23                     | 8,479,237                | 2013-07-02               | Wireless set-top unit and related methods                                                           |
| 900                  | 12/270,568                    | 2008-11-13                     | 8,479,266                | 2013-07-02               | Network assignment appeal architecture and process                                                  |
| 901                  | 13/108,773                    | 2011-05-16                     | 8,483,064                | 2013-07-09               | Method and system for the distribution of internet protocol traffic in a communication system       |
| 902                  | 12/357,998                    | 2009-01-22                     | 8,483,651                | 2013-07-09               | Notifying mobile-device users of emergency vehicles                                                 |
| 903                  | 13/604,185                    | 2012-09-05                     | 8,483,663                | 2013-07-09               | Reducing mobile-phone fraud                                                                         |
| 904                  | 12/652,828                    | 2010-01-06                     | 8,483,682                | 2013-07-09               | Method and system for acquiring a wireless communication channel in a wireless communication system |
| 905                  | 11/671,517                    | 2007-02-06                     | 8,483,705                | 2013-07-09               | Gps proxy for location-unaware devices                                                              |
| 906                  | 12/696,264                    | 2010-01-29                     | 8,484,279                | 2013-07-09               | System and method of distributed computing using embedded processors                                |
| 907                  | 13/042,015                    | 2011-03-07                     | 8,484,482                | 2013-07-09               | Password generation and validation system and method                                                |
| 908                  | 13/156,438                    | 2011-06-09                     | 8,484,707                | 2013-07-09               | Secure changing auto-generated keys for wireless access                                             |
| 909                  | 12/971,364                    | 2010-12-17                     | 8,488,753                | 2013-07-16               | Location based format selection for information services                                            |
| 910                  | 13/568,004                    | 2012-08-06                     | 8,489,080                | 2013-07-16               | Concierge for portable electronic device                                                            |
| 911                  | 13/015,704                    | 2011-01-28                     | 8,493,950                | 2013-07-23               | Ethernet backhaul for wireless base stations                                                        |
| 912                  | 11/943,030                    | 2007-11-20                     | 8,494,478                | 2013-07-23               | Mobile phone as computer backup including power management                                          |
| 913                  | 13/463,801                    | 2012-05-03                     | 8,494,576                | 2013-07-23               | Near field communication authentication and validation to access corporate data                     |
| 914                  | 12/639,902                    | 2009-12-16                     | 8,494,895                | 2013-07-23               | Platform maturity analysis system                                                                   |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------|
| 915                  | 12/983,517                    | 2011-01-03                     | 8,495,186                | 2013-07-23               | Managing termination of point-to-point sessions between electronic devices                  |
| 916                  | 12/939,645                    | 2010-11-04                     | 8,495,195                | 2013-07-23               | Cookie preservation when switching devices                                                  |
| 917                  | 12/483,135                    | 2009-06-11                     | 8,498,657                | 2013-07-30               | User interface update signaling                                                             |
| 918                  | 12/688,551                    | 2010-01-15                     | 8,499,088                | 2013-07-30               | Parallel multiple format downloads                                                          |
| 919                  | 12/706,052                    | 2010-02-16                     | 8,499,338                | 2013-07-30               | Internet protocol controlled modem for use over a wireless voice network                    |
| 920                  | 12/206,140                    | 2008-09-08                     | 8,502,674                | 2013-08-06               | Monitoring the location of an object using a mobile device                                  |
| 921                  | 12/916,027                    | 2010-10-29                     | 8,503,308                | 2013-08-06               | Page routing system                                                                         |
| 922                  | 13/177,726                    | 2011-07-07                     | 8,504,021                | 2013-08-06               | Performance scanning and correlation in wireless communication devices                      |
| 923                  | 13/290,619                    | 2011-11-07                     | 8,504,022                | 2013-08-06               | Identifying outbound-roaming locations in a wireless-communications network                 |
| 924                  | 13/463,797                    | 2012-05-03                     | 8,504,097                | 2013-08-06               | Alternative hardware and software configuration for near field communication                |
| 925                  | 13/565,414                    | 2012-08-02                     | 8,504,724                | 2013-08-06               | Intelligently assigning an ip address to a mobile device                                    |
| 926                  | 12/828,523                    | 2010-07-01                     | 8,508,481                | 2013-08-13               | Adaptive touch keyboard                                                                     |
| 927                  | 13/028,347                    | 2011-02-16                     | 8,509,188                | 2013-08-13               | Buffering user data in a core network interface for delivery over a wireless access network |
| 928                  | 13/571,347                    | 2012-08-10                     | 8,509,741                | 2013-08-13               | System and method for mobile phone activation                                               |
| 929                  | 12/565,875                    | 2009-09-24                     | 8,509,746                | 2013-08-13               | Customer care using handset data for diagnostics                                            |
| 930                  | 12/470,115                    | 2009-05-21                     | 8,509,815                | 2013-08-13               | Dynamically updating a home agent with location-based information                           |

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| 931                  | 12/706,847                    | 2010-02-17                     | 8,509,837                | 2013-08-13               | Tcp-aware power control in wireless networks                                                          |
| 932                  | 13/242,428                    | 2011-09-23                     | 8,509,848                | 2013-08-13               | Modular mobile device                                                                                 |
| 933                  | 13/455,123                    | 2012-04-24                     | 8,509,856                | 2013-08-13               | System and method for mobile device application pre-emption                                           |
| 934                  | 11/335,420                    | 2006-01-19                     | 8,510,429                | 2013-08-13               | Inventory modeling in a data storage infrastructure for a communication network                       |
| 935                  | 13/330,215                    | 2011-12-19                     | 8,510,802                | 2013-08-13               | Home network access node usage prevention by blocking access node entries in a preferred roaming list |
| 936                  | 12/054,918                    | 2008-03-25                     | 8,510,804                | 2013-08-13               | Authorizing application use by a mobile device                                                        |
| 937                  | 11/295,080                    | 2005-12-06                     | 8,510,826                | 2013-08-13               | Carrier-independent on-demand distributed denial of service (ddos) mitigation                         |
| 938                  | 13/555,926                    | 2012-07-23                     | 8,522,001                | 2013-08-27               | Fast restart on a virtual machine                                                                     |
| 939                  | 11/935,771                    | 2007-11-06                     | 8,525,792                | 2013-09-03               | Adjustable keyboard or touch screen in a handheld device                                              |
| 940                  | 12/836,367                    | 2010-07-14                     | 8,526,308                | 2013-09-03               | Interruption of wireless reverse link data transfer based on power change instructions                |
| 941                  | 11/769,522                    | 2007-06-27                     | 8,526,417                | 2013-09-03               | Adaptive initialization for wireless schedulers                                                       |
| 942                  | 13/311,963                    | 2011-12-06                     | 8,526,426                | 2013-09-03               | Configuring guest users for a voip device of a primary user                                           |
| 943                  | 13/051,392                    | 2011-03-18                     | 8,526,876                | 2013-09-03               | Targeted satellite radio advertising using mobile network determined location                         |
| 944                  | 12/482,262                    | 2009-06-10                     | 8,526,924                | 2013-09-03               | Off-device service platform discovery                                                                 |
| 945                  | 12/566,757                    | 2009-09-25                     | 8,526,929                | 2013-09-03               | Mobile communication device provisioning and management                                               |
| 946                  | 13/211,083                    | 2011-08-16                     | 8,526,931                | 2013-09-03               | Wireless network-controlled enabling of user device transceiver                                       |

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| 947                  | 12/954,150                    | 2010-11-24                     | 8,527,009                | 2013-09-03               | Indicating wireless-signal status on a mobile device                                                                        |
| 948                  | 12/267,106                    | 2008-11-07                     | 8,528,041                | 2013-09-03               | Out-of-band network security management                                                                                     |
| 949                  | 13/537,563                    | 2012-06-29                     | 8,533,605                | 2013-09-10               | Device experience adaptation based on schedules and events                                                                  |
| 950                  | 12/603,797                    | 2009-10-22                     | 8,536,949                | 2013-09-17               | Variable power amplifier system                                                                                             |
| 951                  | 13/024,966                    | 2011-02-10                     | 8,537,193                | 2013-09-17               | Wireless video conferencing with mobility                                                                                   |
| 952                  | 12/763,304                    | 2010-04-20                     | 8,537,784                | 2013-09-17               | Increasing the rescan timer in a wireless communication device                                                              |
| 953                  | 12/858,099                    | 2010-08-17                     | 8,537,843                | 2013-09-17               | Timer based logic component for initial filter criteria in a wireless communication system                                  |
| 954                  | 12/423,101                    | 2009-04-14                     | 8,538,422                | 2013-09-17               | Reallocation of resources for dual-mode wireless devices                                                                    |
| 955                  | 10/643,334                    | 2003-08-18                     | 8,538,767                | 2013-09-17               | Method for discovering functional and system requirements in an integrated development process                              |
| 956                  | 13/018,700                    | 2011-02-01                     | 8,539,297                | 2013-09-17               | Determining whether a wireless access node should retransmit data packets based on the condition of a reverse wireless link |
| 957                  | 13/206,505                    | 2011-08-10                     | 8,539,557                | 2013-09-17               | System and method for controlling access to a privileged permission level of a server computer                              |
| 958                  | 12/359,272                    | 2009-01-23                     | 8,542,108                | 2013-09-24               | Dynamic dashboard display                                                                                                   |
| 959                  | 12/886,180                    | 2010-09-20                     | 8,542,611                | 2013-09-24               | Wireless communication system for routing emergency calls from a voip network                                               |
| 960                  | 12/124,826                    | 2008-05-21                     | 8,542,906                | 2013-09-24               | Augmented reality image offset and overlay                                                                                  |
| 961                  | 12/767,284                    | 2010-04-26                     | 8,543,403                | 2013-09-24               | Intelligent information supplements to calls                                                                                |
| 962                  | 11/097,781                    | 2005-04-01                     | 8,543,636                | 2013-09-24               | System migration using hardware virtualization                                                                              |

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| 963                  | 12/788,043                    | 2010-05-26                     | 8,547,834                | 2013-10-01               | Quality of service optimizer for mobile device                                                          |
| 964                  | 12/537,999                    | 2009-08-07                     | 8,547,912                | 2013-10-01               | Mobility between two different wireless access networks                                                 |
| 965                  | 12/946,110                    | 2010-11-15                     | 8,547,939                | 2013-10-01               | Base station frequency band prioritization                                                              |
| 966                  | 13/246,554                    | 2011-09-27                     | 8,548,532                | 2013-10-01               | Head unit to handset interface and integration                                                          |
| 967                  | 12/871,595                    | 2010-08-30                     | 8,549,564                | 2013-10-01               | Wireless video uplink system that wirelessly broadcasts a network access provider identifier            |
| 968                  | 12/626,509                    | 2009-11-25                     | 8,553,700                | 2013-10-08               | Method and system for facilitating packet-based communications                                          |
| 969                  | 13/334,501                    | 2011-12-22                     | 8,553,861                | 2013-10-08               | Managing vendor credits during load balancing                                                           |
| 970                  | 12/725,447                    | 2010-03-16                     | 8,554,154                | 2013-10-08               | Connector supporting integrated radio frequency and baseband data                                       |
| 971                  | 10/656,058                    | 2003-09-05                     | 8,554,860                | 2013-10-08               | Traffic segmentation                                                                                    |
| 972                  | 13/047,047                    | 2011-03-14                     | 8,554,912                | 2013-10-08               | Access management for wireless communication devices failing authentication for a communication network |
| 973                  | 13/429,320                    | 2012-03-24                     | 8,554,934                | 2013-10-08               | Application single sign on leveraging virtual local area network identifier                             |
| 974                  | 10/652,284                    | 2003-08-29                     | 8,554,945                | 2013-10-08               | Cellular extension of wireless local area networks                                                      |
| 975                  | 12/902,538                    | 2010-10-12                     | 8,558,864                | 2013-10-15               | Identifying video conference participants                                                               |
| 976                  | 13/416,171                    | 2012-03-09                     | 8,558,866                | 2013-10-15               | Ensuring quality of a video stream through a telecommunications network                                 |
| 977                  | 11/625,134                    | 2007-01-19                     | 8,558,886                | 2013-10-15               | Video collection for a wireless communication system                                                    |
| 978                  | 11/833,747                    | 2007-08-03                     | 8,558,893                | 2013-10-15               | Head-up security display                                                                                |

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| 979                  | 12/986,708                    | 2011-01-07                     | 8,559,926                | 2013-10-15               | Telecom-fraud detection using device-location information                                            |
| 980                  | 13/023,486                    | 2011-02-08                     | 8,559,933                | 2013-10-15               | System and method for id platform                                                                    |
| 981                  | 13/666,675                    | 2012-11-01                     | 8,559,956                | 2013-10-15               | Determination of wireless device departure from a femtocell                                          |
| 982                  | 13/557,844                    | 2012-07-25                     | 8,560,720                | 2013-10-15               | Real-time transport protocol ad cue extensions                                                       |
| 983                  | 12/467,253                    | 2009-05-15                     | 8,560,851                | 2013-10-15               | Managing digital certificates                                                                        |
| 984                  | 13/719,371                    | 2012-12-19                     | 8,561,143                | 2013-10-15               | Proxy registration and authentication for personal electronic devices                                |
| 985                  | 12/944,816                    | 2010-11-12                     | 8,565,408                | 2013-10-22               | Call-routing system and method                                                                       |
| 986                  | 12/142,631                    | 2008-06-19                     | 8,565,430                | 2013-10-22               | Validation service portal for wireless location management                                           |
| 987                  | 13/173,179                    | 2011-06-30                     | 8,565,686                | 2013-10-22               | Power status multipath search window sizing for wireless communications                              |
| 988                  | 13/570,247                    | 2012-08-09                     | 8,565,720                | 2013-10-22               | Pre-paid account balance notification                                                                |
| 989                  | 12/898,121                    | 2010-10-05                     | 8,565,818                | 2013-10-22               | Broadband wireless router                                                                            |
| 990                  | 13/344,096                    | 2012-01-05                     | 8,566,168                | 2013-10-22               | Electronic payment using a proxy account number stored in a secure element                           |
| 991                  | 12/726,582                    | 2010-03-18                     | 8,566,926                | 2013-10-22               | Mobility protocol selection by an authorization system                                               |
| 992                  | 12/500,857                    | 2009-07-10                     | 8,570,883                | 2013-10-29               | Selective power mode control of wireless communication devices                                       |
| 993                  | 12/762,575                    | 2010-04-19                     | 8,571,022                | 2013-10-29               | Packet filtering by session setup association in a wireless communication system                     |
| 994                  | 12/719,937                    | 2010-03-09                     | 8,571,520                | 2013-10-29               | Notifying a wireless communication system about previously registered wireless communication systems |

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| 995                  | 13/752,386                    | 2013-01-28                     | 8,571,536                | 2013-10-29               | System and method for generic mobile phone configuration                               |
| 996                  | 12/236,142                    | 2008-09-23                     | 8,571,560                | 2013-10-29               | Selecting a wireless access point based on status information                          |
| 997                  | 12/981,856                    | 2010-12-30                     | 8,576,880                | 2013-11-05               | Congestion-based wireless paging channels                                              |
| 998                  | 13/161,496                    | 2011-06-16                     | 8,577,334                | 2013-11-05               | Restricted testing access for electronic device                                        |
| 999                  | 13/250,611                    | 2011-09-30                     | 8,577,731                | 2013-11-05               | Method of transaction processing to support proxy financial card                       |
| 1000                 | 12/876,221                    | 2010-09-06                     | 8,583,091                | 2013-11-12               | Dynamic loading, unloading, and caching of alternate complete interfaces               |
| 1001                 | 11/868,592                    | 2007-10-08                     | 8,583,743                | 2013-11-12               | System and method for message gateway consolidation                                    |
| 1002                 | 12/543,449                    | 2009-08-18                     | 8,583,783                | 2013-11-12               | Method and system for adaptive recovery of heap memory                                 |
| 1003                 | 12/424,394                    | 2009-04-15                     | 8,588,056                | 2013-11-19               | Elimination of unwanted packets entering a restricted bandwidth network                |
| 1004                 | 11/679,290                    | 2007-02-27                     | 8,588,062                | 2013-11-19               | Application based access selection                                                     |
| 1005                 | 11/837,039                    | 2007-08-10                     | 8,588,132                | 2013-11-19               | Enhancing wireless telecommunications services on-site                                 |
| 1006                 | 12/431,156                    | 2009-04-28                     | 8,588,375                | 2013-11-19               | System and method for processing emergency calls                                       |
| 1007                 | 11/534,606                    | 2006-09-22                     | 8,588,394                | 2013-11-19               | Content switch for enhancing directory assistance                                      |
| 1008                 | 12/234,830                    | 2008-09-22                     | 8,588,418                | 2013-11-19               | User level security for an emulated removable mass storage device                      |
| 1009                 | 12/776,487                    | 2010-05-10                     | 8,588,695                | 2013-11-19               | Data transfer rate modification in a wireless communication system                     |
| 1010                 | 12/816,925                    | 2010-06-16                     | 8,588,697                | 2013-11-19               | Wireless communication system for reducing the reverse noise at a wireless access node |
| 1011                 | 13/359,311                    | 2012-01-26                     | 8,588,764                | 2013-11-19               | Wireless network edge guardian                                                         |

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| 1012                 | 12/354,093                    | 2009-01-15                     | 8,588,776                | 2013-11-19               | User controlled base station selection                                                                                               |
| 1013                 | 13/038,178                    | 2011-03-01                     | 8,588,866                | 2013-11-19               | Depicting signal strength and battery level of a mobile communications device                                                        |
| 1014                 | 12/348,731                    | 2009-01-05                     | 8,589,203                | 2013-11-19               | Project pipeline risk management system and methods for updating project resource distributions based on risk exposure level changes |
| 1015                 | 12/260,453                    | 2008-10-29                     | 8,589,426                | 2013-11-19               | Simultaneous file editor                                                                                                             |
| 1016                 | 13/190,204                    | 2011-07-25                     | 8,589,487                | 2013-11-19               | Parallel multimedia conferencing                                                                                                     |
| 1017                 | 11/852,649                    | 2007-09-10                     | 8,589,590                | 2013-11-19               | Selecting an address provider using a dynamic indicator                                                                              |
| 1018                 | 13/471,709                    | 2012-05-15                     | 8,589,987                | 2013-11-19               | Conserving bandwidth by restricting videos communicated in a wireless telecommunications network                                     |
| 1019                 | 12/133,964                    | 2008-06-05                     | 8,594,026                | 2013-11-26               | Discovering resources to facilitate preregistration with a wireless communications network                                           |
| 1020                 | 13/482,439                    | 2012-05-29                     | 8,594,070                | 2013-11-26               | Acting on data packets in a mobile telecommunications network based on inner headers                                                 |
| 1021                 | 12/061,465                    | 2008-04-02                     | 8,594,626                | 2013-11-26               | Post-paid wireless service balance management                                                                                        |
| 1022                 | 11/779,045                    | 2007-07-17                     | 8,595,070                | 2013-11-26               | Coupon validation using radio frequency fingerprinting                                                                               |
| 1023                 | 11/290,707                    | 2005-11-30                     | 8,595,452                | 2013-11-26               | System and method for streaming data conversion and replication                                                                      |
| 1024                 | 12/823,276                    | 2010-06-25                     | 8,599,152                | 2013-12-03               | Intelligent touch screen keyboard                                                                                                    |
| 1025                 | 12/035,985                    | 2008-02-22                     | 8,600,050                | 2013-12-03               | Encrypting a data transmission using multiple channels                                                                               |
| 1026                 | 12/869,347                    | 2010-08-26                     | 8,600,425                | 2013-12-03               | Tcp-aware power control in wireless networks                                                                                         |

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| 1027                 | 11/195,543                    | 2005-08-02                     | 8,601,010                | 2013-12-03               | Application management database with personnel assignment and automated configuration                          |
| 1028                 | 12/765,160                    | 2010-04-22                     | 8,605,652                | 2013-12-10               | Wireless tune away based upon congestion                                                                       |
| 1029                 | 13/267,550                    | 2011-10-06                     | 8,606,637                | 2013-12-10               | Method for providing personalized, targeted advertisements during playback of media                            |
| 1030                 | 12/900,154                    | 2010-10-07                     | 8,606,905                | 2013-12-10               | Automated determination of system scalability and scalability constraint factors                               |
| 1031                 | 13/071,031                    | 2011-03-24                     | 8,606,954                | 2013-12-10               | Progressive download of media content over different wireless access networks                                  |
| 1032                 | 12/710,503                    | 2010-02-23                     | 8,611,850                | 2013-12-17               | Providing an item of content to a mobile device in a prepaid context                                           |
| 1033                 | 13/149,505                    | 2011-05-31                     | 8,612,967                | 2013-12-17               | Loading branded media outside system partition                                                                 |
| 1034                 | 13/330,134                    | 2011-12-19                     | 8,614,966                | 2013-12-24               | Wireless communication device that determines per-resource data call efficiency metrics                        |
| 1035                 | 12/772,831                    | 2010-05-03                     | 8,614,968                | 2013-12-24               | Mobile device user interface notification management                                                           |
| 1036                 | 13/759,194                    | 2013-02-05                     | 8,615,255                | 2013-12-24               | Statistical method for determining the location of a mobile-device                                             |
| 1037                 | 12/353,421                    | 2009-01-14                     | 8,615,596                | 2013-12-24               | Communication method and system for providing content to a communication device according to a user preference |
| 1038                 | 12/618,849                    | 2009-11-16                     | 8,619,817                | 2013-12-31               | Message address manipulation using source port codes                                                           |
| 1039                 | 13/102,403                    | 2011-05-06                     | 8,620,265                | 2013-12-31               | Handset awareness and tracking of subscription plan                                                            |
| 1040                 | 12/949,281                    | 2010-11-18                     | 8,620,331                | 2013-12-31               | Wired service for wireless subscribers                                                                         |
| 1041                 | 13/018,654                    | 2011-02-01                     | 8,625,447                | 2014-01-07               | Overhead message version update based on distribution of devices                                               |

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| 1042                 | 13/776,510                    | 2013-02-25                     | 8,625,537                | 2014-01-07               | Controlling mobile-device roaming                                                                |
| 1043                 | 12/058,508                    | 2008-03-28                     | 8,626,197                | 2014-01-07               | Method and system for linking information from a mobile telephony device with an electronic file |
| 1044                 | 12/949,868                    | 2010-11-19                     | 8,626,204                | 2014-01-07               | Delivery of paging information to sets of wireless communication devices                         |
| 1045                 | 11/426,217                    | 2006-06-23                     | 8,626,586                | 2014-01-07               | Coordinated advertising for multiple wearable advertising display systems                        |
| 1046                 | 10/820,969                    | 2004-04-08                     | 8,626,716                | 2014-01-07               | Service broker enhancements                                                                      |
| 1047                 | 13/606,012                    | 2012-09-07                     | 8,626,860                | 2014-01-07               | Defined delays to support consistent tiered messaging performance                                |
| 1048                 | 12/495,157                    | 2009-06-30                     | 8,627,223                | 2014-01-07               | Customized execution sequences for portions of third party applications                          |
| 1049                 | 12/058,392                    | 2008-03-28                     | 8,627,231                | 2014-01-07               | List-position locator                                                                            |
| 1050                 | 12/718,420                    | 2010-03-05                     | 8,630,283                | 2014-01-14               | System and method for applications based on voice over internet protocol (voip) communications   |
| 1051                 | 13/471,107                    | 2012-05-14                     | 8,630,747                | 2014-01-14               | Alternative authorization for telematics                                                         |
| 1052                 | 13/195,072                    | 2011-08-01                     | 8,631,472                | 2014-01-14               | Triggers for session persistence                                                                 |
| 1053                 | 13/486,018                    | 2012-06-01                     | 8,638,724                | 2014-01-28               | Machine-to-machine traffic indicator                                                             |
| 1054                 | 13/561,191                    | 2012-07-30                     | 8,639,221                | 2014-01-28               | Anonymity determination for wireless communication device users                                  |
| 1055                 | 13/687,773                    | 2012-11-28                     | 8,639,227                | 2014-01-28               | Providing digital content usability for a mobile device user                                     |
| 1056                 | 13/555,397                    | 2012-07-23                     | 8,639,233                | 2014-01-28               | Data session continuity between wireless networks                                                |

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| 1057                 | 13/758,355                    | 2013-02-04                     | 8,639,277                | 2014-01-28               | Methods and systems for automatically forwarding data messages in a wireless telecommunications network                       |
| 1058                 | 13/560,997                    | 2012-07-28                     | 8,639,291                | 2014-01-28               | Mobile phone operation during low battery condition                                                                           |
| 1059                 | 12/031,432                    | 2008-02-14                     | 8,639,572                | 2014-01-28               | Intelligent advertisement selection from multiple sources                                                                     |
| 1060                 | 13/209,011                    | 2011-08-12                     | 8,639,757                | 2014-01-28               | User localization using friend location information                                                                           |
| 1061                 | 11/212,149                    | 2005-08-26                     | 8,639,839                | 2014-01-28               | Routing component quality assurance                                                                                           |
| 1062                 | 12/058,383                    | 2008-03-28                     | 8,640,040                | 2014-01-28               | Persistent event-management access in a mobile communications device                                                          |
| 1063                 | 12/434,895                    | 2009-05-04                     | 8,644,173                | 2014-02-04               | Managing requests in a wireless system                                                                                        |
| 1064                 | 12/707,032                    | 2010-02-17                     | 8,644,189                | 2014-02-04               | Wireless communication device that transmits geographic location information in router advertisement acknowledgement messages |
| 1065                 | 13/070,796                    | 2011-03-24                     | 8,644,218                | 2014-02-04               | Reconnecting dropped calls using an internet protocol multimedia subsystem                                                    |
| 1066                 | 13/070,607                    | 2011-03-24                     | 8,644,255                | 2014-02-04               | Wireless device access to communication services through another wireless device                                              |
| 1067                 | 13/873,886                    | 2013-04-30                     | 8,644,459                | 2014-02-04               | Message-indication testing                                                                                                    |
| 1068                 | 13/116,864                    | 2011-05-26                     | 8,644,771                | 2014-02-04               | Short range wireless power consumption management                                                                             |
| 1069                 | 12/629,860                    | 2009-12-02                     | 8,644,813                | 2014-02-04               | Customer initiated mobile diagnostics service                                                                                 |
| 1070                 | 12/697,981                    | 2010-02-01                     | 8,644,983                | 2014-02-04               | Order fulfillment logistics workflow                                                                                          |
| 1071                 | 13/479,601                    | 2012-05-24                     | 8,645,187                | 2014-02-04               | Identifying influencers among a group of wireless-subscription subscribers                                                    |

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| 1072                 | 13/149,496                    | 2011-05-31                     | 8,645,238                | 2014-02-04               | Prepaid multi-line plan infrastructure and methods                                              |
| 1073                 | 11/854,342                    | 2007-09-12                     | 8,645,970                | 2014-02-04               | Method to route notifications to designated responder                                           |
| 1074                 | 13/540,437                    | 2012-07-02                     | 8,649,770                | 2014-02-11               | Extended trusted security zone radio modem                                                      |
| 1075                 | 12/013,053                    | 2008-01-11                     | 8,649,780                | 2014-02-11               | Wireless communication device with audio/text interface                                         |
| 1076                 | 13/572,913                    | 2012-08-13                     | 8,649,788                | 2014-02-11               | Dynamic wireless transceiver selection in a wireless communication device                       |
| 1077                 | 13/011,732                    | 2011-01-21                     | 8,654,079                | 2014-02-18               | Inputting data into a mobile device using a dynamically configured number pad                   |
| 1078                 | 12/699,617                    | 2010-02-03                     | 8,654,771                | 2014-02-18               | Efficient transfer of packets over multiple backhaul links                                      |
| 1079                 | 11/627,951                    | 2007-01-27                     | 8,655,716                | 2014-02-18               | Integrated advertisement delivery                                                               |
| 1080                 | 11/830,466                    | 2007-07-30                     | 8,656,449                | 2014-02-18               | Applying policy attributes to events                                                            |
| 1081                 | 13/676,979                    | 2012-11-14                     | 8,660,002                | 2014-02-25               | Managing media resources utilizing session initiation protocol                                  |
| 1082                 | 13/335,941                    | 2011-12-23                     | 8,666,383                | 2014-03-04               | Automated branding of generic applications                                                      |
| 1083                 | 13/194,603                    | 2011-07-29                     | 8,666,429                | 2014-03-04               | Location signature extraction on a wireless communication network                               |
| 1084                 | 13/240,542                    | 2011-09-22                     | 8,666,438                | 2014-03-04               | Managing communications with a content provider                                                 |
| 1085                 | 13/074,198                    | 2011-03-29                     | 8,667,513                | 2014-03-04               | Dormancy timer adjustment in a wireless access node based on wireless device application status |
| 1086                 | 12/606,239                    | 2009-10-27                     | 8,667,541                | 2014-03-04               | Intelligent handset remote control                                                              |
| 1087                 | 12/348,720                    | 2009-01-05                     | 8,667,542                | 2014-03-04               | System and method of filtered presentation of broadcast messages by mobile devices              |
| 1088                 | 12/236,750                    | 2008-09-24                     | 8,667,564                | 2014-03-04               | Mobile internet protocol v6 sip proxy bootstrapping                                             |

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| 1089                 | 13/556,200                    | 2012-07-24                     | 8,667,607                | 2014-03-04               | Trusted security zone access to peripheral devices                                                |
| 1090                 | 13/039,414                    | 2011-03-03                     | 8,674,877                | 2014-03-18               | Distribution of positioning satellite information                                                 |
| 1091                 | 12/633,571                    | 2009-12-08                     | 8,675,661                | 2014-03-18               | Allocating ip version fields to increase address space                                            |
| 1092                 | 13/354,433                    | 2012-01-20                     | 8,677,427                | 2014-03-18               | Receiving over-the-air licenses to high-quality media content                                     |
| 1093                 | 12/707,460                    | 2010-02-17                     | 8,681,626                | 2014-03-25               | Translation of congestion notification indicators in a base station system                        |
| 1094                 | 13/929,066                    | 2013-06-27                     | 8,682,352                | 2014-03-25               | Dynamically updating a home agent with location-based information                                 |
| 1095                 | 11/403,701                    | 2006-04-13                     | 8,682,701                | 2014-03-25               | Project pipeline management systems and methods having capital expenditure/expense flip targeting |
| 1096                 | 13/013,585                    | 2011-01-25                     | 8,683,019                | 2014-03-25               | Enabling external access to a private-network host                                                |
| 1097                 | 12/954,123                    | 2010-11-24                     | 8,683,042                | 2014-03-25               | Maintaining policy traffic statistics over multiple sessions                                      |
| 1098                 | 12/691,499                    | 2010-01-21                     | 8,683,063                | 2014-03-25               | Regulating internet traffic that is communicated through anonymizing gateways                     |
| 1099                 | 12/145,454                    | 2008-06-24                     | 8,683,355                | 2014-03-25               | Chat space system and method                                                                      |
| 1100                 | 12/555,581                    | 2009-09-08                     | 8,683,566                | 2014-03-25               | Secure access and architecture for virtual private sites                                          |
| 1101                 | 13/182,754                    | 2011-07-14                     | 8,687,616                | 2014-04-01               | Wireless wide area network characteristics indicated over a wireless local area network           |
| 1102                 | 12/982,481                    | 2010-12-30                     | 8,688,072                | 2014-04-01               | Agent notification triggered by network access failure                                            |
| 1103                 | 13/562,007                    | 2012-07-30                     | 8,688,080                | 2014-04-01               | Visual voicemail client authentication                                                            |
| 1104                 | 12/879,774                    | 2010-09-10                     | 8,688,086                | 2014-04-01               | Providing supplemental content to wireless communication devices based on device status           |

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| 1105                 | 13/290,778                    | 2011-11-07                     | 8,688,808                | 2014-04-01               | Assignment of domain name system (dns) servers                                                |
| 1106                 | 12/253,762                    | 2008-10-17                     | 8,689,012                | 2014-04-01               | Diagnostics for secure elements in a mobile device                                            |
| 1107                 | 12/939,617                    | 2010-11-04                     | 8,689,303                | 2014-04-01               | Cookie-handling gateway                                                                       |
| 1108                 | 13/078,205                    | 2011-04-01                     | 8,699,414                | 2014-04-15               | Wireless communication device with both a wireless transceiver and a wireless paging receiver |
| 1109                 | 13/939,173                    | 2013-07-10                     | 8,700,022                | 2014-04-15               | Mobile communication device provisioning and management                                       |
| 1110                 | 13/041,195                    | 2011-03-04                     | 8,700,030                | 2014-04-15               | Handset diagnostic tool                                                                       |
| 1111                 | 12/917,187                    | 2010-11-01                     | 8,700,409                | 2014-04-15               | Real-time versioning of device-bound content                                                  |
| 1112                 | 12/254,267                    | 2008-10-20                     | 8,706,588                | 2014-04-22               | System and method of provisioning confidential information via a mobile device                |
| 1113                 | 13/440,980                    | 2012-04-05                     | 8,712,407                | 2014-04-29               | Multiple secure elements in mobile electronic device with near field communication capability |
| 1114                 | 12/409,573                    | 2009-03-24                     | 8,713,075                | 2014-04-29               | Inter-carrier communications for multimedia-message delivery                                  |
| 1115                 | 12/431,931                    | 2009-04-29                     | 8,713,093                | 2014-04-29               | Selecting content for storage in a multi-device cache                                         |
| 1116                 | 11/464,778                    | 2006-08-15                     | 8,713,138                | 2014-04-29               | Extensible framework for client-based active network measurement                              |
| 1117                 | 11/938,554                    | 2007-11-12                     | 8,713,193                | 2014-04-29               | Pausing multimedia data streams                                                               |
| 1118                 | 12/323,249                    | 2008-11-25                     | 8,717,283                | 2014-05-06               | Utilizing motion of a device to manipulate a display screen feature                           |
| 1119                 | 13/356,275                    | 2012-01-23                     | 8,718,028                | 2014-05-06               | Customizing a browsing experience on a mobile communications device                           |
| 1120                 | 11/041,344                    | 2005-01-24                     | 8,718,258                | 2014-05-06               | System and method for jurisdictional routing                                                  |

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| 1121                 | 13/529,743                    | 2012-06-21                     | 8,718,565                | 2014-05-06               | Frame offset adjustment based on efficiency of interference cancellation                             |
| 1122                 | 12/369,833                    | 2009-02-12                     | 8,718,596                | 2014-05-06               | Wireless device location for emergency calls                                                         |
| 1123                 | 13/355,771                    | 2012-01-23                     | 8,718,666                | 2014-05-06               | Controlling resource utilization                                                                     |
| 1124                 | 12/389,448                    | 2009-02-20                     | 8,718,678                | 2014-05-06               | Selective delivery of presence messages for wireless communication devices                           |
| 1125                 | 13/237,610                    | 2011-09-20                     | 8,718,704                | 2014-05-06               | Load-based selection of a frequency band class for a wireless communication device                   |
| 1126                 | 12/323,463                    | 2008-11-25                     | 8,719,001                | 2014-05-06               | Remote configuration of widgets                                                                      |
| 1127                 | 13/735,597                    | 2013-01-07                     | 8,719,020                | 2014-05-06               | Generation of voice profiles                                                                         |
| 1128                 | 13/535,337                    | 2012-06-27                     | 8,719,102                | 2014-05-06               | Method and system for blocking confidential information at a point-of-sale reader from eavesdropping |
| 1129                 | 13/654,880                    | 2012-10-18                     | 8,719,147                | 2014-05-06               | Visualizing and analyzing spectrum assets                                                            |
| 1130                 | 13/043,636                    | 2011-03-09                     | 8,724,795                | 2014-05-13               | Problem centric knowledge management tool for call center                                            |
| 1131                 | 12/238,148                    | 2008-09-25                     | 8,731,301                | 2014-05-20               | Display adaptation based on captured image feedback                                                  |
| 1132                 | 12/758,190                    | 2010-04-12                     | 8,731,605                | 2014-05-20               | Wireless tune away based upon wireless device location                                               |
| 1133                 | 13/688,690                    | 2012-11-29                     | 8,732,796                | 2014-05-20               | Addressing security in asymmetrical networks                                                         |
| 1134                 | 12/981,157                    | 2010-12-29                     | 8,737,506                | 2014-05-27               | Determination of transmit diversity transmission delays                                              |
| 1135                 | 13/768,103                    | 2013-02-15                     | 8,737,581                | 2014-05-27               | Pausing a live teleconference call                                                                   |
| 1136                 | 13/032,800                    | 2011-02-23                     | 8,737,987                | 2014-05-27               | Enhanced wireless device network rescan rate determination                                           |
| 1137                 | 12/257,583                    | 2008-10-24                     | 8,738,063                | 2014-05-27               | Power control based on multi-antenna mode distribution                                               |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------|
| 1138                 | 13/331,323                    | 2011-12-20                     | 8,738,544                | 2014-05-27               | Identifying advocates and detractors in a social connections map                                       |
| 1139                 | 13/339,584                    | 2011-12-29                     | 8,739,264                | 2014-05-27               | Managing access to secured data                                                                        |
| 1140                 | 13/749,676                    | 2013-01-24                     | 8,744,769                | 2014-06-03               | System and methods for head unit providing analysis and guidance during long road trips                |
| 1141                 | 12/145,465                    | 2008-06-24                     | 8,749,494                | 2014-06-10               | Touch screen offset pointer                                                                            |
| 1142                 | 11/466,513                    | 2006-08-23                     | 8,750,336                | 2014-06-10               | Distributed multimedia system for ip networks                                                          |
| 1143                 | 12/171,469                    | 2008-07-11                     | 8,750,838                | 2014-06-10               | Reverse buffering media content at a mobile communications device                                      |
| 1144                 | 12/486,873                    | 2009-06-18                     | 8,750,839                | 2014-06-10               | Mobile access terminal with local call session control function                                        |
| 1145                 | 13/540,442                    | 2012-07-02                     | 8,750,849                | 2014-06-10               | System and method for providing wireless communication during radio access network overload conditions |
| 1146                 | 13/603,742                    | 2012-09-05                     | 8,750,884                | 2014-06-10               | Call routing using domain name service and electronic number mapping                                   |
| 1147                 | 13/971,658                    | 2013-08-20                     | 8,750,942                | 2014-06-10               | Head unit to handset interface and integration                                                         |
| 1148                 | 13/610,856                    | 2012-09-11                     | 8,752,140                | 2014-06-10               | System and methods for trusted internet domain networking                                              |
| 1149                 | 13/612,830                    | 2012-09-13                     | 8,752,160                | 2014-06-10               | Dynamic firewall and dynamic host configuration protocol configuration                                 |
| 1150                 | 13/163,040                    | 2011-06-17                     | 8,755,373                | 2014-06-17               | Vop (voice over packet) automatic call distribution                                                    |
| 1151                 | 13/293,107                    | 2011-11-09                     | 8,756,119                | 2014-06-17               | Shipment aggregation in mobile phone order fulfillment                                                 |
| 1152                 | 13/560,480                    | 2012-07-27                     | 8,761,156                | 2014-06-24               | Socket-based internet protocol for wireless networks                                                   |
| 1153                 | 12/022,841                    | 2008-01-30                     | 8,761,719                | 2014-06-24               | Systems and method for provisioning location determination systems                                     |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-------------------------------------------------------------------------------|
| 1154                 | 13/616,958                    | 2012-09-14                     | 8,761,722                | 2014-06-24               | Enhanced location data in emergency call handling                             |
| 1155                 | 12/342,927                    | 2008-12-23                     | 8,762,195                | 2014-06-24               | Dynamically generating pricing information for digital content                |
| 1156                 | 12/170,381                    | 2008-07-09                     | 8,762,429                | 2014-06-24               | File location application programming interface                               |
| 1157                 | 12/615,883                    | 2009-11-10                     | 8,767,544                | 2014-07-01               | Data rate selection for wireless communication devices                        |
| 1158                 | 12/464,242                    | 2009-05-12                     | 8,767,555                | 2014-07-01               | Intelligent routing of voice-over-packet calls                                |
| 1159                 | 12/247,796                    | 2008-10-08                     | 8,767,567                | 2014-07-01               | Intelligent assignment of wireless communication overhead messaging resources |
| 1160                 | 13/645,827                    | 2012-10-05                     | 8,767,746                | 2014-07-01               | Wireless scheduler bandwidth estimation for quick start                       |
| 1161                 | 13/647,463                    | 2012-10-09                     | 8,768,305                | 2014-07-01               | Reestablishing a mobile device radio resource control connection              |
| 1162                 | 12/109,016                    | 2008-04-24                     | 8,768,349                | 2014-07-01               | Real-time subscriber profile consolidation system                             |
| 1163                 | 13/096,206                    | 2011-04-28                     | 8,768,374                | 2014-07-01               | Application management for a wireless communication device                    |
| 1164                 | 12/371,901                    | 2009-02-16                     | 8,768,845                | 2014-07-01               | Electronic wallet removal from mobile electronic devices                      |
| 1165                 | 12/780,142                    | 2010-05-14                     | 8,769,057                | 2014-07-01               | Employing a hierarchy of servers to resolve fractional ip addresses           |
| 1166                 | 13/659,465                    | 2012-10-24                     | 8,769,550                | 2014-07-01               | Reply queue management                                                        |
| 1167                 | 13/167,883                    | 2011-06-24                     | 8,774,031                | 2014-07-08               | Network capacity forecasting and maintenance                                  |
| 1168                 | 13/344,235                    | 2012-01-05                     | 8,774,131                | 2014-07-08               | Facilitating network transfer based on network conditions                     |
| 1169                 | 12/691,274                    | 2010-01-21                     | 8,774,153                | 2014-07-08               | Base station code processing assistance for a code division multiplex format  |
| 1170                 | 13/348,339                    | 2012-01-11                     | 8,774,379                | 2014-07-08               | Incoming spoof call detection                                                 |
| 1171                 | 13/569,334                    | 2012-08-08                     | 8,774,824                | 2014-07-08               | Alleviating and overriding throttled conditions in lte                        |

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| 1172                 | 12/908,581                    | 2010-10-20                     | 8,774,875                | 2014-07-08               | Spatial separation-enabled noise reduction                                                                                                   |
| 1173                 | 13/573,710                    | 2012-10-03                     | 8,775,583                | 2014-07-08               | Assigning internet protocol addresses in a network                                                                                           |
| 1174                 | 11/446,284                    | 2006-06-02                     | 8,775,820                | 2014-07-08               | System and method of enterprise administrative password generation and control                                                               |
| 1175                 | 13/277,818                    | 2011-10-20                     | 8,780,748                | 2014-07-15               | Ipv4 and ipv6 single session on a home agent                                                                                                 |
| 1176                 | 12/197,780                    | 2008-08-25                     | 8,781,968                | 2014-07-15               | Dynamic display based on estimated viewers                                                                                                   |
| 1177                 | 12/053,135                    | 2008-03-21                     | 8,786,555                | 2014-07-22               | Feedback-providing keypad for touchscreen devices                                                                                            |
| 1178                 | 13/212,476                    | 2011-08-18                     | 8,787,401                | 2014-07-22               | Distributed antenna system with location determination based on pseudo-pilot signals                                                         |
| 1179                 | 12/566,084                    | 2009-09-24                     | 8,787,935                | 2014-07-22               | Location request authorization for communication devices                                                                                     |
| 1180                 | 13/897,928                    | 2013-05-20                     | 8,798,277                | 2014-08-05               | Mute indicator                                                                                                                               |
| 1181                 | 13/656,469                    | 2012-10-19                     | 8,798,617                | 2014-08-05               | Device enabled peer-to-peer location based routing to cellular network using an unlicensed radio spectrum for delivery of discovery messages |
| 1182                 | 12/501,719                    | 2009-07-13                     | 8,799,777                | 2014-08-05               | Selectability of objects on a touch-screen display                                                                                           |
| 1183                 | 13/463,756                    | 2012-05-03                     | 8,803,916                | 2014-08-12               | Methods and systems for an augmented reality service delivery platform                                                                       |
| 1184                 | 12/938,574                    | 2010-11-03                     | 8,805,330                | 2014-08-12               | Audio phone number capture, conversion, and use                                                                                              |
| 1185                 | 13/606,016                    | 2012-09-07                     | 8,805,445                | 2014-08-12               | Handset service migration automation and subscriber identity module tracking                                                                 |
| 1186                 | 11/249,554                    | 2005-10-13                     | 8,805,775                | 2014-08-12               | Management of requested or pushed content in communications client devices                                                                   |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------|
| 1187                 | 12/107,762                    | 2008-04-22                     | 8,806,530                | 2014-08-12               | Dual channel presence detection and content delivery system and method |
| 1188                 | 13/404,974                    | 2012-02-24                     | 8,811,213                | 2014-08-19               | Avoiding satellite interference to long term evolution systems         |
| 1189                 | 13/025,234                    | 2011-02-11                     | 8,811,279                | 2014-08-19               | Overhead message prioritization based on rate of originations          |
| 1190                 | 13/566,014                    | 2012-08-03                     | 8,818,290                | 2014-08-26               | Dynamically adapting a receive diversity mode of a base station        |
| 1191                 | 11/567,013                    | 2006-12-05                     | 8,818,324                | 2014-08-26               | Location capability provisioning                                       |
| 1192                 | 13/448,984                    | 2012-04-17                     | 8,818,345                | 2014-08-26               | Enhancing conference bridge muting to save network resources           |
| 1193                 | 13/191,448                    | 2011-07-27                     | 8,818,986                | 2014-08-26               | Onboard advance search refinement                                      |
| 1194                 | 11/868,590                    | 2007-10-08                     | 8,819,145                | 2014-08-26               | System and method for message presentation consolidation               |
| 1195                 | 11/751,281                    | 2007-05-21                     | 8,819,243                | 2014-08-26               | Delivering content to mobile clients                                   |
| 1196                 | 12/720,928                    | 2010-03-10                     | 8,819,447                | 2014-08-26               | Secure storage of protected data in a wireless communication device    |
| 1197                 | 13/358,661                    | 2012-01-26                     | 8,819,598                | 2014-08-26               | Multipage navigation on a small screen device                          |
| 1198                 | 12/168,854                    | 2008-07-07                     | 8,825,856                | 2014-09-02               | Usage-based content filtering for bandwidth optimization               |
| 1199                 | 12/939,742                    | 2010-11-04                     | 8,825,858                | 2014-09-02               | Virtual server resource monitoring and management                      |
| 1200                 | 12/963,714                    | 2010-12-09                     | 8,830,848                | 2014-09-09               | Adjusting a control channel timer in a wireless communication          |
| 1201                 | 13/526,262                    | 2012-06-18                     | 8,831,202                | 2014-09-09               | Failover mechanism based on historical usage data                      |
| 1202                 | 12/566,383                    | 2009-09-24                     | 8,832,204                | 2014-09-09               | Text message spam solutions                                            |
| 1203                 | 12/876,220                    | 2010-09-06                     | 8,838,087                | 2014-09-16               | Provisioning system and methods for interfaceless phone                |
| 1204                 | 12/142,655                    | 2008-06-19                     | 8,838,131                | 2014-09-16               | Providing geographic locations of a user's wireless device             |

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| 1205                 | 12/103,928                    | 2008-04-16                     | 8,838,487                | 2014-09-16               | Maintaining a common identifier for a user session on a communication network                                   |
| 1206                 | 12/103,952                    | 2008-04-16                     | 8,838,488                | 2014-09-16               | Maintaining a common identifier for a user session on a communication network                                   |
| 1207                 | 13/537,610                    | 2012-06-29                     | 8,843,122                | 2014-09-23               | Mobile phone controls preprocessor                                                                              |
| 1208                 | 12/014,915                    | 2008-01-16                     | 8,843,980                | 2014-09-23               | Network-based video source authentication                                                                       |
| 1209                 | 12/711,900                    | 2010-02-24                     | 8,847,894                | 2014-09-30               | Providing tactile feedback incident to touch actions                                                            |
| 1210                 | 13/012,462                    | 2011-01-24                     | 8,848,531                | 2014-09-30               | Dynamic quality of service (qos) assignment                                                                     |
| 1211                 | 11/782,058                    | 2007-07-24                     | 8,848,545                | 2014-09-30               | Use of bearer traffic to validate call records                                                                  |
| 1212                 | 13/353,003                    | 2012-01-18                     | 8,848,558                | 2014-09-30               | Mesh wireless connectivity                                                                                      |
| 1213                 | 12/392,774                    | 2009-02-25                     | 8,854,991                | 2014-10-07               | Tunneling binding messages in registration messages                                                             |
| 1214                 | 14/017,973                    | 2013-09-04                     | 8,855,307                | 2014-10-07               | Validation service portal for wireless location management                                                      |
| 1215                 | 13/689,023                    | 2012-11-29                     | 8,855,661                | 2014-10-07               | Adaptive power control with an overall power control command                                                    |
| 1216                 | 12/262,366                    | 2008-10-31                     | 8,856,690                | 2014-10-07               | Associating gestures on a touch screen with characters                                                          |
| 1217                 | 13/418,809                    | 2012-03-13                     | 8,856,929                | 2014-10-07               | Wireless communication device with circuitry to invoke a physically independent non-ip communication capability |
| 1218                 | 13/482,731                    | 2012-05-29                     | 8,862,181                | 2014-10-14               | Electronic purchase transaction trust infrastructure                                                            |
| 1219                 | 13/557,213                    | 2012-07-25                     | 8,863,252                | 2014-10-14               | Trusted access to third party applications systems and methods                                                  |
| 1220                 | 13/489,013                    | 2012-06-05                     | 8,868,093                | 2014-10-21               | Carrier frequency assignment based on transmit power differentials                                              |
| 1221                 | 13/448,451                    | 2012-04-17                     | 8,868,119                | 2014-10-21               | Carrier frequency mode selection based on device mobility                                                       |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------|
| 1222                 | 12/833,808                    | 2010-07-09                     | 8,868,527                | 2014-10-21               | Tracking switch transactions in a communications-networking environment                    |
| 1223                 | 12/834,613                    | 2010-07-12                     | 8,868,650                | 2014-10-21               | Consolidating multi-party communications                                                   |
| 1224                 | 11/870,134                    | 2007-10-10                     | 8,869,304                | 2014-10-21               | Digital rights management based content access mediation                                   |
| 1225                 | 12/355,177                    | 2009-01-16                     | 8,873,752                | 2014-10-28               | Distributed wireless device association with basestations                                  |
| 1226                 | 13/207,996                    | 2011-08-11                     | 8,874,157                | 2014-10-28               | Scheduling wireless communication power resources in wireless communication systems        |
| 1227                 | 13/005,859                    | 2011-01-13                     | 8,874,899                | 2014-10-28               | Premium services authentication                                                            |
| 1228                 | 13/353,400                    | 2012-01-19                     | 8,875,061                | 2014-10-28               | Enhancing usability of a moving touch screen                                               |
| 1229                 | 11/613,393                    | 2006-12-20                     | 8,875,231                | 2014-10-28               | Communication privacy services                                                             |
| 1230                 | 13/015,558                    | 2011-01-27                     | 8,875,243                | 2014-10-28               | Identity abstraction providing limited cross-domain access                                 |
| 1231                 | 13/711,359                    | 2012-12-11                     | 8,875,257                | 2014-10-28               | Restricting mature content                                                                 |
| 1232                 | 13/768,106                    | 2013-02-15                     | 8,878,782                | 2014-11-04               | Electrooculographical control for a mobile device                                          |
| 1233                 | 11/479,370                    | 2006-06-29                     | 8,879,537                | 2014-11-04               | Communication system providing integrated wireless and packet communication services       |
| 1234                 | 13/743,155                    | 2013-01-16                     | 8,880,118                | 2014-11-04               | Determining presence status using motion detection                                         |
| 1235                 | 13/195,074                    | 2011-08-01                     | 8,880,662                | 2014-11-04               | Re-provisioning a network device                                                           |
| 1236                 | 13/802,383                    | 2013-03-13                     | 8,881,977                | 2014-11-11               | Point-of-sale and automated teller machine transactions using trusted mobile access device |
| 1237                 | 12/485,477                    | 2009-06-16                     | 8,887,064                | 2014-11-11               | Managing calendar information among users                                                  |
| 1238                 | 13/604,884                    | 2012-09-06                     | 8,891,486                | 2014-11-18               | Shared offload vectors to control device offloads between wireless                         |

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|                      |                               |                                |                          |                          | carrier frequencies                                                                                     |
| 1239                 | 12/768,222                    | 2010-04-27                     | 8,892,093                | 2014-11-18               | Wireless communication system for increasing the rescan timer in a wireless communication device        |
| 1240                 | 13/559,608                    | 2012-07-27                     | 8,892,518                | 2014-11-18               | System and method of intelligent log agents                                                             |
| 1241                 | 13/213,947                    | 2011-08-19                     | 8,896,416                | 2014-11-25               | Utilizing a mobile device to operate an electronic locking mechanism                                    |
| 1242                 | 13/412,170                    | 2012-03-05                     | 8,896,497                | 2014-11-25               | Communications-tower antenna mount                                                                      |
| 1243                 | 11/858,645                    | 2007-09-20                     | 8,897,322                | 2014-11-25               | Enhancing video quality for broadcast video services                                                    |
| 1244                 | 13/212,530                    | 2011-08-18                     | 8,897,739                | 2014-11-25               | Distributed antenna system that provides information for a location based on pseudo-network identifiers |
| 1245                 | 13/675,939                    | 2012-11-13                     | 8,898,201                | 2014-11-25               | Global data migration between home location registers                                                   |
| 1246                 | 13/159,569                    | 2011-06-14                     | 8,898,501                | 2014-11-25               | Updating kernel affinity for applications executing in a multiprocessor system                          |
| 1247                 | 13/451,281                    | 2012-04-19                     | 8,898,520                | 2014-11-25               | Method of assessing restart approach to minimize recovery time                                          |
| 1248                 | 12/829,876                    | 2010-07-02                     | 8,903,411                | 2014-12-02               | Applying call events in association with user devices based on priority levels                          |
| 1249                 | 12/948,292                    | 2010-11-17                     | 8,903,719                | 2014-12-02               | Providing context-sensitive writing assistance                                                          |
| 1250                 | 12/138,143                    | 2008-06-12                     | 8,904,306                | 2014-12-02               | Variable speed scrolling                                                                                |
| 1251                 | 13/485,876                    | 2012-05-31                     | 8,908,681                | 2014-12-09               | Facilitating call continuity when transferring calls between a mobile access network to a voip network  |
| 1252                 | 12/336,156                    | 2008-12-16                     | 8,909,261                | 2014-12-09               | Dynamic determination of file transmission chunk size for efficient media upload                        |

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| 1253                 | 13/744,847                    | 2013-01-18                     | 8,909,291                | 2014-12-09               | Dynamic remotely managed sim profile                                                                                                       |
| 1254                 | 12/193,878                    | 2008-08-19                     | 8,909,618                | 2014-12-09               | Multi-step platform for image capture and action                                                                                           |
| 1255                 | 14/086,035                    | 2013-11-21                     | 8,909,709                | 2014-12-09               | User localization using friend location information                                                                                        |
| 1256                 | 11/877,260                    | 2007-10-23                     | 8,914,001                | 2014-12-16               | Simple network database protocol                                                                                                           |
| 1257                 | 13/547,590                    | 2012-07-12                     | 8,914,016                | 2014-12-16               | External interface for a mobile device                                                                                                     |
| 1258                 | 13/630,801                    | 2012-09-28                     | 8,914,344                | 2014-12-16               | Service manager source code control system                                                                                                 |
| 1259                 | 13/491,595                    | 2012-06-08                     | 8,918,087                | 2014-12-23               | Methods and systems for accessing crowd sourced landscape images                                                                           |
| 1260                 | 13/586,618                    | 2012-08-15                     | 8,918,091                | 2014-12-23               | Wireless communication service using shared service credentials                                                                            |
| 1261                 | 13/213,047                    | 2011-08-18                     | 8,924,287                | 2014-12-30               | System and methods for mobile electronic funds transfers                                                                                   |
| 1262                 | 13/402,682                    | 2012-02-22                     | 8,928,289                | 2015-01-06               | Power management of device with modular components                                                                                         |
| 1263                 | 13/903,085                    | 2013-05-28                     | 8,929,889                | 2015-01-06               | Handling of frequency bands in neighbor lists in wireless communication devices                                                            |
| 1264                 | 12/975,762                    | 2010-12-22                     | 8,931,036                | 2015-01-06               | Transformation of extensible markup language documents for web services customization                                                      |
| 1265                 | 13/035,778                    | 2011-02-25                     | 8,934,499                | 2015-01-13               | Dynamically transferring between multiple-input and multiple-output (mimo) transmit modes based on a usage level of a wireless access node |
| 1266                 | 13/768,380                    | 2013-02-15                     | 8,934,918                | 2015-01-13               | Aggregating spectrum chunks for maximum bandwidth utilization                                                                              |
| 1267                 | 12/171,484                    | 2008-07-11                     | 8,935,720                | 2015-01-13               | Multimedia ad delivery                                                                                                                     |
| 1268                 | 13/748,314                    | 2013-01-23                     | 8,937,861                | 2015-01-20               | Adding different channel pseudo-noise codes of different carriers for a wireless communication                                             |

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|---------------|------------------------|-------------------------|-------------------|-------------------|------------------------------------------------------------------------------------------------------|
|               |                        |                         |                   |                   | device                                                                                               |
| 1269          | 14/286,110             | 2014-05-23              | 8,938,229         | 2015-01-20        | Alleviating and overriding throttled conditions in lte                                               |
| 1270          | 13/768,797             | 2013-02-15              | 8,942,177         | 2015-01-27        | Presenting an indication of an originating carrier of a wireless call                                |
| 1271          | 14/296,103             | 2014-06-04              | 8,942,354         | 2015-01-27        | Message-indication testing                                                                           |
| 1272          | 14/090,156             | 2013-11-26              | 8,942,355         | 2015-01-27        | Optimizing identification of public safety answering platform next generation 911 media support      |
| 1273          | 12/877,226             | 2010-09-08              | 8,942,719         | 2015-01-27        | Locating a nearby mobile device without using gps                                                    |
| 1274          | 13/708,524             | 2012-12-07              | 8,942,755         | 2015-01-27        | Dynamic gain adjustment via mechanical transducers involving active combiners in wireless networks   |
| 1275          | 12/784,289             | 2010-05-20              | 8,942,992         | 2015-01-27        | Dynamic promotion code insertion in contactless payment transaction                                  |
| 1276          | 11/946,132             | 2007-11-28              | 8,943,520         | 2015-01-27        | Uniform resource locator application initiation                                                      |
| 1277          | 13/358,279             | 2012-01-25              | 8,943,605         | 2015-01-27        | Proximity based digital rights management                                                            |
| 1278          | 13/828,663             | 2013-03-14              | 8,948,362         | 2015-02-03        | Increasing the likelihood that a conference call will occur                                          |
| 1279          | 13/364,032             | 2012-02-01              | 8,948,779         | 2015-02-03        | Communication profiles for mobile devices based on historical characteristics                        |
| 1280          | 13/178,745             | 2011-07-08              | 8,948,802         | 2015-02-03        | Conditional wireless communication channel for a wireless communication device                       |
| 1281          | 12/644,233             | 2009-12-22              | 8,949,597         | 2015-02-03        | Managing certificates on a mobile device                                                             |
| 1282          | 13/678,198             | 2012-11-15              | 8,950,000         | 2015-02-03        | Application digital rights management (drm) and portability using a mobile device for authentication |
| 1283          | 12/968,601             | 2010-12-15              | 8,953,521         | 2015-02-10        | Facilitating communication between wireless access                                                   |

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|               |                        |                         |                   |                   | components                                                                          |
| 1284          | 11/627,675             | 2007-01-26              | 8,953,565         | 2015-02-10        | Providing adaptive network access                                                   |
| 1285          | 14/057,877             | 2013-10-18              | 8,953,788         | 2015-02-10        | Encrypting a data transmission using multiple channels                              |
| 1286          | 13/590,335             | 2012-08-21              | 8,954,032         | 2015-02-10        | Creating accurate billing records in a carrier-aggregation network                  |
| 1287          | 14/019,053             | 2013-09-05              | 8,954,041         | 2015-02-10        | System and method for id platform                                                   |
| 1288          | 13/957,995             | 2013-08-02              | 8,954,044         | 2015-02-10        | Off-device service platform discovery                                               |
| 1289          | 13/594,778             | 2012-08-25              | 8,954,588         | 2015-02-10        | Reservations in real-time brokering of digital content delivery                     |
| 1290          | 12/246,494             | 2008-10-06              | 8,954,834         | 2015-02-10        | System for communicating information to a mobile device using portable code widgets |
| 1291          | 13/533,663             | 2012-06-26              | 8,954,987         | 2015-02-10        | Device location application programming interface                                   |
| 1292          | 13/936,934             | 2013-07-08              | 8,959,321         | 2015-02-17        | Fast restart on a virtual machine                                                   |
| 1293          | 13/686,259             | 2012-11-27              | 8,964,736         | 2015-02-24        | Rtp streaming with dynamic packet format modification                               |
| 1294          | 13/164,489             | 2011-06-20              | 8,965,329         | 2015-02-24        | Transmission of wireless communication device status information                    |
| 1295          | 14/018,857             | 2013-09-05              | 8,965,343         | 2015-02-24        | Security key based authorization of transceivers in wireless communication devices  |
| 1296          | 13/488,706             | 2012-06-05              | 8,965,363         | 2015-02-24        | Controlling a preferred roaming list                                                |
| 1297          | 13/539,649             | 2012-07-02              | 8,965,689         | 2015-02-24        | Map display configurations for wireless communication devices                       |
| 1298          | 12/703,597             | 2010-02-10              | 8,966,034         | 2015-02-24        | Managing subscriptions for an out-of-network mobile device                          |
| 1299          | 13/093,800             | 2011-04-25              | 8,966,039         | 2015-02-24        | End-to-end communication service monitoring and reporting                           |

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| 1300                 | 13/653,055                    | 2012-10-16                     | 8,966,487                | 2015-02-24               | Application transaction wait time dynamic adjustment                                                                                  |
| 1301                 | 13/549,574                    | 2012-07-16                     | 8,971,185                | 2015-03-03               | Tiered subscriber service with advanced header compression methods in a voip system                                                   |
| 1302                 | 11/209,441                    | 2005-08-23                     | 8,971,309                | 2015-03-03               | Universal voice over packet protocol call structure                                                                                   |
| 1303                 | 13/722,694                    | 2012-12-20                     | 8,972,587                | 2015-03-03               | Arbitration server for determining remediation measures in response to an error message from a content provider                       |
| 1304                 | 13/118,058                    | 2011-05-27                     | 8,972,592                | 2015-03-03               | Extending an interface pack to a computer system                                                                                      |
| 1305                 | 13/742,873                    | 2013-01-16                     | 8,976,750                | 2015-03-10               | Delivering precision time protocol frequency and phase synchronization over a network without on-path support                         |
| 1306                 | 12/759,843                    | 2010-04-14                     | 8,977,260                | 2015-03-10               | Preventing clone device registration in a wireless communication system                                                               |
| 1307                 | 12/349,558                    | 2009-01-07                     | 8,977,595                | 2015-03-10               | Message-recovery file log locating and monitoring                                                                                     |
| 1308                 | 13/868,642                    | 2013-04-23                     | 8,982,776                | 2015-03-17               | Increasing accuracy for delivering precision time protocol frequency and phase synchronization over a network without on-path support |
| 1309                 | 13/919,681                    | 2013-06-17                     | 8,982,777                | 2015-03-17               | Method of adding and removing sites for a cluster based on a baseline delay comparison                                                |
| 1310                 | 13/967,012                    | 2013-08-14                     | 8,983,045                | 2015-03-17               | Managing vendor credits during load balancing                                                                                         |
| 1311                 | 14/102,766                    | 2013-12-11                     | 8,983,530                | 2015-03-17               | Data session continuity between wireless networks                                                                                     |
| 1312                 | 13/844,357                    | 2013-03-15                     | 8,984,592                | 2015-03-17               | Enablement of a trusted security zone authentication for remote mobile device management systems and methods                          |
| 1313                 | 14/183,517                    | 2014-02-18                     | 8,989,369                | 2015-03-24               | Using media server control markup language messages to dynamically interact with a web                                                |

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|                      |                               |                                |                          |                          | real-time communication customer care                                                  |
| 1314                 | 13/294,177                    | 2011-11-11                     | 8,989,705                | 2015-03-24               | Secure placement of centralized media controller application in mobile access terminal |
| 1315                 | 13/855,677                    | 2013-04-02                     | 8,989,731                | 2015-03-24               | Detection and self-healing of a mobile communication device network access failure     |
| 1316                 | 12/606,276                    | 2009-10-27                     | 8,990,104                | 2015-03-24               | Multimedia product placement marketplace                                               |
| 1317                 | 13/736,722                    | 2013-01-08                     | 8,990,148                | 2015-03-24               | System and method for dynamic hierarchical data parsing                                |
| 1318                 | 13/693,840                    | 2012-12-04                     | 8,995,429                | 2015-03-31               | Socket-based internet protocol for wired networks                                      |
| 1319                 | 13/683,135                    | 2012-11-21                     | 8,995,987                | 2015-03-31               | Providing non-lte communications over lte signaling based on congestion                |
| 1320                 | 13/747,193                    | 2013-01-22                     | 9,001,660                | 2015-04-07               | Selective discard of diameter protocol messages                                        |
| 1321                 | 13/831,494                    | 2013-03-14                     | 9,001,685                | 2015-04-07               | Bi-directional real-time data connection troubleshooting                               |
| 1322                 | 13/787,313                    | 2013-03-06                     | 9,001,767                | 2015-04-07               | Selection of wireless backhaul links based on uptime factors                           |
| 1323                 | 11/873,178                    | 2007-10-16                     | 9,002,974                | 2015-04-07               | Script server for efficiently providing multimedia services in a multimedia system     |
| 1324                 | 12/496,420                    | 2009-07-01                     | 9,003,331                | 2015-04-07               | Graphical user interface dynamic menu slot                                             |
| 1325                 | 13/936,918                    | 2013-07-08                     | 9,003,481                | 2015-04-07               | Out-of band network security management                                                |
| 1326                 | 13/729,215                    | 2012-12-28                     | 9,007,953                | 2015-04-14               | Estimating average user throughput in a wireless network                               |
| 1327                 | 14/058,958                    | 2013-10-21                     | 9,008,666                | 2015-04-14               | Wireless communication system for dormant mode during off-network transit              |
| 1328                 | 11/986,840                    | 2007-11-27                     | 9,013,505                | 2015-04-21               | Mobile system representing virtual objects on live camera image                        |
| 1329                 | 14/284,024                    | 2014-05-21                     | 9,014,046                | 2015-04-21               | Network capacity forecasting and maintenance                                           |

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| 1330                 | 13/034,393                    | 2011-02-24                     | 9,014,343                | 2015-04-21               | Recalling user-generated messages                                                                                |
| 1331                 | 13/532,568                    | 2012-06-25                     | 9,014,662                | 2015-04-21               | Pre-paid phone cash wallet                                                                                       |
| 1332                 | 13/855,684                    | 2013-04-02                     | 9,014,669                | 2015-04-21               | Limit failed network connection attempts with factory default settings                                           |
| 1333                 | 13/594,777                    | 2012-08-25                     | 9,015,068                | 2015-04-21               | Framework for real-time brokering of digital content delivery                                                    |
| 1334                 | 12/031,419                    | 2008-02-14                     | 9,015,620                | 2015-04-21               | User interface navigation                                                                                        |
| 1335                 | 13/546,786                    | 2012-07-11                     | 9,015,808                | 2015-04-21               | Restricting mobile device services between an occurrence of an account change and acquisition of a security code |
| 1336                 | 13/928,993                    | 2013-06-27                     | 9,019,820                | 2015-04-28               | Optimizing voice services                                                                                        |
| 1337                 | 13/797,103                    | 2013-03-12                     | 9,020,509                | 2015-04-28               | Dynamic qrxlevmin and sintrasearch values to optimize intra- and inter-frequency handovers in lte                |
| 1338                 | 12/029,614                    | 2008-02-12                     | 9,020,533                | 2015-04-28               | Location services                                                                                                |
| 1339                 | 13/033,323                    | 2011-02-23                     | 9,021,527                | 2015-04-28               | Facilitating communication actions in accordance with cable attributes                                           |
| 1340                 | 13/844,325                    | 2013-03-15                     | 9,021,585                | 2015-04-28               | Jtag fuse vulnerability determination and protection using a trusted execution environment                       |
| 1341                 | 13/451,917                    | 2012-04-20                     | 9,025,463                | 2015-05-05               | Intelligent air-interface congestion manager                                                                     |
| 1342                 | 13/831,504                    | 2013-03-14                     | 9,026,105                | 2015-05-05               | System for activating and customizing a mobile device via near field communication                               |
| 1343                 | 12/749,639                    | 2010-03-30                     | 9,026,354                | 2015-05-05               | Determining optimal map downloading locations                                                                    |
| 1344                 | 13/470,203                    | 2012-05-11                     | 9,027,102                | 2015-05-05               | Web server bypass of backend process on near field communications and secure                                     |

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|               |                        |                         |                   |                   | element chips                                                                                                                                                   |
| 1345          | 13/910,636             | 2013-06-05              | 9,030,965         | 2015-05-12        | Communication system to provide selective access to a wireless communication device                                                                             |
| 1346          | 12/953,699             | 2010-11-24              | 9,030,990         | 2015-05-12        | Paging a wireless communication device that uses multiple access networks                                                                                       |
| 1347          | 13/094,494             | 2011-04-26              | 9,031,498         | 2015-05-12        | Automotive multi-generation connectivity                                                                                                                        |
| 1348          | 13/780,638             | 2013-02-28              | 9,031,607         | 2015-05-12        | Utilizing signal powers associated with multiple channels of a mobile device to facilitate network selection                                                    |
| 1349          | 13/675,946             | 2012-11-13              | 9,031,762         | 2015-05-12        | System and method for dynamically adapting to events during operations of a vehicle                                                                             |
| 1350          | 13/661,536             | 2012-10-26              | 9,032,547         | 2015-05-12        | Provisioning vehicle based digital rights management for media delivered via phone                                                                              |
| 1351          | 13/168,568             | 2011-06-24              | 9,036,503         | 2015-05-19        | Interband traffic management in a multi-band wireless network                                                                                                   |
| 1352          | 14/142,056             | 2013-12-27              | 9,037,101         | 2015-05-19        | Switching power between power amplifier systems in a remote radio head system                                                                                   |
| 1353          | 13/710,431             | 2012-12-10              | 9,037,664         | 2015-05-19        | Personalized integrated audio services                                                                                                                          |
| 1354          | 13/794,730             | 2013-03-11              | 9,038,093         | 2015-05-19        | Retrieving service request messages from a message queue maintained by a messaging middleware tool based on the origination time of the service request message |
| 1355          | 14/020,449             | 2013-09-06              | 9,038,144         | 2015-05-19        | Mobility protocol selection by an authorization system                                                                                                          |
| 1356          | 13/899,566             | 2013-05-21              | 9,042,877         | 2015-05-26        | System and method for retrofitting a branding framework into a mobile communication device                                                                      |
| 1357          | 13/045,292             | 2011-03-10              | 9,043,446         | 2015-05-26        | Mirroring device interface components for content sharing                                                                                                       |

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| 1358                 | 13/546,688                    | 2012-07-11                     | 9,043,879                | 2015-05-26               | Facilitating enforcement of prl restrictions                                                                              |
| 1359                 | 12/711,902                    | 2010-02-24                     | 9,043,928                | 2015-05-26               | Enabling web page tracking                                                                                                |
| 1360                 | 13/831,463                    | 2013-03-14                     | 9,049,013                | 2015-06-02               | Trusted security zone containers for the protection and confidentiality of trusted service manager data                   |
| 1361                 | 13/780,625                    | 2013-02-28                     | 9,049,084                | 2015-06-02               | Utilizing an offset qpsk signal to transmit two digital symbols                                                           |
| 1362                 | 13/831,486                    | 2013-03-14                     | 9,049,186                | 2015-06-02               | Trusted security zone re-provisioning and re-use capability for refurbished mobile devices                                |
| 1363                 | 14/069,619                    | 2013-11-01                     | 9,049,487                | 2015-06-02               | Communication method and system for providing content to a communication device according to a user preference            |
| 1364                 | 14/151,512                    | 2014-01-09                     | 9,049,590                | 2015-06-02               | Communication usage control for a group of users                                                                          |
| 1365                 | 13/477,182                    | 2012-05-22                     | 9,049,632                | 2015-06-02               | Idle mode handoff transfer of network access information                                                                  |
| 1366                 | 12/949,284                    | 2010-11-18                     | 9,055,385                | 2015-06-09               | Adjusting an application update rate in a wireless communication device                                                   |
| 1367                 | 13/566,134                    | 2012-08-03                     | 9,055,482                | 2015-06-09               | Wireless frequency changes for wireless communication devices based on tracking area updates                              |
| 1368                 | 14/189,759                    | 2014-02-25                     | 9,055,499                | 2015-06-09               | Communication control system to control communication sessions over a long term evolution (lte) network                   |
| 1369                 | 13/569,279                    | 2012-08-08                     | 9,058,311                | 2015-06-16               | User timeframe selection for delivery of media resources                                                                  |
| 1370                 | 11/948,655                    | 2007-11-30                     | 9,058,764                | 2015-06-16               | Markers to implement augmented reality                                                                                    |
| 1371                 | 13/857,144                    | 2013-04-04                     | 9,059,987                | 2015-06-16               | Methods and systems of using single sign-on for identification for a web server not integrated with an enterprise network |

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| 1372                 | 12/767,494                    | 2010-04-26                     | 9,060,022                | 2015-06-16               | Data communications method and structure                                                             |
| 1373                 | 13/037,753                    | 2011-03-01                     | 9,060,255                | 2015-06-16               | Adaptive information service access                                                                  |
| 1374                 | 13/872,069                    | 2013-04-27                     | 9,060,276                | 2015-06-16               | Providing service to a portable electronic device using allowed network codes                        |
| 1375                 | 13/827,865                    | 2013-03-14                     | 9,060,297                | 2015-06-16               | Application labels for data communication                                                            |
| 1376                 | 13/037,885                    | 2011-03-01                     | 9,060,324                | 2015-06-16               | Frequency selection for exchanging wireless communications                                           |
| 1377                 | 12/578,415                    | 2009-10-13                     | 9,064,246                | 2015-06-23               | Payment service and platform authentication integration                                              |
| 1378                 | 14/049,428                    | 2013-10-09                     | 9,065,498                | 2015-06-23               | Dynamic assignment of mimo modes for a wireless communication device                                 |
| 1379                 | 13/490,253                    | 2012-06-06                     | 9,065,704                | 2015-06-23               | Parallel adaptation of digital content                                                               |
| 1380                 | 13/628,889                    | 2012-09-27                     | 9,065,737                | 2015-06-23               | Measuring traffic utilization                                                                        |
| 1381                 | 11/764,625                    | 2007-06-18                     | 9,065,898                | 2015-06-23               | Emergency call handling to provide context information to responder devices                          |
| 1382                 | 13/483,902                    | 2012-05-30                     | 9,066,217                | 2015-06-23               | Messaging session enhancement with user data                                                         |
| 1383                 | 13/533,969                    | 2012-06-27                     | 9,066,230                | 2015-06-23               | Trusted policy and charging enforcement function                                                     |
| 1384                 | 13/764,122                    | 2013-02-11                     | 9,066,269                | 2015-06-23               | Network handovers                                                                                    |
| 1385                 | 14/026,102                    | 2013-09-13                     | 9,066,314                | 2015-06-23               | Notifying a wireless communication system about previously registered wireless communication systems |
| 1386                 | 12/350,778                    | 2009-01-08                     | 9,069,385                | 2015-06-30               | Communicating physical gestures as compressed data streams                                           |
| 1387                 | 14/514,543                    | 2014-10-15                     | 9,069,618                | 2015-06-30               | Updating kernel affinity for applications executing in a multiprocessor system                       |

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| 1388                 | 13/898,435                    | 2013-05-20                     | 9,069,952                | 2015-06-30               | Method for enabling hardware assisted operating system region for safe execution of untrusted code using trusted transitional memory |
| 1389                 | 11/548,686                    | 2006-10-11                     | 9,071,483                | 2015-06-30               | Presenting vop call trace data                                                                                                       |
| 1390                 | 13/797,998                    | 2013-03-12                     | 9,071,576                | 2015-06-30               | Application rate limiting without overhead                                                                                           |
| 1391                 | 13/545,379                    | 2012-07-10                     | 9,071,833                | 2015-06-30               | Two-dimensional supplementary information in a three-dimensional image                                                               |
| 1392                 | 13/555,090                    | 2012-07-21                     | 9,072,016                | 2015-06-30               | Care messaging for missed or dropped calls                                                                                           |
| 1393                 | 13/868,441                    | 2013-04-23                     | 9,072,022                | 2015-06-30               | Dynamic report of reference signal received quality by a wireless communication device                                               |
| 1394                 | 14/010,028                    | 2013-08-26                     | 9,084,102                | 2015-07-14               | Contention-free handoff of emergency telephone calls in a wireless network                                                           |
| 1395                 | 13/027,812                    | 2011-02-15                     | 9,084,284                | 2015-07-14               | Proximity-based device switching using proxy credentials                                                                             |
| 1396                 | 12/840,635                    | 2010-07-21                     | 9,087,038                | 2015-07-21               | Messaging with shortcut character strings                                                                                            |
| 1397                 | 14/076,164                    | 2013-11-08                     | 9,087,318                | 2015-07-21               | Visually readable electronic label                                                                                                   |
| 1398                 | 13/800,503                    | 2013-03-13                     | 9,088,886                | 2015-07-21               | User demographics determination based on commonality in call graphs                                                                  |
| 1399                 | 13/788,878                    | 2013-03-07                     | 9,088,930                | 2015-07-21               | Radio access discovery and selection                                                                                                 |
| 1400                 | 14/146,137                    | 2014-01-02                     | 9,088,988                | 2015-07-21               | Variable bandwidth of wireless relay node backhaul using beamformed wireless links                                                   |
| 1401                 | 13/585,244                    | 2012-08-14                     | 9,092,282                | 2015-07-28               | Channel optimization in a messaging-middleware environment                                                                           |
| 1402                 | 13/940,253                    | 2013-07-11                     | 9,092,291                | 2015-07-28               | Dynamic updating and renaming virtual pre-installation stub applications                                                             |

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| 1403                 | 13/856,242                    | 2013-04-03                     | 9,094,381                | 2015-07-28               | Wireless content loading                                                                    |
| 1404                 | 13/947,461                    | 2013-07-22                     | 9,094,497                | 2015-07-28               | Dtmf circuit and method of relaying dtmf digits in a dtmf circuit                           |
| 1405                 | 14/568,369                    | 2014-12-12                     | 9,094,783                | 2015-07-28               | Providing adaptive network access                                                           |
| 1406                 | 13/804,182                    | 2013-03-14                     | 9,094,814                | 2015-07-28               | Provision of relay operation information to a wireless communication network                |
| 1407                 | 14/174,217                    | 2014-02-06                     | 9,094,921                | 2015-07-28               | Dynamic power distribution to reference signals in lte                                      |
| 1408                 | 13/940,251                    | 2013-07-11                     | 9,098,366                | 2015-08-04               | Virtual pre-installation of applications                                                    |
| 1409                 | 14/066,947                    | 2013-10-30                     | 9,098,368                | 2015-08-04               | Loading branded media outside system partition                                              |
| 1410                 | 13/705,807                    | 2012-12-05                     | 9,100,487                | 2015-08-04               | Conditional voicemail routing in wireless communication networks                            |
| 1411                 | 13/763,428                    | 2013-02-08                     | 9,100,769                | 2015-08-04               | System and method of storing service brand packages on a mobile device                      |
| 1412                 | 13/763,434                    | 2013-02-08                     | 9,100,819                | 2015-08-04               | System and method of provisioning and reprovisioning a mobile device based on self-locating |
| 1413                 | 13/741,574                    | 2013-01-15                     | 9,100,906                | 2015-08-04               | Parameters for user devices in wireless access systems based on azimuth angle               |
| 1414                 | 13/027,814                    | 2011-02-15                     | 9,100,982                | 2015-08-04               | Proximity-based device switching                                                            |
| 1415                 | 13/675,564                    | 2012-11-13                     | 9,104,611                | 2015-08-11               | Management of syntax errors in signaling messages                                           |
| 1416                 | 13/786,450                    | 2013-03-05                     | 9,104,840                | 2015-08-11               | Trusted security zone watermark                                                             |
| 1417                 | 13/326,941                    | 2011-12-15                     | 9,106,267                | 2015-08-11               | Near field communication session feedback                                                   |
| 1418                 | 14/097,379                    | 2013-12-05                     | 9,106,284                | 2015-08-11               | Antenna system driven in beamforming and mimo transmission modes                            |

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| 1419                 | 14/104,184                    | 2013-12-12                     | 9,106,382                | 2015-08-11               | Quality adjustment for volte emergency calls                                            |
| 1420                 | 12/363,702                    | 2009-01-30                     | 9,106,468                | 2015-08-11               | Transferring media objects from one device to another device                            |
| 1421                 | 13/155,488                    | 2011-06-08                     | 9,106,507                | 2015-08-11               | Selective packet voice trigger use in a wireless communication network                  |
| 1422                 | 14/137,317                    | 2013-12-20                     | 9,106,519                | 2015-08-11               | Wireless communication system for determining user equipment quality of service         |
| 1423                 | 14/038,313                    | 2013-09-26                     | 9,106,562                | 2015-08-11               | Quality of service optimizer for mobile device                                          |
| 1424                 | 14/080,469                    | 2013-11-14                     | 9,106,638                | 2015-08-11               | Triggers for session persistence                                                        |
| 1425                 | 14/066,288                    | 2013-10-29                     | 9,107,038                | 2015-08-11               | Roaming control system and method for a roaming wireless communication device           |
| 1426                 | 13/005,210                    | 2011-01-12                     | 9,107,134                | 2015-08-11               | Edge sector handoff determination                                                       |
| 1427                 | 14/096,659                    | 2013-12-04                     | 9,107,196                | 2015-08-11               | Reconnecting dropped calls using an internet protocol multimedia subsystem              |
| 1428                 | 13/844,226                    | 2013-03-15                     | 9,110,774                | 2015-08-18               | System and method of utilizing driving profiles via a mobile device                     |
| 1429                 | 14/178,040                    | 2014-02-11                     | 9,111,297                | 2015-08-18               | Providing supplemental content to wireless communication devices based on device status |
| 1430                 | 14/133,004                    | 2013-12-18                     | 9,112,998                | 2015-08-18               | Caller name detection and export                                                        |
| 1431                 | 14/084,115                    | 2013-11-19                     | 9,113,293                | 2015-08-18               | Displaying location uncertainty of a mobile device                                      |
| 1432                 | 14/163,047                    | 2014-01-24                     | 9,118,655                | 2015-08-25               | Trusted display and transmission of digital ticket documentation                        |
| 1433                 | 14/266,450                    | 2014-04-30                     | 9,118,721                | 2015-08-25               | Socket-based internet protocol for wireless networks                                    |
| 1434                 | 12/689,121                    | 2010-01-18                     | 9,118,934                | 2015-08-25               | Integration of remote electronic device with media local area network                   |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------|
| 1435                 | 14/565,599                    | 2014-12-10                     | 9,119,037                | 2015-08-25               | Locating a nearby mobile device without using gps                                                                 |
| 1436                 | 13/031,123                    | 2011-02-18                     | 9,123,062                | 2015-09-01               | Ad sponsored interface pack                                                                                       |
| 1437                 | 14/517,444                    | 2014-10-17                     | 9,124,333                | 2015-09-01               | Improving uplink performance for a beam-forming antenna configuration                                             |
| 1438                 | 13/487,327                    | 2012-06-04                     | 9,125,011                | 2015-09-01               | Wireless egress control of user data sets based on geo-control tags in the user data sets                         |
| 1439                 | 14/010,524                    | 2013-08-27                     | 9,125,037                | 2015-09-01               | System and methods for deferred and remote device branding                                                        |
| 1440                 | 14/218,162                    | 2014-03-18                     | 9,125,040                | 2015-09-01               | Notification system and notification distribution method to distribute notification communications                |
| 1441                 | 13/769,271                    | 2013-02-15                     | 9,125,145                | 2015-09-01               | Mobile device centered communication routing module                                                               |
| 1442                 | 13/711,544                    | 2012-12-11                     | 9,125,234                | 2015-09-01               | Femtocell bridging in media local area networks                                                                   |
| 1443                 | 13/241,357                    | 2011-09-23                     | 9,130,798                | 2015-09-08               | Managing internet protocol address allocation                                                                     |
| 1444                 | 11/614,744                    | 2006-12-21                     | 9,136,957                | 2015-09-15               | Mobile device activation for events                                                                               |
| 1445                 | 12/429,001                    | 2009-04-23                     | 9,137,026                | 2015-09-15               | Seamless service transitions for dual-network mobile devices                                                      |
| 1446                 | 12/978,689                    | 2010-12-27                     | 9,137,620                | 2015-09-15               | Conformity analysis system for analyzing conformity to restrictions on the use of a wireless communication device |
| 1447                 | 14/026,757                    | 2013-09-13                     | 9,137,666                | 2015-09-15               | Mobile security using graphical images                                                                            |
| 1448                 | 14/226,135                    | 2014-03-26                     | 9,137,667                | 2015-09-15               | Visual voicemail client authentication                                                                            |
| 1449                 | 14/142,142                    | 2013-12-27                     | 9,137,716                | 2015-09-15               | Mobility based frequency band selection in wireless communication systems                                         |
| 1450                 | 14/018,948                    | 2013-09-05                     | 9,137,767                | 2015-09-15               | Generating frequency reference signals                                                                            |

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| 1451                 | 13/946,725                    | 2013-07-19                     | 9,137,827                | 2015-09-15               | Dynamic adjustment of preambles for a random access channel                                  |
| 1452                 | 13/947,597                    | 2013-07-22                     | 9,137,837                | 2015-09-15               | Managing termination of point-to-point sessions between electronic devices                   |
| 1453                 | 14/279,013                    | 2014-05-15                     | 9,141,367                | 2015-09-22               | Application management for a wireless communication device                                   |
| 1454                 | 11/567,436                    | 2006-12-06                     | 9,142,844                | 2015-09-22               | Power system for a telecommunications network                                                |
| 1455                 | 14/065,936                    | 2013-10-29                     | 9,143,303                | 2015-09-22               | Carrier aggregation across multiple frequency bands                                          |
| 1456                 | 12/890,766                    | 2010-09-27                     | 9,143,386                | 2015-09-22               | Remote keep-alive message management in a wireless communication network                     |
| 1457                 | 12/728,321                    | 2010-03-22                     | 9,143,428                | 2015-09-22               | Keep-alive message integration over a wireless communication network                         |
| 1458                 | 13/074,684                    | 2011-03-29                     | 9,143,534                | 2015-09-22               | Managing multimedia messages being transmitted to recipient devices of foreign networks      |
| 1459                 | 13/653,059                    | 2012-10-16                     | 9,143,886                | 2015-09-22               | Pre-provisioning and de-provisioning functions for a mobile system                           |
| 1460                 | 14/010,518                    | 2013-08-27                     | 9,143,924                | 2015-09-22               | Segmented customization payload delivery                                                     |
| 1461                 | 13/958,994                    | 2013-08-05                     | 9,144,079                | 2015-09-22               | Dynamic adjustment of the number of uplink grants per random access response message         |
| 1462                 | 12/502,765                    | 2009-07-14                     | 9,146,651                | 2015-09-29               | Displaying multiple applications on limited capability devices                               |
| 1463                 | 13/737,604                    | 2013-01-09                     | 9,147,187                | 2015-09-29               | Storing and accessing a plurality of payment options on a secure element                     |
| 1464                 | 13/047,118                    | 2011-03-14                     | 9,148,453                | 2015-09-29               | Dynamic determination of initial filter criteria                                             |
| 1465                 | 14/107,251                    | 2013-12-16                     | 9,148,784                | 2015-09-29               | Secure wireless device handoff                                                               |
| 1466                 | 13/176,909                    | 2011-07-06                     | 9,148,830                | 2015-09-29               | Reverse link throughput using multiple input multiple output (mimo) across multiple wireless |

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|               |                        |                         |                   |                   | devices                                                                                                                |
| 1467          | 14/017,660             | 2013-09-04              | 9,154,284         | 2015-10-06        | Estimating sounding reference signals for secondary radio-frequency channels                                           |
| 1468          | 13/938,435             | 2013-07-10              | 9,154,287         | 2015-10-06        | Alleviation of time division multiplexing interference between multiple access nodes                                   |
| 1469          | 13/326,184             | 2011-12-14              | 9,154,366         | 2015-10-06        | Server maintenance modeling in cloud computing                                                                         |
| 1470          | 12/043,199             | 2008-03-06              | 9,154,899         | 2015-10-06        | Communication transceiver configuration in response to optically receiving an image in a wireless communication device |
| 1471          | 14/218,231             | 2014-03-18              | 9,154,911         | 2015-10-06        | Selective delivery of presence messages for wireless communication devices                                             |
| 1472          | 13/741,866             | 2013-01-15              | 9,154,926         | 2015-10-06        | Delivery of a message based on a status of a receiving device                                                          |
| 1473          | 13/937,191             | 2013-07-08              | 9,154,949         | 2015-10-06        | Authenticated delivery of premium communication services to untrusted devices over an untrusted network                |
| 1474          | 13/937,193             | 2013-07-08              | 9,154,955         | 2015-10-06        | Authenticated delivery of premium communication services to trusted devices over an untrusted network                  |
| 1475          | 13/930,372             | 2013-06-28              | 9,154,973         | 2015-10-06        | Testing mobile phone maintenance channel                                                                               |
| 1476          | 14/446,627             | 2014-07-30              | 9,154,976         | 2015-10-06        | Mesh wireless connectivity                                                                                             |
| 1477          | 14/054,937             | 2013-10-16              | 9,155,034         | 2015-10-06        | Wireless communication device and method for hand-up from less-capable to more-capable communication protocol          |
| 1478          | 13/741,541             | 2013-01-15              | 9,155,036         | 2015-10-06        | Cell selection offset used to indicate wireless cell unsuitable for communications                                     |
| 1479          | 12/560,859             | 2009-09-16              | 9,155,125         | 2015-10-06        | Location validation system and methods                                                                                 |

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| 1480                 | 14/450,447                    | 2014-08-04                     | 9,160,629                | 2015-10-13               | Mesh wireless connectivity                                                                                                                  |
| 1481                 | 13/972,827                    | 2013-08-21                     | 9,161,209                | 2015-10-13               | Multi-step mobile device initiation with intermediate partial reset                                                                         |
| 1482                 | 13/762,319                    | 2013-02-07                     | 9,161,227                | 2015-10-13               | Trusted signaling in long term evolution (lte) 4g wireless communication                                                                    |
| 1483                 | 14/085,474                    | 2013-11-20                     | 9,161,325                | 2015-10-13               | Subscriber identity module virtualization                                                                                                   |
| 1484                 | 13/348,314                    | 2012-01-11                     | 9,167,370                | 2015-10-20               | Delaying registration on roaming networks                                                                                                   |
| 1485                 | 14/136,922                    | 2013-12-20                     | 9,167,410                | 2015-10-20               | Policy-based roaming control for wireless communication devices                                                                             |
| 1486                 | 14/273,317                    | 2014-05-08                     | 9,167,454                | 2015-10-20               | Wireless communication system to detect an abnormal condition associated with wireless communication device types                           |
| 1487                 | 13/965,899                    | 2013-08-13                     | 9,167,586                | 2015-10-20               | Interference mitigation at cell edge region of enhanced node b of lte wireless network                                                      |
| 1488                 | 14/010,523                    | 2013-08-27                     | 9,170,870                | 2015-10-27               | Development and testing of payload receipt by a portable electronic device                                                                  |
| 1489                 | 13/857,138                    | 2013-04-04                     | 9,171,243                | 2015-10-27               | System for managing a digest of biographical information stored in a radio frequency identity chip coupled to a mobile communication device |
| 1490                 | 13/932,605                    | 2013-07-01                     | 9,172,495                | 2015-10-27               | Dynamic modulation change while generating a mac pdu in a lte protocol wireless network                                                     |
| 1491                 | 13/962,439                    | 2013-08-08                     | 9,172,580                | 2015-10-27               | Selecting transceiver for wireless network based on security keys                                                                           |
| 1492                 | 14/535,656                    | 2014-11-07                     | 9,172,814                | 2015-10-27               | Facilitating call continuity when transferring calls between a mobile access network to a voip network                                      |
| 1493                 | 13/949,992                    | 2013-07-24                     | 9,173,181                | 2015-10-27               | Adapter that converts precision time protocol (ptp) to global positioning system (gps)                                                      |

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| 1494                 | 13/769,268                    | 2013-02-15                     | 9,173,238                | 2015-10-27               | Dual path in-vehicle communication                                                                                    |
| 1495                 | 13/360,523                    | 2012-01-27                     | 9,176,797                | 2015-11-03               | Workflow processing and methods for auditing and playback of data                                                     |
| 1496                 | 13/947,359                    | 2013-07-22                     | 9,178,915                | 2015-11-03               | Cookie preservation when switching devices                                                                            |
| 1497                 | 13/966,521                    | 2013-08-14                     | 9,179,333                | 2015-11-03               | Hybrid automatic repeat request block error rate control for wireless communications                                  |
| 1498                 | 13/922,913                    | 2013-06-20                     | 9,179,360                | 2015-11-03               | Forward error correction and retransmissions for media service optimization over a wireless communication network     |
| 1499                 | 13/896,088                    | 2013-05-16                     | 9,179,438                | 2015-11-03               | Determination of wireless device movement to and from an area of interest using a route update radius                 |
| 1500                 | 14/215,434                    | 2014-03-17                     | 9,179,497                | 2015-11-03               | Distribution of sensor data among a group of wireless communication devices                                           |
| 1501                 | 13/571,348                    | 2012-08-10                     | 9,183,412                | 2015-11-10               | Systems and methods for provisioning and using multiple trusted security zones on an electronic device                |
| 1502                 | 13/939,175                    | 2013-07-10                     | 9,183,606                | 2015-11-10               | Trusted processing location within a graphics processing unit                                                         |
| 1503                 | 14/050,454                    | 2013-10-10                     | 9,185,514                | 2015-11-10               | Orchestration of application updates over a wireless communication network                                            |
| 1504                 | 14/066,661                    | 2013-10-29                     | 9,185,626                | 2015-11-10               | Secure peer-to-peer call forking facilitated by trusted 3rd party voice server provisioning                           |
| 1505                 | 14/476,339                    | 2014-09-03                     | 9,189,607                | 2015-11-17               | Mobile phone controls preprocessor                                                                                    |
| 1506                 | 14/175,612                    | 2014-02-07                     | 9,191,265                | 2015-11-17               | Internet multimedia subsystem (ims) bypass of a long term evolution (lte) policy, charging, and rules function (pcrf) |
| 1507                 | 13/844,145                    | 2013-03-15                     | 9,191,388                | 2015-11-17               | Trusted security zone communication addressing on an                                                                  |

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|---------------|------------------------|-------------------------|-------------------|-------------------|------------------------------------------------------------------------------------------------------------------|
|               |                        |                         |                   |                   | electronic device                                                                                                |
| 1508          | 14/075,663             | 2013-11-08              | 9,191,522         | 2015-11-17        | Billing varied service based on tier                                                                             |
| 1509          | 14/137,369             | 2013-12-20              | 9,191,620         | 2015-11-17        | Voice call using augmented reality                                                                               |
| 1510          | 12/703,576             | 2010-02-10              | 9,191,804         | 2015-11-17        | Managing subscription messages on behalf of a mobile device                                                      |
| 1511          | 14/021,248             | 2013-09-09              | 9,191,817         | 2015-11-17        | Security key based authorization of voice call identification numbers in wireless communication devices          |
| 1512          | 14/617,498             | 2015-02-09              | 9,191,865         | 2015-11-17        | Long term evolution (lte) communications over trusted hardware                                                   |
| 1513          | 11/933,798             | 2007-11-01              | 9,197,485         | 2015-11-24        | Geographically appropriate domain name system assignment                                                         |
| 1514          | 13/622,234             | 2012-09-18              | 9,198,027         | 2015-11-24        | Generic mobile devices customization framework                                                                   |
| 1515          | 14/285,621             | 2014-05-22              | 9,198,045         | 2015-11-24        | Mobile communication device remote unlock system and method                                                      |
| 1516          | 14/061,876             | 2013-10-24              | 9,198,182         | 2015-11-24        | Method and systems for optimizing carrier aggregation implementation for ue in-building coverage in lte networks |
| 1517          | 14/145,064             | 2013-12-31              | 9,201,716         | 2015-12-01        | Automatic queue size determination and tuning                                                                    |
| 1518          | 14/066,227             | 2013-10-29              | 9,203,978         | 2015-12-01        | Providing an item of content to a mobile device in a prepaid context                                             |
| 1519          | 14/010,522             | 2013-08-27              | 9,204,239         | 2015-12-01        | Segmented customization package within distributed server architecture                                           |
| 1520          | 13/844,104             | 2013-03-15              | 9,204,286         | 2015-12-01        | System and method of branding and labeling a mobile device                                                       |
| 1521          | 12/020,599             | 2008-01-28              | 9,208,293         | 2015-12-08        | Authentication for tag-based content delivery                                                                    |
| 1522          | 13/964,112             | 2013-08-12              | 9,208,339         | 2015-12-08        | Verifying applications in virtual environments using a trusted security zone                                     |

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| 1523                 | 14/152,627                    | 2014-01-10                     | 9,208,513                | 2015-12-08               | Automated branding of generic applications                                                                  |
| 1524                 | 14/081,859                    | 2013-11-15                     | 9,210,533                | 2015-12-08               | Resource block structure and control in a wireless ofdm communication system                                |
| 1525                 | 14/090,667                    | 2013-11-26                     | 9,210,576                | 2015-12-08               | Extended trusted security zone radio modem                                                                  |
| 1526                 | 14/613,495                    | 2015-02-04                     | 9,210,582                | 2015-12-08               | Method of adding and removing sites for a cluster based on a baseline delay comparison                      |
| 1527                 | 14/607,792                    | 2015-01-28                     | 9,213,931                | 2015-12-15               | Matrix barcode enhancement through capture and use of neighboring environment image                         |
| 1528                 | 14/094,084                    | 2013-12-02                     | 9,214,981                | 2015-12-15               | Configurable antenna port selection for beam forming and mimo in a telecommunications network               |
| 1529                 | 13/594,779                    | 2012-08-25                     | 9,215,180                | 2015-12-15               | File retrieval in real-time brokering of digital content                                                    |
| 1530                 | 12/565,092                    | 2009-09-23                     | 9,215,572                | 2015-12-15               | Mobile device alternative text messaging                                                                    |
| 1531                 | 13/722,719                    | 2012-12-20                     | 9,223,467                | 2015-12-29               | Distributing icons so that they do not overlap certain screen areas of a mobile device                      |
| 1532                 | 14/522,586                    | 2014-10-24                     | 9,226,133                | 2015-12-29               | Dynamic remotely managed sim profile                                                                        |
| 1533                 | 14/071,400                    | 2013-11-04                     | 9,226,141                | 2015-12-29               | Identifying unsubscribed tethering in a wireless network                                                    |
| 1534                 | 14/229,532                    | 2014-03-28                     | 9,226,145                | 2015-12-29               | Verification of mobile device integrity during activation                                                   |
| 1535                 | 13/660,754                    | 2012-10-25                     | 9,226,258                | 2015-12-29               | Wireless device location derived from base station signaling                                                |
| 1536                 | 14/446,330                    | 2014-07-29                     | 9,230,085                | 2016-01-05               | Network based temporary trust extension to a remote or mobile device enabled via specialized cloud services |
| 1537                 | 14/186,968                    | 2014-02-21                     | 9,232,420                | 2016-01-05               | Automated network testing using in-progress call detail records                                             |

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| 1538                 | 13/661,211                    | 2012-10-26                     | 9,235,865                | 2016-01-12               | Identifying influencers using social information                                                                                      |
| 1539                 | 14/151,640                    | 2014-01-09                     | 9,236,984                | 2016-01-12               | Determination of frequency band information by a wireless communication device                                                        |
| 1540                 | 13/965,493                    | 2013-08-13                     | 9,237,547                | 2016-01-12               | Management of cdma reference cell identifiers in an lte network                                                                       |
| 1541                 | 14/179,805                    | 2014-02-13                     | 9,240,968                | 2016-01-19               | Autogenerated email summarization process                                                                                             |
| 1542                 | 14/036,662                    | 2013-09-25                     | 9,240,997                | 2016-01-19               | Security for a power over ethernet installation                                                                                       |
| 1543                 | 14/328,658                    | 2014-07-10                     | 9,241,269                | 2016-01-19               | Method to identify a customer on a wi-fi network                                                                                      |
| 1544                 | 13/572,210                    | 2012-08-10                     | 9,241,285                | 2016-01-19               | Pcrf/andsf interaction in a communication network                                                                                     |
| 1545                 | 14/061,049                    | 2013-10-23                     | 9,241,289                | 2016-01-19               | Dynamic adjustment of cell reselection parameters for a wireless communication device                                                 |
| 1546                 | 13/968,629                    | 2013-08-16                     | 9,241,350                | 2016-01-19               | Access network type identification in mobile internet protocol (mip) registration (rrq)                                               |
| 1547                 | 14/184,347                    | 2014-02-19                     | 9,241,359                | 2016-01-19               | Delayed authentication following a radio link failure                                                                                 |
| 1548                 | 13/442,412                    | 2012-04-09                     | 9,247,043                | 2016-01-26               | Carrier identity translation for special service calls based on the organization responsible for the special service routing database |
| 1549                 | 14/290,484                    | 2014-05-29                     | 9,247,478                | 2016-01-26               | Call routing using domain name service and electronic number mapping                                                                  |
| 1550                 | 13/708,617                    | 2012-12-07                     | 9,249,921                | 2016-02-02               | Raising and lowering telecommunications equipment on a telecommunications tower                                                       |
| 1551                 | 13/667,497                    | 2012-11-02                     | 9,252,838                | 2016-02-02               | Alternative techniques for processing wireless communication backhaul                                                                 |
| 1552                 | 14/304,861                    | 2014-06-13                     | 9,252,951                | 2016-02-02               | Vehicle key function control from a mobile phone based on radio frequency link from phone to vehicle                                  |

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| 1553                 | 14/251,262                    | 2014-04-11                     | 9,253,614                | 2016-02-02               | Communication system providing integrated wireless and packet communication services                   |
| 1554                 | 13/742,051                    | 2013-01-15                     | 9,253,652                | 2016-02-02               | Ad hoc formation of a swarm for information collection and distribution                                |
| 1555                 | 14/164,684                    | 2014-01-27                     | 9,253,814                | 2016-02-02               | Wireless communication device and method for interacting with a wireless hotspot                       |
| 1556                 | 14/449,986                    | 2014-08-01                     | 9,258,252                | 2016-02-09               | Virtual server resource monitoring and management                                                      |
| 1557                 | 12/880,684                    | 2010-09-13                     | 9,258,434                | 2016-02-09               | Using a mobile device as an external monitor                                                           |
| 1558                 | 13/173,232                    | 2011-06-30                     | 9,258,579                | 2016-02-09               | Temporal shift of object resolution and optimization                                                   |
| 1559                 | 14/206,815                    | 2014-03-12                     | 9,258,689                | 2016-02-09               | Transfer of trimmed commercial mobile alert system messages                                            |
| 1560                 | 14/033,633                    | 2013-09-23                     | 9,258,707                | 2016-02-09               | Timing security flags in common public radio interface                                                 |
| 1561                 | 13/913,689                    | 2013-06-10                     | 9,258,748                | 2016-02-09               | Circuit switch fallback handling for wireless communication devices in wireless communication networks |
| 1562                 | 13/858,528                    | 2013-04-08                     | 9,264,338                | 2016-02-16               | Detecting upset conditions in application instances                                                    |
| 1563                 | 12/553,272                    | 2009-09-03                     | 9,264,522                | 2016-02-16               | Ensuring communication device capabilities comply with content provider specifications                 |
| 1564                 | 14/171,774                    | 2014-02-03                     | 9,264,842                | 2016-02-16               | Secondary open mobile alliance device management platform                                              |
| 1565                 | 13/975,513                    | 2013-08-26                     | 9,264,864                | 2016-02-16               | Message delivery receipt transmission in a wireless communication system                               |
| 1566                 | 13/488,785                    | 2012-06-05                     | 9,264,879                | 2016-02-16               | Managing resource usage of a mobile device                                                             |
| 1567                 | 14/148,714                    | 2014-01-06                     | 9,268,959                | 2016-02-23               | Trusted security zone access to peripheral devices                                                     |
| 1568                 | 14/064,640                    | 2013-10-28                     | 9,271,207                | 2016-02-23               | Wireless network transition by a wireless communication device                                         |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------|
| 1569                 | 14/043,643                    | 2013-10-01                     | 9,271,247                | 2016-02-23               | Characterizing slave clock synchronization behavior by means of dropped sync packets                           |
| 1570                 | 12/900,795                    | 2010-10-08                     | 9,271,261                | 2016-02-23               | Wireless geographic routing protocol                                                                           |
| 1571                 | 14/256,317                    | 2014-04-18                     | 9,271,330                | 2016-02-23               | Internet multimedia subsystem (ims) control over session transfer between communication networks               |
| 1572                 | 11/438,540                    | 2006-05-22                     | 9,275,390                | 2016-03-01               | Systems and methods for state based advertisement messaging across media types                                 |
| 1573                 | 12/417,081                    | 2009-04-02                     | 9,275,405                | 2016-03-01               | Content provider sponsored data services system and methods                                                    |
| 1574                 | 14/067,401                    | 2013-10-30                     | 9,277,354                | 2016-03-01               | Systems, methods, and software for receiving commands within a mobile communications application               |
| 1575                 | 13/974,349                    | 2013-08-23                     | 9,277,465                | 2016-03-01               | Contention-free handoff return in a wireless network                                                           |
| 1576                 | 14/025,577                    | 2013-09-12                     | 9,277,509                | 2016-03-01               | Dynamic power boosting based on contiguous and non-contiguous coverage                                         |
| 1577                 | 13/891,449                    | 2013-05-10                     | 9,277,572                | 2016-03-01               | Modification of diameter messages to establish a communication session over a home packet data network gateway |
| 1578                 | 13/899,567                    | 2013-05-22                     | 9,280,483                | 2016-03-08               | Rebranding a portable electronic device while maintaining user data                                            |
| 1579                 | 14/017,613                    | 2013-09-04                     | 9,282,469                | 2016-03-08               | Increasing cinr gain in a network deploying beam forming                                                       |
| 1580                 | 13/852,136                    | 2013-03-28                     | 9,282,529                | 2016-03-08               | Identification of dormant wireless communication devices in wireless communication systems                     |
| 1581                 | 13/569,995                    | 2012-08-08                     | 9,282,572                | 2016-03-08               | Enhanced access class barring mechanism in lte                                                                 |
| 1582                 | 13/532,588                    | 2012-06-25                     | 9,282,898                | 2016-03-15               | End-to-end trusted communications infrastructure                                                               |
| 1583                 | 14/732,846                    | 2015-06-08                     | 9,286,594                | 2016-03-15               | Visually readable electronic label                                                                             |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 1584                 | 13/681,705                    | 2012-11-20                     | 9,286,705                | 2016-03-15               | Presenting wireless-telecommunications coverage areas                                                                                           |
| 1585                 | 14/026,568                    | 2013-09-13                     | 9,288,724                | 2016-03-15               | Mobile device handoff optimization                                                                                                              |
| 1586                 | 14/262,376                    | 2014-04-25                     | 9,292,540                | 2016-03-22               | File location application programming interface                                                                                                 |
| 1587                 | 11/417,371                    | 2006-05-04                     | 9,294,477                | 2016-03-22               | Media access control address security                                                                                                           |
| 1588                 | 14/152,543                    | 2014-01-10                     | 9,294,970                | 2016-03-22               | Self-healing algorithm to overcome handover failure due to out-of-date neighbor list                                                            |
| 1589                 | 14/242,613                    | 2014-04-01                     | 9,295,081                | 2016-03-22               | Orthogonal frequency division multiplexing (ofdm) communication system and method to schedule transfers of first and second user communications |
| 1590                 | 12/017,167                    | 2008-01-21                     | 9,299,087                | 2016-03-29               | Providing and tracking virtual coupons                                                                                                          |
| 1591                 | 14/183,518                    | 2014-02-18                     | 9,300,623                | 2016-03-29               | Domain name system cache integrity check                                                                                                        |
| 1592                 | 14/073,321                    | 2013-11-06                     | 9,301,081                | 2016-03-29               | Delivery of oversized branding elements for customization                                                                                       |
| 1593                 | 13/667,470                    | 2012-11-02                     | 9,301,111                | 2016-03-29               | Reconciling contact information between users                                                                                                   |
| 1594                 | 13/796,919                    | 2013-03-12                     | 9,301,159                | 2016-03-29               | Adaptive convolution method in long term evolution networks                                                                                     |
| 1595                 | 13/895,521                    | 2013-05-16                     | 9,301,208                | 2016-03-29               | Managing optimal relation neighbor data                                                                                                         |
| 1596                 | 14/152,533                    | 2014-01-10                     | 9,301,218                | 2016-03-29               | Overcoming handover failure due to out-of-date neighbor list                                                                                    |
| 1597                 | 13/963,492                    | 2013-08-09                     | 9,301,244                | 2016-03-29               | Reallocation of resources for dual-mode wireless devices                                                                                        |
| 1598                 | 13/967,555                    | 2013-08-15                     | 9,301,295                | 2016-03-29               | Redirection of wireless communication devices to target base stations that support requested media sessions                                     |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1599                 | 13/612,819                    | 2012-09-12                     | 9,304,647                | 2016-04-05               | User interface screen presentation prioritization                                                                                                          |
| 1600                 | 13/304,410                    | 2011-11-25                     | 9,305,029                | 2016-04-05               | Inventory centric knowledge management                                                                                                                     |
| 1601                 | 14/037,840                    | 2013-09-26                     | 9,307,032                | 2016-04-05               | Media session extension in a wireless network                                                                                                              |
| 1602                 | 14/475,399                    | 2014-09-02                     | 9,307,400                | 2016-04-05               | System and method of efficient mobile device network brand customization                                                                                   |
| 1603                 | 13/789,146                    | 2013-03-07                     | 9,307,419                | 2016-04-05               | Data transmission throughput for a wireless access node                                                                                                    |
| 1604                 | 14/481,449                    | 2014-09-09                     | 9,307,506                | 2016-04-05               | Implementation of a fiber distributed antenna system network while maintaining synchronization                                                             |
| 1605                 | 14/619,677                    | 2015-02-11                     | 9,313,643                | 2016-04-12               | Dynamic subscriber identity module                                                                                                                         |
| 1606                 | 14/021,070                    | 2013-09-09                     | 9,313,648                | 2016-04-12               | Network selection support for wireless communication devices                                                                                               |
| 1607                 | 14/092,342                    | 2013-11-27                     | 9,313,706                | 2016-04-12               | Processing preamble usage data to select a handover target in a wireless communication system                                                              |
| 1608                 | 13/956,367                    | 2013-08-01                     | 9,319,379                | 2016-04-19               | Methods and systems of generating a unique mobile device identifier                                                                                        |
| 1609                 | 14/256,102                    | 2014-04-18                     | 9,319,407                | 2016-04-19               | Authentication extension to untrusted devices on an untrusted network                                                                                      |
| 1610                 | 14/661,884                    | 2015-03-18                     | 9,319,948                | 2016-04-19               | Wireless communication system to select a wireless access node based on radio access terminal measurements and subscriber wireless data scheduling weights |
| 1611                 | 13/792,728                    | 2013-03-11                     | 9,319,991                | 2016-04-19               | Dynamically adjusting power settings based on a gain mapping file                                                                                          |
| 1612                 | 13/857,141                    | 2013-04-04                     | 9,324,016                | 2016-04-26               | Digest of biographical information for an electronic device with static and dynamic portions                                                               |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------------|
| 1613                 | 13/660,812                    | 2012-10-25                     | 9,324,352                | 2016-04-26               | Location association identification between wireless communication devices                        |
| 1614                 | 14/092,691                    | 2013-11-27                     | 9,325,621                | 2016-04-26               | Wireless device offload                                                                           |
| 1615                 | 14/486,774                    | 2014-09-15                     | 9,325,663                | 2016-04-26               | Discovery of network address allocations and translations in wireless communication systems       |
| 1616                 | 14/179,214                    | 2014-02-12                     | 9,326,188                | 2016-04-26               | Mitigating interference using beamforming                                                         |
| 1617                 | 14/152,504                    | 2014-01-10                     | 9,326,196                | 2016-04-26               | Updating an out-of-date source neighbor list                                                      |
| 1618                 | 14/825,424                    | 2015-08-13                     | 9,326,206                | 2016-04-26               | Wireless communication device control of wireless communication access systems                    |
| 1619                 | 11/945,398                    | 2007-11-27                     | 9,330,051                | 2016-05-03               | Collection of web server performance metrics to a centralized database for reporting and analysis |
| 1620                 | 13/949,228                    | 2013-07-24                     | 9,330,053                | 2016-05-03               | True push architecture for internet protocol notification                                         |
| 1621                 | 14/328,142                    | 2014-07-10                     | 9,331,905                | 2016-05-03               | Configuring ethernet elements via ethernet local management interface                             |
| 1622                 | 11/948,641                    | 2007-11-30                     | 9,332,107                | 2016-05-03               | Handset application interruption avoidance                                                        |
| 1623                 | 11/565,440                    | 2006-11-30                     | 9,332,120                | 2016-05-03               | Dialing rule determining and application in a communication system                                |
| 1624                 | 14/083,441                    | 2013-11-18                     | 9,332,127                | 2016-05-03               | Mobile device user interface notification management                                              |
| 1625                 | 12/510,788                    | 2009-07-28                     | 9,336,375                | 2016-05-10               | Restricting access to data on portable storage media based on access to a private intranet        |
| 1626                 | 14/532,290                    | 2014-11-10                     | 9,338,133                | 2016-05-10               | Locating optimum security gateway                                                                 |
| 1627                 | 14/203,926                    | 2014-03-11                     | 9,338,184                | 2016-05-10               | Systems, methods, and software for improving resistance to distributed denial of service attacks  |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1628                 | 13/764,402                    | 2013-02-11                     | 9,338,697                | 2016-05-10               | Mobile device handoff while maintaining connectivity with multiple access points                                                         |
| 1629                 | 12/388,474                    | 2009-02-18                     | 9,342,207                | 2016-05-17               | Presenting media instances on a communication device                                                                                     |
| 1630                 | 13/889,044                    | 2013-05-07                     | 9,342,752                | 2016-05-17               | Adjusting an image for video conference display                                                                                          |
| 1631                 | 13/552,749                    | 2012-07-19                     | 9,344,452                | 2016-05-17               | User control over wifi network access                                                                                                    |
| 1632                 | 14/619,390                    | 2015-02-11                     | 9,344,764                | 2016-05-17               | Facilitating communication actions in accordance with cable attributes                                                                   |
| 1633                 | 13/967,519                    | 2013-08-15                     | 9,344,770                | 2016-05-17               | Wireless video uplink system that wirelessly broadcasts a network access provider identifier                                             |
| 1634                 | 14/249,720                    | 2014-04-10                     | 9,344,933                | 2016-05-17               | Mobility management entity (mme) system and method to disable voice over lte (volte) service of a long term evolution (lte) base station |
| 1635                 | 13/691,941                    | 2012-12-03                     | 9,344,990                | 2016-05-17               | Device location accuracy metrics for applications on wireless communication devices                                                      |
| 1636                 | 14/150,362                    | 2014-01-08                     | 9,345,033                | 2016-05-17               | Dormancy timer adjustment in a wireless access node based on wireless device application status                                          |
| 1637                 | 13/606,018                    | 2012-09-07                     | 9,351,044                | 2016-05-24               | Dynamic interface for mobile devices                                                                                                     |
| 1638                 | 14/685,941                    | 2015-04-14                     | 9,351,309                | 2016-05-24               | Dynamic allocation of carrier aggregation resources based on device requests                                                             |
| 1639                 | 14/463,132                    | 2014-08-19                     | 9,351,329                | 2016-05-24               | Session continuity for packet data network gateways                                                                                      |
| 1640                 | 14/165,574                    | 2014-01-27                     | 9,355,233                | 2016-05-31               | Password reset using hash functions                                                                                                      |
| 1641                 | 14/508,236                    | 2014-10-07                     | 9,356,911                | 2016-05-31               | Serving gateway policy enforcement                                                                                                       |
| 1642                 | 14/639,056                    | 2015-03-04                     | 9,357,378                | 2016-05-31               | Subscriber identity module (sim) card initiation of custom application launcher installation                                             |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------|
|                      |                               |                                |                          |                          | on a mobile communication device                                                                                       |
| 1643                 | 14/160,839                    | 2014-01-22                     | 9,357,467                | 2016-05-31               | Transmission of radio frequency (rf) measurements to facilitate selection of approved neighboring wireless access node |
| 1644                 | 14/036,454                    | 2013-09-25                     | 9,363,090                | 2016-06-07               | Authorization of communication links between end user devices using intermediary nodes                                 |
| 1645                 | 14/013,432                    | 2013-08-29                     | 9,363,138                | 2016-06-07               | Bridging communications                                                                                                |
| 1646                 | 14/108,736                    | 2013-12-17                     | 9,363,391                | 2016-06-07               | Wireless device access to communication services through another wireless device                                       |
| 1647                 | 14/189,133                    | 2014-02-25                     | 9,363,656                | 2016-06-07               | Sector based wireless device management                                                                                |
| 1648                 | 14/503,394                    | 2014-09-30                     | 9,363,665                | 2016-06-07               | Targeting insertion work-around for long term evolution (lte) path                                                     |
| 1649                 | 12/686,509                    | 2010-01-13                     | 9,363,691                | 2016-06-07               | Application transfer negotiation for a media device                                                                    |
| 1650                 | 14/254,889                    | 2014-04-16                     | 9,367,379                | 2016-06-14               | Automated self-healing computer system                                                                                 |
| 1651                 | 12/132,400                    | 2008-06-03                     | 9,367,489                | 2016-06-14               | Adjusting the size of a media presentation received by a mobile device                                                 |
| 1652                 | 14/457,855                    | 2014-08-12                     | 9,369,161                | 2016-06-14               | Mitigation of radio-frequency interference at a remote radio head                                                      |
| 1653                 | 14/013,442                    | 2013-08-29                     | 9,369,336                | 2016-06-14               | Managing communication links                                                                                           |
| 1654                 | 14/453,927                    | 2014-08-07                     | 9,369,352                | 2016-06-14               | Method of capturing server and operating system metrics for virtual to physical topology reporting                     |
| 1655                 | 14/612,963                    | 2015-02-03                     | 9,369,492                | 2016-06-14               | Out-of band network security management                                                                                |
| 1656                 | 14/176,373                    | 2014-02-10                     | 9,369,592                | 2016-06-14               | Accurate user data information                                                                                         |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1657                 | 14/333,994                    | 2014-07-17                     | 9,369,841                | 2016-06-14               | Providing geographic locations of a user's wireless device                                                                                                                             |
| 1658                 | 14/542,084                    | 2014-11-14                     | 9,369,881                | 2016-06-14               | Modification of antenna dipole element orientation for enhanced radio transmission                                                                                                     |
| 1659                 | 14/329,301                    | 2014-07-11                     | 9,369,937                | 2016-06-14               | Long term evolution (lte) network hand-over control based on quality-of-service class indicator (qci) combinations                                                                     |
| 1660                 | 12/767,082                    | 2010-04-26                     | 9,373,106                | 2016-06-21               | Tracking the download and purchase of digital content                                                                                                                                  |
| 1661                 | 13/570,677                    | 2012-08-09                     | 9,373,121                | 2016-06-21               | User communication device control with operating system action request messages                                                                                                        |
| 1662                 | 14/024,629                    | 2013-09-11                     | 9,374,335                | 2016-06-21               | System and method for distributing messages to particular mobile devices                                                                                                               |
| 1663                 | 13/844,282                    | 2013-03-15                     | 9,374,363                | 2016-06-21               | Restricting access of a portable communication device to confidential data or applications via a remote network based on event triggers generated by the portable communication device |
| 1664                 | 12/103,391                    | 2008-04-15                     | 9,374,603                | 2016-06-21               | Systems and methods for providing content delivery over a backhaul link in a communication system                                                                                      |
| 1665                 | 14/503,385                    | 2014-09-30                     | 9,375,845                | 2016-06-28               | Synchronizing robot motion with social interaction                                                                                                                                     |
| 1666                 | 13/615,565                    | 2012-09-13                     | 9,380,608                | 2016-06-28               | Enhanced emergency call mobility support                                                                                                                                               |
| 1667                 | 13/679,766                    | 2012-11-16                     | 9,384,495                | 2016-07-05               | Optical indicia for indexing and check-in                                                                                                                                              |
| 1668                 | 14/659,614                    | 2015-03-17                     | 9,384,498                | 2016-07-05               | Framework for real-time brokering of digital content delivery                                                                                                                          |
| 1669                 | 14/181,291                    | 2014-02-14                     | 9,385,974                | 2016-07-05               | Data message queue management to identify message sets for delivery metric modification                                                                                                |
| 1670                 | 14/635,631                    | 2015-03-02                     | 9,386,001                | 2016-07-05               | Border gateway protocol (bgp) communications over trusted                                                                                                                              |

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|                      |                               |                                |                          |                          | network function virtualization (nfv) hardware                                                                                          |
| 1671                 | 14/330,641                    | 2014-07-14                     | 9,386,076                | 2016-07-05               | Delivering content to mobile clients                                                                                                    |
| 1672                 | 14/042,707                    | 2013-09-30                     | 9,386,395                | 2016-07-05               | Dynamic loading, unloading, and caching of alternate complete interfaces                                                                |
| 1673                 | 13/681,337                    | 2012-11-19                     | 9,386,463                | 2016-07-05               | Application risk analysis                                                                                                               |
| 1674                 | 14/080,245                    | 2013-11-14                     | 9,391,866                | 2016-07-12               | Method for qualitative analysis of system performance correlation factors                                                               |
| 1675                 | 14/157,507                    | 2014-01-16                     | 9,392,395                | 2016-07-12               | Background delivery of device configuration and branding                                                                                |
| 1676                 | 14/178,027                    | 2014-02-11                     | 9,392,402                | 2016-07-12               | Communication of events depicted in media to a wireless device                                                                          |
| 1677                 | 14/037,637                    | 2013-09-26                     | 9,392,442                | 2016-07-12               | Secured application communications                                                                                                      |
| 1678                 | 13/958,937                    | 2013-08-05                     | 9,392,446                | 2016-07-12               | Authenticating environmental sensor systems based on security keys in communication systems                                             |
| 1679                 | 14/067,086                    | 2013-10-30                     | 9,392,468                | 2016-07-12               | Adaptive beamforming techniques in long term evolution networks                                                                         |
| 1680                 | 14/602,055                    | 2015-01-21                     | 9,392,574                | 2016-07-12               | Notification factors and rules for proactive notification of potential service impacts                                                  |
| 1681                 | 14/323,030                    | 2014-07-03                     | 9,392,584                | 2016-07-12               | User equipment control in a multi-core long term evolution system                                                                       |
| 1682                 | 14/722,801                    | 2015-05-27                     | 9,396,016                | 2016-07-19               | Handoff of virtual machines based on security requirements                                                                              |
| 1683                 | 14/532,954                    | 2014-11-04                     | 9,396,424                | 2016-07-19               | Radio frequency induced power reception management for a radio frequency identity (rfid) chip embedded in a mobile communication device |
| 1684                 | 12/432,415                    | 2009-04-29                     | 9,398,320                | 2016-07-19               | Managing access to content using ratings provided by a content provider                                                                 |

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| 1685                 | 13/455,121                    | 2012-04-24                     | 9,398,454                | 2016-07-19               | In-car head unit wireless communication service subscription initialization                                             |
| 1686                 | 14/639,060                    | 2015-03-04                     | 9,398,462                | 2016-07-19               | Network access tiered based on application launcher installation                                                        |
| 1687                 | 14/827,062                    | 2015-08-14                     | 9,398,514                | 2016-07-19               | Generating frequency reference signals                                                                                  |
| 1688                 | 13/908,169                    | 2013-06-03                     | 9,402,209                | 2016-07-26               | Utilizing linear network coding in packet delivery                                                                      |
| 1689                 | 14/149,495                    | 2014-01-07                     | 9,402,218                | 2016-07-26               | Prioritization of network handovers                                                                                     |
| 1690                 | 14/709,971                    | 2015-05-12                     | 9,407,525                | 2016-08-02               | Measuring traffic utilization                                                                                           |
| 1691                 | 14/947,847                    | 2015-11-20                     | 9,407,571                | 2016-08-02               | Geographically appropriate domain name system assignment                                                                |
| 1692                 | 14/619,640                    | 2015-02-11                     | 9,407,755                | 2016-08-02               | Mobile communication devices collaborative power management                                                             |
| 1693                 | 12/052,281                    | 2008-03-20                     | 9,407,940                | 2016-08-02               | User-targeted ad insertion in streaming media                                                                           |
| 1694                 | 12/235,792                    | 2008-09-23                     | 9,413,664                | 2016-08-09               | Resuming media objects delivered via streaming services upon data loss events                                           |
| 1695                 | 13/563,709                    | 2012-07-31                     | 9,413,839                | 2016-08-09               | Traffic management of third party applications                                                                          |
| 1696                 | 14/532,962                    | 2014-11-04                     | 9,414,081                | 2016-08-09               | Adaptation of digital image transcoding based on estimated mean opinion scores of digital images                        |
| 1697                 | 14/566,341                    | 2014-12-10                     | 9,414,190                | 2016-08-09               | Device location application programming interface                                                                       |
| 1698                 | 13/674,598                    | 2012-11-12                     | 9,414,224                | 2016-08-09               | Antenna port identification                                                                                             |
| 1699                 | 14/022,707                    | 2013-09-10                     | 9,414,415                | 2016-08-09               | Call setup system and method for setting up a wireless media session extending from a first network to a second network |
| 1700                 | 14/877,215                    | 2015-10-07                     | 9,420,399                | 2016-08-16               | Generic mobile devices customization framework                                                                          |

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| 1701                 | 13/363,369                    | 2012-01-31                     | 9,420,403                | 2016-08-16               | Remote deactivation of near field communication functionality                          |
| 1702                 | 14/618,984                    | 2015-02-10                     | 9,420,474                | 2016-08-16               | Beamforming selection for macro cells based on small cell availability                 |
| 1703                 | 14/163,041                    | 2014-01-24                     | 9,420,496                | 2016-08-16               | Activation sequence using permission based connection to network                       |
| 1704                 | 13/873,813                    | 2013-04-30                     | 9,426,604                | 2016-08-23               | Prevention of inductive coupling between components of a mobile communication device   |
| 1705                 | 13/900,634                    | 2013-05-23                     | 9,426,608                | 2016-08-23               | Gps proxy for location-unaware devices                                                 |
| 1706                 | 14/297,429                    | 2014-06-05                     | 9,426,641                | 2016-08-23               | Multiple carrier partition dynamic access on a mobile device                           |
| 1707                 | 14/266,801                    | 2014-04-30                     | 9,430,450                | 2016-08-30               | Automatically adapting accessibility features in a device user interface               |
| 1708                 | 14/203,901                    | 2014-03-11                     | 9,432,310                | 2016-08-30               | Circuit switched fallback failure handling in wireless communication networks          |
| 1709                 | 13/897,220                    | 2013-05-17                     | 9,432,445                | 2016-08-30               | System and method of maintaining an enqueue rate of data messages into a set of queues |
| 1710                 | 14/836,526                    | 2015-08-26                     | 9,432,855                | 2016-08-30               | Connecting machine-to-machine (m2m) components of trucks                               |
| 1711                 | 14/135,574                    | 2013-12-19                     | 9,432,865                | 2016-08-30               | Wireless cell tower performance analysis system and method                             |
| 1712                 | 13/461,457                    | 2012-05-01                     | 9,432,924                | 2016-08-30               | Preferred roaming list distribution over wireless local area networks                  |
| 1713                 | 14/820,522                    | 2015-08-06                     | 9,439,025                | 2016-09-06               | Multi-step mobile device initiation with intermediate partial reset                    |
| 1714                 | 14/809,654                    | 2015-07-27                     | 9,439,092                | 2016-09-06               | Detection of component fault at cell towers                                            |
| 1715                 | 13/218,503                    | 2011-08-26                     | 9,439,240                | 2016-09-06               | Mobile communication system identity pairing                                           |
| 1716                 | 13/659,889                    | 2012-10-24                     | 9,442,709                | 2016-09-13               | Transition experience during loading and updating an interface and applications pack   |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| 1717                 | 13/863,376                    | 2013-04-15                     | 9,443,088                | 2016-09-13               | Protection for multimedia files pre-downloaded to a mobile device                                                           |
| 1718                 | 14/720,367                    | 2015-05-22                     | 9,444,533                | 2016-09-13               | Method to improve multiple user multiple input multiple output pairing in a network                                         |
| 1719                 | 14/703,997                    | 2015-05-05                     | 9,444,892                | 2016-09-13               | Network event management support for vehicle wireless communication                                                         |
| 1720                 | 14/163,563                    | 2014-01-24                     | 9,445,389                | 2016-09-13               | Utilization of relay nodes with beamformed communications                                                                   |
| 1721                 | 14/329,375                    | 2014-07-11                     | 9,451,427                | 2016-09-20               | Delivery notification enhancement for data messages                                                                         |
| 1722                 | 13/744,861                    | 2013-01-18                     | 9,451,446                | 2016-09-20               | Sim profile brokering system                                                                                                |
| 1723                 | 14/061,858                    | 2013-10-24                     | 9,451,501                | 2016-09-20               | Wireless access node and method for signaling aggregation of a plurality of ue devices through a hub ue device              |
| 1724                 | 13/857,139                    | 2013-04-04                     | 9,454,723                | 2016-09-27               | Radio frequency identity (rfid) chip electrically and communicatively coupled to motherboard of mobile communication device |
| 1725                 | 14/489,467                    | 2014-09-17                     | 9,460,046                | 2016-10-04               | Common computer hierarchal system for virtualization of network function                                                    |
| 1726                 | 14/740,367                    | 2015-06-16                     | 9,460,437                | 2016-10-04               | Triggers for session persistence                                                                                            |
| 1727                 | 14/192,316                    | 2014-02-27                     | 9,460,573                | 2016-10-04               | Autonomous authentication of a reader by a radio frequency identity (rfid) device                                           |
| 1728                 | 14/945,062                    | 2015-11-18                     | 9,462,125                | 2016-10-04               | Identification of public safety answering platform next generation 911 media support                                        |
| 1729                 | 13/899,069                    | 2013-05-21                     | 9,462,418                | 2016-10-04               | Augmentation of call data information to determine a location of a wireless communication device                            |
| 1730                 | 14/936,136                    | 2015-11-09                     | 9,462,476                | 2016-10-04               | Identifying unsubscribed tethering in a wireless network                                                                    |

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| 1731                 | 14/016,428                    | 2013-09-03                     | 9,462,518                | 2016-10-04               | Optimization of neighbor information transfer in a long term evolution network                  |
| 1732                 | 12/616,538                    | 2009-11-11                     | 9,466,052                | 2016-10-11               | Application development and execution framework                                                 |
| 1733                 | 14/204,192                    | 2014-03-11                     | 9,473,385                | 2016-10-18               | Control of long term evolution (lte) virtual network elements based on radio network tunnels    |
| 1734                 | 14/734,801                    | 2015-06-09                     | 9,473,630                | 2016-10-18               | Caller name detection and export                                                                |
| 1735                 | 14/681,077                    | 2015-04-07                     | 9,473,945                | 2016-10-18               | Infrastructure for secure short message transmission                                            |
| 1736                 | 14/277,045                    | 2014-05-14                     | 9,477,917                | 2016-10-25               | System and method of context specific identity in a radio frequency identity (rfid) chip        |
| 1737                 | 13/923,102                    | 2013-06-20                     | 9,479,569                | 2016-10-25               | Parallel multiple format downloads                                                              |
| 1738                 | 15/091,094                    | 2016-04-05                     | 9,479,821                | 2016-10-25               | Facilitating communication actions in accordance with cable attributes                          |
| 1739                 | 14/609,740                    | 2015-01-30                     | 9,479,927                | 2016-10-25               | Wireless communication system to provide call routing when connection to a core network is lost |
| 1740                 | 14/701,156                    | 2015-04-30                     | 9,483,253                | 2016-11-01               | Methods for customization of default applications on a mobile communication device              |
| 1741                 | 13/434,468                    | 2012-03-29                     | 9,483,538                | 2016-11-01               | Two-way data sharing between disparate data stores                                              |
| 1742                 | 13/692,472                    | 2012-12-03                     | 9,484,980                | 2016-11-01               | Precision timing source back-up for loss of gps satellites                                      |
| 1743                 | 14/550,344                    | 2014-11-21                     | 9,485,241                | 2016-11-01               | Secure communication paths in data networks with tethered devices                               |
| 1744                 | 14/666,015                    | 2015-03-23                     | 9,485,711                | 2016-11-01               | Providing service to a portable electronic device using allowed network codes                   |
| 1745                 | 14/619,667                    | 2015-02-11                     | 9,485,721                | 2016-11-01               | Discovery of services by mobile communication devices using a service registry indexed by       |

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|               |                        |                         |                   |                   | wireless beacons                                                                    |
| 1746          | 14/072,420             | 2013-11-05              | 9,485,800         | 2016-11-01        | Session quality display in a wireless communication system                          |
| 1747          | 14/245,871             | 2014-04-04              | 9,485,801         | 2016-11-01        | Mobile communication device connected to home digital network                       |
| 1748          | 14/081,559             | 2013-11-15              | 9,490,534         | 2016-11-08        | Dynamic optimization of antenna systems                                             |
| 1749          | 12/764,730             | 2010-04-21              | 9,491,055         | 2016-11-08        | Determining user communities in communication networks                              |
| 1750          | 14/168,009             | 2014-01-30              | 9,491,135         | 2016-11-08        | Sub class c reverse domain name system zone compilation                             |
| 1751          | 14/973,317             | 2015-12-17              | 9,491,173         | 2016-11-08        | Alternative techniques for processing wireless communication backhaul               |
| 1752          | 14/316,572             | 2014-06-26              | 9,491,231         | 2016-11-08        | Mobile communication device stateful applications system                            |
| 1753          | 15/041,564             | 2016-02-11              | 9,491,721         | 2016-11-08        | Dynamically modifying power headroom prohibit timers based on signaling load        |
| 1754          | 14/794,761             | 2015-07-08              | 9,491,768         | 2016-11-08        | Wireless communication user equipment on-board policy enforcement                   |
| 1755          | 14/678,451             | 2015-04-03              | 9,503,416         | 2016-11-22        | Communication system to provide selective access to a wireless communication device |
| 1756          | 14/524,802             | 2014-10-27              | 9,503,895         | 2016-11-22        | Distributed wireless device association with basestations                           |
| 1757          | 14/885,477             | 2015-10-16              | 9,503,922         | 2016-11-22        | Wireless network abstract maintenance command execution framework                   |
| 1758          | 13/866,125             | 2013-04-19              | 9,503,953         | 2016-11-22        | Increasing reference signal level to prevent communication format change            |
| 1759          | 14/705,512             | 2015-05-06              | 9,504,021         | 2016-11-22        | Long term evolution (lte) network control of carrier aggregation for user equipment |
| 1760          | 14/494,601             | 2014-09-24              | 9,508,090         | 2016-11-29        | End user participation in mobile advertisement                                      |

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| 1761                 | 14/662,870                    | 2015-03-19                     | 9,509,587                | 2016-11-29               | Hardware root of trust (hrot) for internet protocol (ip) communications                                     |
| 1762                 | 14/192,518                    | 2014-02-27                     | 9,509,646                | 2016-11-29               | Inter-carrier communications for multimedia-message delivery                                                |
| 1763                 | 14/080,538                    | 2013-11-14                     | 9,509,654                | 2016-11-29               | Delivering recall messages via internet or telephony communication paths                                    |
| 1764                 | 14/555,298                    | 2014-11-26                     | 9,509,703                | 2016-11-29               | Proximity based digital rights management                                                                   |
| 1765                 | 14/334,403                    | 2014-07-17                     | 9,509,718                | 2016-11-29               | Network-attached storage solution for application servers                                                   |
| 1766                 | 14/296,282                    | 2014-06-04                     | 9,509,723                | 2016-11-29               | Session initiation protocol (sip) server to efficiently handle session description protocol (sdp) data sets |
| 1767                 | 14/168,007                    | 2014-01-30                     | 9,513,888                | 2016-12-06               | Virtual preloads                                                                                            |
| 1768                 | 14/197,528                    | 2014-03-05                     | 9,515,837                | 2016-12-06               | Policy implementation during charging server interruption                                                   |
| 1769                 | 14/873,010                    | 2015-10-01                     | 9,516,572                | 2016-12-06               | Server control of user equipment having a current access point name (apn) data set                          |
| 1770                 | 14/730,933                    | 2015-06-04                     | 9,521,195                | 2016-12-13               | Wireless content loading                                                                                    |
| 1771                 | 14/956,468                    | 2015-12-02                     | 9,521,504                | 2016-12-13               | Channel selection in a mobile communication device application framework                                    |
| 1772                 | 14/577,935                    | 2014-12-19                     | 9,521,529                | 2016-12-13               | Automated short message formatting commanded by embedded specialty codes                                    |
| 1773                 | 14/640,708                    | 2015-03-06                     | 9,521,580                | 2016-12-13               | Reduction of interference potential between a cell tower and an electromagnetic radiation source            |
| 1774                 | 14/034,094                    | 2013-09-23                     | 9,526,036                | 2016-12-20               | Dynamic packet gateway selection based on long term evolution network loading                               |
| 1775                 | 13/215,615                    | 2011-08-23                     | 9,526,086                | 2016-12-20               | Application data rate limiting in a wireless communication device                                           |

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| 1776                 | 14/872,754                    | 2015-10-01                     | 9,526,109                | 2016-12-20               | Limiting intermodulation distortion across frequency bands                                                        |
| 1777                 | 12/690,648                    | 2010-01-20                     | 9,526,121                | 2016-12-20               | Unified communication access system                                                                               |
| 1778                 | 14/592,677                    | 2015-01-08                     | 9,529,359                | 2016-12-27               | Interactive behavior engagement and management in subordinate airborne robots                                     |
| 1779                 | 14/170,003                    | 2014-01-31                     | 9,531,554                | 2016-12-27               | Default quota implementation for wireless devices                                                                 |
| 1780                 | 14/815,039                    | 2015-07-31                     | 9,531,887                | 2016-12-27               | Conformity analysis system for analyzing conformity to restrictions on the use of a wireless communication device |
| 1781                 | 13/968,259                    | 2013-08-15                     | 9,532,211                | 2016-12-27               | Directing server connection based on location identifier                                                          |
| 1782                 | 14/321,906                    | 2014-07-02                     | 9,537,547                | 2017-01-03               | User equipment srs selection with network node intelligence for beamforming performance improvement               |
| 1783                 | 13/682,089                    | 2012-11-20                     | 9,538,435                | 2017-01-03               | Volte packet delay based network configuration                                                                    |
| 1784                 | 14/790,844                    | 2015-07-02                     | 9,538,449                | 2017-01-03               | Quality of service optimizer for mobile device                                                                    |
| 1785                 | 14/990,130                    | 2016-01-07                     | 9,538,486                | 2017-01-03               | Dynamic power boosting based on contiguous and non-contiguous coverage                                            |
| 1786                 | 14/470,235                    | 2014-08-27                     | 9,538,489                | 2017-01-03               | Wireless communication device to synchronize data transfer rates                                                  |
| 1787                 | 14/088,078                    | 2013-11-22                     | 9,543,758                | 2017-01-10               | Adaptive battery power distribution to remote radio heads in long term evolution (lte) networks                   |
| 1788                 | 14/452,530                    | 2014-08-06                     | 9,544,330                | 2017-01-10               | Method of securing management interfaces of virtual machines                                                      |
| 1789                 | 14/021,494                    | 2013-09-09                     | 9,544,936                | 2017-01-10               | Managing bearers                                                                                                  |
| 1790                 | 12/342,511                    | 2008-12-23                     | 9,547,653                | 2017-01-17               | Wireless drive file backup                                                                                        |

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| 1791                 | 14/536,284                    | 2014-11-07                     | 9,548,770                | 2017-01-17               | Reducing inter-sector interference in beamforming                                                   |
| 1792                 | 13/763,443                    | 2013-02-08                     | 9,549,009                | 2017-01-17               | Electronic fixed brand labeling                                                                     |
| 1793                 | 12/426,089                    | 2009-04-17                     | 9,552,357                | 2017-01-24               | Mobile device search optimizer                                                                      |
| 1794                 | 13/096,748                    | 2011-04-28                     | 9,552,584                | 2017-01-24               | Electronic wallet ready to pay timer                                                                |
| 1795                 | 13/437,383                    | 2012-04-02                     | 9,553,680                | 2017-01-24               | Uplink interference mitigation                                                                      |
| 1796                 | 14/645,370                    | 2015-03-11                     | 9,553,780                | 2017-01-24               | Bi-directional real-time data connection troubleshooting                                            |
| 1797                 | 13/182,619                    | 2011-07-14                     | 9,553,817                | 2017-01-24               | Diverse transmission of packet content                                                              |
| 1798                 | 14/866,312                    | 2015-09-25                     | 9,554,235                | 2017-01-24               | Identifying one or more cargo devices for communication                                             |
| 1799                 | 14/465,831                    | 2014-08-22                     | 9,558,060                | 2017-01-31               | End use self-help delivery system                                                                   |
| 1800                 | 11/403,619                    | 2006-04-13                     | 9,558,341                | 2017-01-31               | Integrated user profile administration tool                                                         |
| 1801                 | 14/337,898                    | 2014-07-22                     | 9,559,911                | 2017-01-31               | Forecasting link utilization between points of presence in an ip network                            |
| 1802                 | 13/481,384                    | 2012-05-25                     | 9,560,047                | 2017-01-31               | Multi-device authorization to access wireless network communications based on shared event times    |
| 1803                 | 13/866,528                    | 2013-04-19                     | 9,560,518                | 2017-01-31               | Data usage assessment when allocating roaming resources                                             |
| 1804                 | 13/912,190                    | 2013-06-06                     | 9,560,519                | 2017-01-31               | Mobile communication device profound identity brokering framework                                   |
| 1805                 | 14/095,686                    | 2013-12-03                     | 9,560,524                | 2017-01-31               | Wireless network application access by a wireless communication device via an untrusted access node |
| 1806                 | 15/049,650                    | 2016-02-22                     | 9,560,550                | 2017-01-31               | Mitigating interference using beamforming                                                           |

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| 1807                 | 14/989,108                    | 2016-01-06                     | 9,560,611                | 2017-01-31               | Characterizing slave clock synchronization behavior by means of dropped sync packets             |
| 1808                 | 14/308,975                    | 2014-06-19                     | 9,560,654                | 2017-01-31               | Indication of mode transitions of a wireless communication device                                |
| 1809                 | 14/458,742                    | 2014-08-13                     | 9,563,495                | 2017-02-07               | Detecting upset conditions in channel instances                                                  |
| 1810                 | 14/517,537                    | 2014-10-17                     | 9,563,604                | 2017-02-07               | Providing context-sensitive writing assistance                                                   |
| 1811                 | 14/604,662                    | 2015-01-23                     | 9,563,613                | 2017-02-07               | System and method for dynamic portable document file generation                                  |
| 1812                 | 12/782,472                    | 2010-05-18                     | 9,564,148                | 2017-02-07               | Isolation and modification of audio streams of a mixed signal in a wireless communication device |
| 1813                 | 14/703,885                    | 2015-05-05                     | 9,565,168                | 2017-02-07               | System and method of a trusted computing operation mode                                          |
| 1814                 | 15/080,546                    | 2016-03-24                     | 9,565,264                | 2017-02-07               | True push architecture for internet protocol notification                                        |
| 1815                 | 15/044,973                    | 2016-02-16                     | 9,565,544                | 2017-02-07               | Managing resource usage of a mobile device                                                       |
| 1816                 | 14/452,027                    | 2014-08-05                     | 9,565,645                | 2017-02-07               | Method for a small cell to wirelessly connect to a grandmaster timing device                     |
| 1817                 | 14/314,928                    | 2014-06-25                     | 9,565,646                | 2017-02-07               | Detection of base station synchronization failure                                                |
| 1818                 | 14/732,671                    | 2015-06-05                     | 9,565,659                | 2017-02-07               | Wireless beacon for embedding in building infrastructure                                         |
| 1819                 | 13/367,123                    | 2012-02-06                     | 9,569,790                | 2017-02-14               | Resource allocation for advertising content on wireless communication devices                    |
| 1820                 | 15/065,849                    | 2016-03-09                     | 9,571,991                | 2017-02-14               | Opt-in tracking across messaging application platforms                                           |
| 1821                 | 13/240,659                    | 2011-09-22                     | 9,572,197                | 2017-02-14               | Configuration of remote radio head antenna ports                                                 |
| 1822                 | 14/609,870                    | 2015-01-30                     | 9,578,069                | 2017-02-21               | Cooperative ims access from a visited domain                                                     |
| 1823                 | 14/883,997                    | 2015-10-15                     | 9,578,556                | 2017-02-21               | Long term evolution (lte) communications over trusted hardware                                   |

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| 1824                 | 14/885,424                    | 2015-10-16                     | 9,578,565                | 2017-02-21               | Dynamic hysteresis offset manipulation for wireless communication device handovers                                                                                |
| 1825                 | 14/746,615                    | 2015-06-22                     | 9,578,664                | 2017-02-21               | Trusted signaling in 3gpp interfaces in a network function virtualization wireless communication system                                                           |
| 1826                 | 14/174,615                    | 2014-02-06                     | 9,584,462                | 2017-02-28               | Universal email failure notification system                                                                                                                       |
| 1827                 | 14/750,700                    | 2015-06-25                     | 9,585,034                | 2017-02-28               | Automated response system deactivation during large scale issues and managing wireless network operations                                                         |
| 1828                 | 12/888,950                    | 2010-09-23                     | 9,589,119                | 2017-03-07               | Feedback segmentation based on short codes                                                                                                                        |
| 1829                 | 13/802,325                    | 2013-03-13                     | 9,590,885                | 2017-03-07               | System and method of calculating and reporting of messages expiring from a queue                                                                                  |
| 1830                 | 14/024,627                    | 2013-09-11                     | 9,590,938                | 2017-03-07               | System and method for identifying a mobile device with near real time visualization to action                                                                     |
| 1831                 | 14/669,474                    | 2015-03-26                     | 9,591,046                | 2017-03-07               | Efficiently providing multimedia services                                                                                                                         |
| 1832                 | 14/696,835                    | 2015-04-27                     | 9,591,434                | 2017-03-07               | Virtual private network (vpn) tunneling in a user equipment (ue) brokered by a radio frequency identity (rfid) chip communicatively coupled to the user equipment |
| 1833                 | 14/565,600                    | 2014-12-10                     | 9,591,453                | 2017-03-07               | Locating a nearby mobile device without using gps                                                                                                                 |
| 1834                 | 14/530,667                    | 2014-10-31                     | 9,591,482                | 2017-03-07               | Method for authenticating driver for registration of in-vehicle telematics unit                                                                                   |
| 1835                 | 14/572,241                    | 2014-12-16                     | 9,591,498                | 2017-03-07               | Detection of base station synchronization failure                                                                                                                 |
| 1836                 | 14/179,186                    | 2014-02-12                     | 9,594,153                | 2017-03-14               | Detecting interference data in association with radars                                                                                                            |
| 1837                 | 14/169,544                    | 2014-01-31                     | 9,594,471                | 2017-03-14               | System and method for inserting additional icon content into a                                                                                                    |

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|               |                        |                         |                   |                   | display screen                                                                                                |
| 1838          | 14/090,306             | 2013-11-26              | 9,596,588         | 2017-03-14        | Cqi verification for a roaming wcd                                                                            |
| 1839          | 14/339,848             | 2014-07-24              | 9,596,687         | 2017-03-14        | Aperiodic antenna calibration triggering method                                                               |
| 1840          | 13/425,069             | 2012-03-20              | 9,601,121         | 2017-03-21        | Override vocoder capacity operating point allocation                                                          |
| 1841          | 14/567,462             | 2014-12-11              | 9,602,346         | 2017-03-21        | Configuration data handling in wireless communication devices                                                 |
| 1842          | 14/826,302             | 2015-08-14              | 9,603,001         | 2017-03-21        | Long term evolution communication system to perform a mobility management entity reselection                  |
| 1843          | 14/163,035             | 2014-01-24              | 9,603,009         | 2017-03-21        | System and method of branding a device independent of device activation                                       |
| 1844          | 14/819,425             | 2015-08-05              | 9,604,651         | 2017-03-28        | Vehicle telematics unit communication authorization and authentication and communication service provisioning |
| 1845          | 14/513,598             | 2014-10-14              | 9,608,306         | 2017-03-28        | Communications-tower antenna mount                                                                            |
| 1846          | 15/058,874             | 2016-03-02              | 9,608,715         | 2017-03-28        | Media service delivery over a wireless relay in a data communication network                                  |
| 1847          | 14/719,026             | 2015-05-21              | 9,608,759         | 2017-03-28        | Optical communication system with hardware root of trust (hrot) and network function virtualization (nfv)     |
| 1848          | 13/969,908             | 2013-08-19              | 9,608,853         | 2017-03-28        | Ip origination point and method to determine transcoding in packet communications                             |
| 1849          | 14/034,755             | 2013-09-24              | 9,608,882         | 2017-03-28        | Network event tracking                                                                                        |
| 1850          | 14/522,926             | 2014-10-24              | 9,609,489         | 2017-03-28        | Distribution of media content identifiers to wireless communication devices                                   |

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| 1851                 | 14/449,679                    | 2014-08-01                     | 9,609,529                | 2017-03-28               | Optimizing coverage by customizing signal patterns                                                             |
| 1852                 | 14/324,821                    | 2014-07-07                     | 9,609,556                | 2017-03-28               | Facilitating network transfer based on network conditions                                                      |
| 1853                 | 12/559,229                    | 2009-09-14                     | 9,612,707                | 2017-04-04               | Lenses and filters for complete network page content                                                           |
| 1854                 | 13/802,404                    | 2013-03-13                     | 9,613,208                | 2017-04-04               | Trusted security zone enhanced with trusted hardware drivers                                                   |
| 1855                 | 14/090,388                    | 2013-11-26                     | 9,615,300                | 2017-04-04               | Wireless access node and hand-off method for handing-off a wcd to a relay node                                 |
| 1856                 | 13/271,207                    | 2011-10-11                     | 9,619,810                | 2017-04-11               | Zone architecture for dynamic targeted content creation                                                        |
| 1857                 | 14/602,096                    | 2015-01-21                     | 9,619,825                | 2017-04-11               | Management of distribution lists                                                                               |
| 1858                 | 14/882,981                    | 2015-10-14                     | 9,621,247                | 2017-04-11               | Configurable antenna port selection for beam forming and mimo in a telecommunications network                  |
| 1859                 | 14/996,986                    | 2016-01-15                     | 9,622,101                | 2017-04-11               | System and method for protecting telecommunications equipment                                                  |
| 1860                 | 14/508,702                    | 2014-10-07                     | 9,622,135                | 2017-04-11               | Traffic redirection control in wireless networks                                                               |
| 1861                 | 14/271,449                    | 2014-05-06                     | 9,626,442                | 2017-04-18               | System and method for a customer care document management system                                               |
| 1862                 | 14/857,393                    | 2015-09-17                     | 9,627,729                | 2017-04-18               | Power system for a telecommunications network                                                                  |
| 1863                 | 15/233,484                    | 2016-08-10                     | 9,628,955                | 2017-04-18               | Repeater chain location determination based on a repeater chain identifier in a wireless communication network |
| 1864                 | 13/683,220                    | 2012-11-21                     | 9,635,617                | 2017-04-25               | Controllable transformer tap to dynamically adjust power distribution levels in wireless networks              |
| 1865                 | 14/254,402                    | 2014-04-16                     | 9,641,646                | 2017-05-02               | Distributed multimedia system for ip networks                                                                  |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------|
| 1866                 | 14/079,735                    | 2013-11-14                     | 9,642,139                | 2017-05-02               | In-band backhaul from a wireless macrocell                                                                              |
| 1867                 | 14/834,003                    | 2015-08-24                     | 9,648,617                | 2017-05-09               | Hardware-trusted orthogonal frequency division multiplex (ofdm) access to a shared common public radio interface (cpri) |
| 1868                 | 14/698,522                    | 2015-04-28                     | 9,649,999                | 2017-05-16               | Vehicle remote operations control                                                                                       |
| 1869                 | 14/668,986                    | 2015-03-26                     | 9,652,972                | 2017-05-16               | Maintenance of telecommunications network infrastructure based on alarm scoring                                         |
| 1870                 | 14/872,845                    | 2015-10-01                     | 9,654,231                | 2017-05-16               | Dynamically mitigating external interference in multi-band antenna systems                                              |
| 1871                 | 14/200,495                    | 2014-03-07                     | 9,654,440                | 2017-05-16               | Modification of domain name systems using session initiation protocol messages                                          |
| 1872                 | 14/872,578                    | 2015-10-01                     | 9,654,465                | 2017-05-16               | Software-defined network threat control                                                                                 |
| 1873                 | 14/197,577                    | 2014-03-05                     | 9,654,650                | 2017-05-16               | Data quotas based on online charging server load                                                                        |
| 1874                 | 14/156,434                    | 2014-01-15                     | 9,654,948                | 2017-05-16               | System and method for dynamically forwarding voice calls                                                                |
| 1875                 | 14/798,571                    | 2015-07-14                     | 9,655,104                | 2017-05-16               | Carrier aggregation scheduling based reordering density                                                                 |
| 1876                 | 15/222,610                    | 2016-07-28                     | 9,655,157                | 2017-05-16               | Multiple user multiple input multiple output pairing in a network                                                       |
| 1877                 | 14/553,999                    | 2014-11-25                     | 9,661,504                | 2017-05-23               | Use of customer impact to prioritize network efforts                                                                    |
| 1878                 | 14/191,099                    | 2014-02-26                     | 9,661,636                | 2017-05-23               | Actively dropping data packets during volte communication sessions                                                      |
| 1879                 | 14/630,978                    | 2015-02-25                     | 9,667,665                | 2017-05-30               | Session initiation protocol (sip) communications over trusted hardware                                                  |
| 1880                 | 14/193,816                    | 2014-02-28                     | 9,668,274                | 2017-05-30               | Dynamic allocation of frequency bands to user devices                                                                   |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1881                 | 14/243,882                    | 2014-04-02                     | 9,672,489                | 2017-06-06               | Inventory validator with notification manager                                                                                                                |
| 1882                 | 14/146,489                    | 2014-01-02                     | 9,672,512                | 2017-06-06               | Processor routing number for mobile communication service provider billing                                                                                   |
| 1883                 | 14/855,647                    | 2015-09-16                     | 9,673,982                | 2017-06-06               | Efficient hardware trust verification in data communication systems that comprise network interface cards, central processing units, and data memory buffers |
| 1884                 | 14/465,833                    | 2014-08-22                     | 9,680,914                | 2017-06-13               | Seamless service migration updates                                                                                                                           |
| 1885                 | 13/606,011                    | 2012-09-07                     | 9,680,961                | 2017-06-13               | Dynamic scheduling of electronic content updates                                                                                                             |
| 1886                 | 14/704,795                    | 2015-05-05                     | 9,681,088                | 2017-06-13               | System and methods for movie digital container augmented with post-processing metadata                                                                       |
| 1887                 | 14/231,718                    | 2014-03-31                     | 9,681,251                | 2017-06-13               | Customization for preloaded applications                                                                                                                     |
| 1888                 | 13/763,080                    | 2013-02-08                     | 9,681,298                | 2017-06-13               | Controlling an amount of information disclosed by a position-determining system                                                                              |
| 1889                 | 13/445,512                    | 2012-04-12                     | 9,686,164                | 2017-06-20               | Packet allocation schema for 3g and 4g routers                                                                                                               |
| 1890                 | 14/279,193                    | 2014-05-15                     | 9,686,226                | 2017-06-20               | Domain name system (dns) query response providing loop-back internet protocol (ip) address to non-activated mobile communication device                      |
| 1891                 | 14/793,344                    | 2015-07-07                     | 9,686,240                | 2017-06-20               | Ipv6 to ipv4 data packet migration in a trusted security zone                                                                                                |
| 1892                 | 13/240,713                    | 2011-09-22                     | 9,690,100                | 2017-06-27               | Wireless communication system with a liquid crystal display embedded in an optical lens                                                                      |
| 1893                 | 14/504,417                    | 2014-10-01                     | 9,691,182                | 2017-06-27               | System and method for adaptive display restriction in a headset computer                                                                                     |
| 1894                 | 14/220,296                    | 2014-03-20                     | 9,693,373                | 2017-06-27               | Media session transfer between communication networks                                                                                                        |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------|
| 1895                 | 15/418,237                    | 2017-01-27                     | 9,698,465                | 2017-07-04               | Communications-tower antenna mount                                                          |
| 1896                 | 14/946,747                    | 2015-11-19                     | 9,699,020                | 2017-07-04               | Component aware maintenance alarm monitoring system and methods                             |
| 1897                 | 12/032,898                    | 2008-02-18                     | 9,704,202                | 2017-07-11               | Blending device-based recommendations                                                       |
| 1898                 | 14/809,566                    | 2015-07-27                     | 9,705,177                | 2017-07-11               | Antenna mount system and methods for small cell deployment                                  |
| 1899                 | 14/712,063                    | 2015-05-14                     | 9,705,580                | 2017-07-11               | Wireless communication device control over wireless network antenna configurations          |
| 1900                 | 14/554,446                    | 2014-11-26                     | 9,705,660                | 2017-07-11               | Aggregating spectrum chunks for maximum bandwidth utilization                               |
| 1901                 | 15/072,763                    | 2016-03-17                     | 9,705,794                | 2017-07-11               | Discovery of network address allocations and translations in wireless communication systems |
| 1902                 | 14/735,346                    | 2015-06-10                     | 9,705,803                | 2017-07-11               | Negotiated radio link properties among wireless access nodes                                |
| 1903                 | 14/335,258                    | 2014-07-18                     | 9,705,993                | 2017-07-11               | Information exchange between a directory assistance application server and a web-rtc engine |
| 1904                 | 12/018,728                    | 2008-01-23                     | 9,706,266                | 2017-07-11               | Telephony codec optimizing method and apparatus                                             |
| 1905                 | 14/333,761                    | 2014-07-17                     | 9,706,353                | 2017-07-11               | Providing geographic locations of a user's wireless device                                  |
| 1906                 | 15/072,707                    | 2016-03-17                     | 9,706,463                | 2017-07-11               | Wireless communication device control of wireless communication access systems              |
| 1907                 | 15/057,881                    | 2016-03-01                     | 9,706,502                | 2017-07-11               | Dynamically modifying power headroom timers based on communication service type             |
| 1908                 | 14/333,626                    | 2014-07-17                     | 9,706,538                | 2017-07-11               | Frequency priority based message transfer in long term evolution (lte) systems              |
| 1909                 | 14/174,617                    | 2014-02-06                     | 9,712,483                | 2017-07-18               | Automated check for simple mail transfer protocol email delays                              |
| 1910                 | 14/988,723                    | 2016-01-05                     | 9,712,664                | 2017-07-18               | Sustained service subscriptions                                                             |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------|
| 1911                 | 15/069,921                    | 2016-03-14                     | 9,712,999                | 2017-07-18               | Digest of biographical information for an electronic device with static and dynamic portions  |
| 1912                 | 14/794,765                    | 2015-07-08                     | 9,724,824                | 2017-08-08               | Sensor use and analysis for dynamic update of interaction in a social robot                   |
| 1913                 | 14/150,832                    | 2014-01-09                     | 9,734,515                | 2017-08-15               | Ad management using ads cached on a mobile electronic device                                  |
| 1914                 | 14/470,262                    | 2014-08-27                     | 9,736,114                | 2017-08-15               | Restricting mature content at a network element having an image scanner                       |
| 1915                 | 14/702,640                    | 2015-05-01                     | 9,736,663                | 2017-08-15               | Messaging session enhancement with user data                                                  |
| 1916                 | 14/882,075                    | 2015-10-13                     | 9,736,700                | 2017-08-15               | Cellular communication equipment radio resource adaptation                                    |
| 1917                 | 14/570,011                    | 2014-12-15                     | 9,736,728                | 2017-08-15               | Identifying available packet data network gateways based on response messages                 |
| 1918                 | 14/869,453                    | 2015-09-29                     | 9,736,846                | 2017-08-15               | Intelligent radiation selection for antennas in a wireless communications environment         |
| 1919                 | 12/711,933                    | 2010-02-24                     | 9,737,268                | 2017-08-22               | Facilitating navigation data updates                                                          |
| 1920                 | 14/832,010                    | 2015-08-21                     | 9,742,829                | 2017-08-22               | Managing multimedia messages being transmitted to recipient devices of foreign networks       |
| 1921                 | 15/152,813                    | 2016-05-12                     | 9,743,262                | 2017-08-22               | Content distribution channel selection, transcoding, and tracking gateway                     |
| 1922                 | 14/060,712                    | 2013-10-23                     | 9,743,271                | 2017-08-22               | Delivery of branding content and customizations to a mobile communication device              |
| 1923                 | 14/600,250                    | 2015-01-20                     | 9,743,282                | 2017-08-22               | Computer system hardware validation for virtual communication network elements                |
| 1924                 | 15/058,147                    | 2016-03-01                     | 9,743,301                | 2017-08-22               | Systems and methods for maintaining a telecommunications network using real-time sql analysis |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 1925                 | 14/531,959                    | 2014-11-03                     | 9,747,295                | 2017-08-29               | Updating a large dataset in an enterprise computer system                                                                |
| 1926                 | 15/010,959                    | 2016-01-29                     | 9,747,303                | 2017-08-29               | File location application programming interface                                                                          |
| 1927                 | 14/243,367                    | 2014-04-02                     | 9,747,432                | 2017-08-29               | Remotely enabling a disabled user interface of a wireless communication device                                           |
| 1928                 | 13/923,652                    | 2013-06-21                     | 9,747,617                | 2017-08-29               | Provision of wireless device activity information to a third party based on acceptance of an offer presented to a user   |
| 1929                 | 14/707,580                    | 2015-05-08                     | 9,749,238                | 2017-08-29               | Application labels for data communication                                                                                |
| 1930                 | 14/847,992                    | 2015-09-08                     | 9,749,294                | 2017-08-29               | System and method of establishing trusted operability between networks in a network functions virtualization environment |
| 1931                 | 14/956,275                    | 2015-12-01                     | 9,753,758                | 2017-09-05               | Building of virtual servers in a cloud via non-structured strings                                                        |
| 1932                 | 14/920,874                    | 2015-10-23                     | 9,753,800                | 2017-09-05               | Communication network operations management system and method                                                            |
| 1933                 | 14/808,292                    | 2015-07-24                     | 9,755,723                | 2017-09-05               | Improving uplink performance for a beam-forming antenna configuration                                                    |
| 1934                 | 15/154,561                    | 2016-05-13                     | 9,756,466                | 2017-09-05               | Providing geographic locations of a user's wireless device                                                               |
| 1935                 | 15/221,070                    | 2016-07-27                     | 9,756,597                | 2017-09-05               | User equipment (ue) attachment to multiple mobility management entities (mmes) for multiple data services                |
| 1936                 | 15/389,121                    | 2016-12-22                     | 9,760,542                | 2017-09-12               | Providing context-sensitive writing assistance                                                                           |
| 1937                 | 13/358,267                    | 2012-01-25                     | 9,760,843                | 2017-09-12               | Pooling network devices                                                                                                  |
| 1938                 | 10/307,867                    | 2002-12-02                     | 9,760,873                | 2017-09-12               | Displaying payment card account information                                                                              |
| 1939                 | 15/206,002                    | 2016-07-08                     | 9,763,033                | 2017-09-12               | Prevention of inductive coupling between components of a mobile communication device                                     |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------|
| 1940                 | 14/202,961                    | 2014-03-10                     | 9,763,180                | 2017-09-12               | Peer-to-peer wireless device communication over a wireless local area network                                |
| 1941                 | 14/476,725                    | 2014-09-03                     | 9,767,566                | 2017-09-19               | Mobile three-dimensional model creation platform and methods                                                 |
| 1942                 | 15/287,455                    | 2016-10-06                     | 9,768,547                | 2017-09-19               | Water and ingress resistant audio port                                                                       |
| 1943                 | 14/793,322                    | 2015-07-07                     | 9,769,113                | 2017-09-19               | Socket-based internet protocol for wireless networks                                                         |
| 1944                 | 15/077,338                    | 2016-03-22                     | 9,769,425                | 2017-09-19               | Adjusting an image for video conference display                                                              |
| 1945                 | 14/015,343                    | 2013-08-30                     | 9,769,585                | 2017-09-19               | Positioning surround sound for virtual acoustic presence                                                     |
| 1946                 | 15/047,443                    | 2016-02-18                     | 9,769,609                | 2017-09-19               | Adaptive feedback in cell tower trilateration locating of mobile communication devices                       |
| 1947                 | 14/231,925                    | 2014-04-01                     | 9,769,685                | 2017-09-19               | Long term evolution (lte) network management system to process and display internet protocol usage data      |
| 1948                 | 15/403,166                    | 2017-01-10                     | 9,769,854                | 2017-09-19               | Trusted signaling in 3gpp interfaces in a network function virtualization wireless communication system      |
| 1949                 | 14/205,676                    | 2014-03-12                     | 9,769,875                | 2017-09-19               | Multimedia messaging proxy for non-compliant communication devices                                           |
| 1950                 | 15/014,692                    | 2016-02-03                     | 9,774,674                | 2017-09-26               | Reconciling contact information between users                                                                |
| 1951                 | 14/875,263                    | 2015-10-05                     | 9,778,965                | 2017-10-03               | Automatic queue size determination and tuning                                                                |
| 1952                 | 14/596,218                    | 2015-01-14                     | 9,779,232                | 2017-10-03               | Trusted code generation and verification to prevent fraud from maleficent external devices that capture data |
| 1953                 | 14/930,146                    | 2015-11-02                     | 9,781,016                | 2017-10-03               | Dynamic addition of network function services                                                                |
| 1954                 | 14/733,727                    | 2015-06-08                     | 9,781,255                | 2017-10-03               | Authentication of phone call origination                                                                     |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------|
| 1955                 | 13/090,480                    | 2011-04-20                     | 9,781,658                | 2017-10-03               | Wireless communication device detection with a pseudo-pilot signal                                           |
| 1956                 | 14/657,116                    | 2015-03-13                     | 9,788,247                | 2017-10-10               | Long term evolution (lte) communication system to transfer communications from non-lte to lte networks       |
| 1957                 | 13/584,307                    | 2012-08-13                     | 9,791,843                | 2017-10-17               | Rfid information used to unlock a user interface for a wireless communication device                         |
| 1958                 | 13/759,034                    | 2013-02-04                     | 9,792,603                | 2017-10-17               | Companion applets for web-based transactions                                                                 |
| 1959                 | 13/734,924                    | 2013-01-05                     | 9,792,627                | 2017-10-17               | Platform-aware commercial content resolution                                                                 |
| 1960                 | 12/698,495                    | 2010-02-02                     | 9,794,647                | 2017-10-17               | Centralized program guide                                                                                    |
| 1961                 | 15/164,530                    | 2016-05-25                     | 9,794,727                | 2017-10-17               | Network access tiered based on application launcher installation                                             |
| 1962                 | 15/337,019                    | 2016-10-28                     | 9,794,820                | 2017-10-17               | Wireless communication network to control radio frequency (rf) measurement reporting for user equipment      |
| 1963                 | 14/138,698                    | 2013-12-23                     | 9,794,826                | 2017-10-17               | Handling of traffic congestion messages for wireless communication devices in wireless communication systems |
| 1964                 | 14/963,909                    | 2015-12-09                     | 9,799,196                | 2017-10-24               | Integrated gas detection and vehicle telematics system                                                       |
| 1965                 | 14/507,323                    | 2014-10-06                     | 9,801,056                | 2017-10-24               | Wireless communication system to secure data communications between application programming interfaces       |
| 1966                 | 15/361,901                    | 2016-11-28                     | 9,801,116                | 2017-10-24               | Wireless communication system control of carrier aggregation for a wireless relay                            |
| 1967                 | 14/104,899                    | 2013-12-12                     | 9,806,413                | 2017-10-31               | Automatic control of spacing between antenna dipole columns                                                  |
| 1968                 | 14/815,445                    | 2015-07-31                     | 9,806,856                | 2017-10-31               | Efficiently responding to mobile-device requests in a wireless environment                                   |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------|
| 1969                 | 14/132,949                    | 2013-12-18                     | 9,807,599                | 2017-10-31               | Management of wireless communication devices by a mobile control device                                |
| 1970                 | 14/297,956                    | 2014-06-06                     | 9,807,664                | 2017-10-31               | Wireless communication system to optimize device performance across wireless communication networks    |
| 1971                 | 14/523,023                    | 2014-10-24                     | 9,807,669                | 2017-10-31               | Identifying communication paths based on packet data network gateway status reports                    |
| 1972                 | 15/280,517                    | 2016-09-29                     | 9,807,672                | 2017-10-31               | Wireless communication system control of uplink carrier aggregation                                    |
| 1973                 | 12/554,215                    | 2009-09-04                     | 9,807,819                | 2017-10-31               | Cross-technology session continuity                                                                    |
| 1974                 | 14/855,364                    | 2015-09-15                     | 9,811,672                | 2017-11-07               | Systems and methods for provisioning and using multiple trusted security zones on an electronic device |
| 1975                 | 14/879,324                    | 2015-10-09                     | 9,811,686                | 2017-11-07               | Support systems interactions with virtual network functions in a trusted security zone                 |
| 1976                 | 14/272,221                    | 2014-05-07                     | 9,811,793                | 2017-11-07               | System and method linking use case documents to business process documents                             |
| 1977                 | 15/223,963                    | 2016-07-29                     | 9,813,141                | 2017-11-07               | Dynamic control of automatic gain control (agc) in a repeater system                                   |
| 1978                 | 12/873,957                    | 2010-09-01                     | 9,813,562                | 2017-11-07               | Dual tone multi-frequency transcoding server for use by multiple session border controllers            |
| 1979                 | 15/014,463                    | 2016-02-03                     | 9,813,961                | 2017-11-07               | Data communication system redirection of a media session to user equipment                             |
| 1980                 | 14/931,411                    | 2015-11-03                     | 9,813,968                | 2017-11-07               | Management of channel status information for lte redirects                                             |
| 1981                 | 14/930,803                    | 2015-11-03                     | 9,814,057                | 2017-11-07               | Resource block structure and control in a wireless ofdm communication system                           |
| 1982                 | 14/733,702                    | 2015-06-08                     | 9,817,641                | 2017-11-14               | Facilitating application development using protected components                                        |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 1983                 | 14/947,257                    | 2015-11-20                     | 9,817,992                | 2017-11-14               | System and method for secure usim wireless network access                                                                |
| 1984                 | 13/750,831                    | 2013-01-25                     | 9,818,104                | 2017-11-14               | Secure online credit card transactions                                                                                   |
| 1985                 | 14/518,504                    | 2014-10-20                     | 9,818,133                | 2017-11-14               | Method for consumer profile consolidation using mobile network identification                                            |
| 1986                 | 14/853,492                    | 2015-09-14                     | 9,819,679                | 2017-11-14               | Hardware assisted provenance proof of named data networking associated to device data, addresses, services, and servers  |
| 1987                 | 14/275,054                    | 2014-05-12                     | 9,820,216                | 2017-11-14               | Wireless traffic channel release prevention before update process completion                                             |
| 1988                 | 14/463,641                    | 2014-08-19                     | 9,824,374                | 2017-11-21               | Radio access network adaptive mobile advertisement delivery                                                              |
| 1989                 | 14/693,441                    | 2015-04-22                     | 9,830,214                | 2017-11-28               | Diameter routing agent detection of policy server communication failure                                                  |
| 1990                 | 13/714,178                    | 2012-12-13                     | 9,830,587                | 2017-11-28               | System, method, and device for customizing online merchant payment forms for mobile devices without merchant integration |
| 1991                 | 15/148,318                    | 2016-05-06                     | 9,832,166                | 2017-11-28               | Optical communication system to automatically configure remote optical nodes                                             |
| 1992                 | 15/064,764                    | 2016-03-09                     | 9,832,741                | 2017-11-28               | Dynamically modifying transmit power based on reference signal receive power                                             |
| 1993                 | 14/160,206                    | 2014-01-21                     | 9,836,771                | 2017-12-05               | Client mediation and integration to advertisement gateway                                                                |
| 1994                 | 14/956,243                    | 2015-12-01                     | 9,838,379                | 2017-12-05               | Security tiering in a mobile communication device application framework                                                  |
| 1995                 | 14/606,011                    | 2015-01-26                     | 9,838,868                | 2017-12-05               | Mated universal serial bus (usb) wireless dongles configured with destination addresses                                  |
| 1996                 | 13/860,338                    | 2013-04-10                     | 9,838,869                | 2017-12-05               | Delivering digital content to a mobile device via a digital rights clearing house                                        |

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| 1997          | 15/333,163             | 2016-10-24              | 9,843,581         | 2017-12-12        | Hardware root of trust (hrot) for software-defined network (sdn) communications                                                                              |
| 1998          | 15/231,959             | 2016-08-09              | 9,843,983         | 2017-12-12        | Dynamically controlling a user equipment (ue) handover from a source repeater                                                                                |
| 1999          | 15/070,504             | 2016-03-15              | 9,844,063         | 2017-12-12        | Adaptive convolution method in long term evolution networks                                                                                                  |
| 2000          | 11/934,924             | 2007-11-05              | 9,851,800         | 2017-12-26        | Executing computing tasks based on force levels                                                                                                              |
| 2001          | 14/753,536             | 2015-06-29              | 9,854,048         | 2017-12-26        | Network function virtualization (nfv) hardware trust in data communication systems                                                                           |
| 2002          | 14/620,056             | 2015-02-11              | 9,859,620         | 2018-01-02        | Increasing energy efficiency of a small cell antenna                                                                                                         |
| 2003          | 14/170,930             | 2014-02-03              | 9,860,117         | 2018-01-02        | Automatically generated virtual network elements for virtualized packet networks                                                                             |
| 2004          | 14/026,309             | 2013-09-13              | 9,860,284         | 2018-01-02        | Parallel multimedia conferencing                                                                                                                             |
| 2005          | 14/021,019             | 2013-09-09              | 9,860,674         | 2018-01-02        | Management of machine-to-machine traffic in a wireless communication network                                                                                 |
| 2006          | 14/168,755             | 2014-01-30              | 9,860,722         | 2018-01-02        | Converting location information into public safety answering point (psap) signaling                                                                          |
| 2007          | 14/321,971             | 2014-07-02              | 9,860,791         | 2018-01-02        | Long term evolution communication policies based on explicit congestion notification                                                                         |
| 2008          | 14/941,947             | 2015-11-16              | 9,860,898         | 2018-01-02        | Long term evolution (lte) network control of carrier aggregation for user equipment                                                                          |
| 2009          | 14/085,362             | 2013-11-20              | 9,864,422         | 2018-01-09        | Reducing transitions between idle and active states                                                                                                          |
| 2010          | 15/584,202             | 2017-05-02              | 9,864,856         | 2018-01-09        | Efficient hardware trust verification in data communication systems that comprise network interface cards, central processing units, and data memory buffers |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------------------------------------------|
| 2011                 | 14/727,974                    | 2015-06-02                     | 9,866,343                | 2018-01-09               | Orthogonal frequency division multiplex (ofdm) sub-band allocation to enhance wireless data communications |
| 2012                 | 15/363,312                    | 2016-11-29                     | 9,867,007                | 2018-01-09               | Fine distance determination for user equipment (ue) that are served by wireless repeater chains            |
| 2013                 | 15/015,814                    | 2016-02-04                     | 9,867,114                | 2018-01-09               | Wireless relay backhaul selection in a data communication network                                          |
| 2014                 | 15/602,057                    | 2017-05-22                     | 9,871,768                | 2018-01-16               | Ipv6 to ipv4 data packet migration in a trusted security zone                                              |
| 2015                 | 15/232,569                    | 2016-08-09                     | 9,871,905                | 2018-01-16               | Systems and methods for customized delivery of virtually installed applications                            |
| 2016                 | 15/286,956                    | 2016-10-06                     | 9,872,160                | 2018-01-16               | Session quality display in a wireless communication system                                                 |
| 2017                 | 14/571,606                    | 2014-12-16                     | 9,872,187                | 2018-01-16               | Transmission mode selection based on wireless communication device information                             |
| 2018                 | 14/919,412                    | 2015-10-21                     | 9,872,209                | 2018-01-16               | Pre-registration of a wireless communication device in a long term evolution network                       |
| 2019                 | 14/187,986                    | 2014-02-24                     | 9,872,263                | 2018-01-16               | Generating reference signals from selected signals                                                         |
| 2020                 | 14/086,620                    | 2013-11-21                     | 9,872,304                | 2018-01-16               | Packet fragmentation for volte communication sessions                                                      |
| 2021                 | 14/207,175                    | 2014-03-12                     | 9,875,269                | 2018-01-23               | Collaborative editing in self-contained single page applications                                           |
| 2022                 | 15/087,087                    | 2016-03-31                     | 9,876,560                | 2018-01-23               | Dynamic allocation of resources to a wireless relay node                                                   |
| 2023                 | 14/170,889                    | 2014-02-03                     | 9,876,689                | 2018-01-23               | Automatically generated virtual network elements for virtualized local area networks                       |
| 2024                 | 12/355,511                    | 2009-01-16                     | 9,876,866                | 2018-01-23               | Providing location-based data to secondary content providers via primary content providers                 |
| 2025                 | 15/188,842                    | 2016-06-21                     | 9,876,896                | 2018-01-23               | System and method of interdicting malware infiltration as spoofed advertisement                            |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------|
| 2026                 | 14/731,054                    | 2015-06-04                     | 9,877,190                | 2018-01-23               | System and method for authentication and sharing of subscriber data                          |
| 2027                 | 15/351,423                    | 2016-11-14                     | 9,877,213                | 2018-01-23               | Integrated minimization of drive test (mdt) and ticketing in a mobile communication network  |
| 2028                 | 15/154,947                    | 2016-05-14                     | 9,877,263                | 2018-01-23               | Carrier aggregation (ca) for user equipment (ue) and wireless relays                         |
| 2029                 | 14/863,023                    | 2015-09-23                     | 9,877,332                | 2018-01-23               | Quality of service level based on medical data for a wireless communication device           |
| 2030                 | 14/817,972                    | 2015-08-04                     | 9,877,338                | 2018-01-23               | Wireless scheduler bandwidth estimation for quick start                                      |
| 2031                 | 14/469,568                    | 2014-08-26                     | 9,880,799                | 2018-01-30               | Extendable display screens of electronic devices                                             |
| 2032                 | 15/266,080                    | 2016-09-15                     | 9,882,742                | 2018-01-30               | Control of long term evolution (lte) virtual network elements based on radio network tunnels |
| 2033                 | 12/943,678                    | 2010-11-10                     | 9,882,765                | 2018-01-30               | Packet network access point selection based on application group membership                  |
| 2034                 | 14/945,060                    | 2015-11-18                     | 9,882,864                | 2018-01-30               | Trace route audit and alarming                                                               |
| 2035                 | 14/226,804                    | 2014-03-26                     | 9,883,049                | 2018-01-30               | System and method for cell site performance management                                       |
| 2036                 | 11/866,410                    | 2007-10-02                     | 9,883,381                | 2018-01-30               | Providing secure access to smart card applications                                           |
| 2037                 | 15/005,255                    | 2016-01-25                     | 9,887,761                | 2018-02-06               | Wireless backhaul for wireless relays in a data communication network                        |
| 2038                 | 14/446,732                    | 2014-07-30                     | 9,887,980                | 2018-02-06               | Global time based authentication of client devices                                           |
| 2039                 | 15/080,542                    | 2016-03-24                     | 9,888,290                | 2018-02-06               | Service denial notification in secure socket layer (ssl) processing                          |
| 2040                 | 15/496,394                    | 2017-04-25                     | 9,893,759                | 2018-02-13               | Wireless relay antenna isolation                                                             |
| 2041                 | 14/732,093                    | 2015-06-05                     | 9,894,600                | 2018-02-13               | Providing adaptive network access                                                            |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 2042                 | 14/032,458                    | 2013-09-20                     | 9,904,984                | 2018-02-27               | Wireless communication device configured to capture orientation information and orientation information gathering method                      |
| 2043                 | 15/474,471                    | 2017-03-30                     | 9,906,504                | 2018-02-27               | Hardware-trusted orthogonal frequency division multiplex (ofdm) access to a shared common public radio interface (cpri)                       |
| 2044                 | 14/632,850                    | 2015-02-26                     | 9,906,958                | 2018-02-27               | Web server bypass of backend process on near field communications and secure element chips                                                    |
| 2045                 | 15/653,101                    | 2017-07-18                     | 9,906,961                | 2018-02-27               | Computer system hardware validation for virtual communication network elements                                                                |
| 2046                 | 15/695,539                    | 2017-09-05                     | 9,906,975                | 2018-02-27               | Wireless communication network to control radio frequency (rf) measurement reporting for user equipment                                       |
| 2047                 | 15/092,756                    | 2016-04-07                     | 9,907,028                | 2018-02-27               | Mitigating uplink interference                                                                                                                |
| 2048                 | 15/227,712                    | 2016-08-03                     | 9,907,077                | 2018-02-27               | Uplink interference mitigation                                                                                                                |
| 2049                 | 15/057,781                    | 2016-03-01                     | 9,912,316                | 2018-03-06               | Mechanical hub                                                                                                                                |
| 2050                 | 14/920,873                    | 2015-10-23                     | 9,912,547                | 2018-03-06               | Computer platform to collect, marshal, and normalize communication network data for use by a network operation center (noc) management system |
| 2051                 | 14/679,173                    | 2015-04-06                     | 9,912,693                | 2018-03-06               | Identification of malicious precise time protocol (ptp) nodes                                                                                 |
| 2052                 | 13/832,898                    | 2013-03-15                     | 9,913,113                | 2018-03-06               | Communicating utility data over a cellular network with priority                                                                              |
| 2053                 | 14/274,915                    | 2014-05-12                     | 9,913,125                | 2018-03-06               | Mobile data service control for a wireless communication device                                                                               |
| 2054                 | 15/265,833                    | 2016-09-14                     | 9,913,132                | 2018-03-06               | System and method of mobile phone customization based on universal manifest                                                                   |

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| 2055                 | 15/014,352                    | 2016-02-03                     | 9,913,165                | 2018-03-06               | Wireless relay quality-of-service in a data communication network                                                        |
| 2056                 | 14/974,084                    | 2015-12-18                     | 9,913,242                | 2018-03-06               | Long term evolution (lte) network selection of a serving gateway (s-gw)                                                  |
| 2057                 | 15/047,432                    | 2016-02-18                     | 9,913,281                | 2018-03-06               | Dynamic customization of mobile communication device access point name (apn) selection                                   |
| 2058                 | 14/542,132                    | 2014-11-14                     | 9,917,363                | 2018-03-13               | Adjustable cross-polarized antenna array elements                                                                        |
| 2059                 | 15/182,738                    | 2016-06-15                     | 9,917,815                | 2018-03-13               | Border gateway protocol (bgp) communications over trusted network function virtualization (nfv) hardware                 |
| 2060                 | 12/253,381                    | 2008-10-17                     | 9,917,837                | 2018-03-13               | Determining trusted sources from which to download content to a mobile device                                            |
| 2061                 | 14/813,527                    | 2015-07-30                     | 9,917,841                | 2018-03-13               | Branding and improper operation detection on a user equipment                                                            |
| 2062                 | 15/471,219                    | 2017-03-28                     | 9,918,321                | 2018-03-13               | Wireless communication system to optimize traffic management on a multi-band wireless base station                       |
| 2063                 | 15/060,565                    | 2016-03-03                     | 9,921,574                | 2018-03-20               | Dynamic interactive robot dialogue creation incorporating disparate information sources and collective feedback analysis |
| 2064                 | 14/165,571                    | 2014-01-27                     | 9,922,347                | 2018-03-20               | Ad management using ads cached on a mobile electronic device                                                             |
| 2065                 | 15/230,335                    | 2016-08-05                     | 9,922,539                | 2018-03-20               | System and method of telecommunication network infrastructure alarms queuing and multi-threading                         |
| 2066                 | 15/069,656                    | 2016-03-14                     | 9,924,000                | 2018-03-20               | Communication packet header data compression                                                                             |
| 2067                 | 13/676,788                    | 2012-11-14                     | 9,924,292                | 2018-03-20               | Over the air passive downloads                                                                                           |
| 2068                 | 14/720,365                    | 2015-05-22                     | 9,924,516                | 2018-03-20               | Method to transmit data packets on a network                                                                             |
| 2069                 | 14/922,103                    | 2015-10-23                     | 9,928,055                | 2018-03-27               | Validating development software by comparing results from                                                                |

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|               |                        |                         |                   |                   | processing historic data sets                                                                              |
| 2070          | 14/226,146             | 2014-03-26              | 9,928,222         | 2018-03-27        | Customizing a browsing experience on a mobile communications device                                        |
| 2071          | 15/415,730             | 2017-01-25              | 9,930,161         | 2018-03-27        | System and method of caching targeted internet protocol (ip) notifications to mobile communication devices |
| 2072          | 14/585,448             | 2014-12-30              | 9,940,644         | 2018-04-10        | Multimedia product placement marketplace                                                                   |
| 2073          | 15/210,315             | 2016-07-14              | 9,942,702         | 2018-04-10        | Device location determination when attached to one or more wireless repeaters                              |
| 2074          | 14/828,165             | 2015-08-17              | 9,942,766         | 2018-04-10        | Caller validation for end service providers                                                                |
| 2075          | 14/108,572             | 2013-12-17              | 9,942,779         | 2018-04-10        | Method and system for using customer analytics to detect network events                                    |
| 2076          | 11/866,519             | 2007-10-03              | 9,948,076         | 2018-04-17        | Rack pulley system                                                                                         |
| 2077          | 14/061,335             | 2013-10-23              | 9,948,452         | 2018-04-17        | Adapter that converts enhanced long range navigation (eloran) to precision time protocol (ptp)             |
| 2078          | 13/782,762             | 2013-03-01              | 9,948,597         | 2018-04-17        | Facilitating access of a mobile device to a web-based service using a network interface                    |
| 2079          | 15/093,171             | 2016-04-07              | 9,949,146         | 2018-04-17        | Control over data services that are delivered over a wireless access point                                 |
| 2080          | 15/426,820             | 2017-02-07              | 9,949,198         | 2018-04-17        | Long term evolution communication system to perform a mobility management entity reselection               |
| 2081          | 15/365,934             | 2016-11-30              | 9,949,304         | 2018-04-17        | Mobile communication device profound identity brokering framework                                          |
| 2082          | 14/314,257             | 2014-06-25              | 9,954,568         | 2018-04-24        | Antenna module communication control in an antenna enclosure system                                        |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2083                 | 14/522,584                    | 2014-10-24                     | 9,965,740                | 2018-05-08               | Return merchandise authorization asset recovery                                                                                                                                                   |
| 2084                 | 14/806,495                    | 2015-07-22                     | 9,967,155                | 2018-05-08               | Dynamically creating and routing network records for dispatch prior to session timeout                                                                                                            |
| 2085                 | 15/071,484                    | 2016-03-16                     | 9,967,257                | 2018-05-08               | Software defined network (sdn) application integrity                                                                                                                                              |
| 2086                 | 14/551,960                    | 2014-11-24                     | 9,967,734                | 2018-05-08               | Content delivery network request handling in wireless communication systems                                                                                                                       |
| 2087                 | 15/013,898                    | 2016-02-02                     | 9,967,745                | 2018-05-08               | Hardware-trusted network bearers in network function virtualization infrastructure (nfvi) servers that execute virtual network functions (vnfs) under management and orchestration (mano) control |
| 2088                 | 15/139,291                    | 2016-04-26                     | 9,967,753                | 2018-05-08               | Wireless communication network adaptation based on collaborative data analysis                                                                                                                    |
| 2089                 | 14/946,748                    | 2015-11-19                     | 9,971,637                | 2018-05-15               | Big data propagation agent framework                                                                                                                                                              |
| 2090                 | 14/518,523                    | 2014-10-20                     | 9,971,683                | 2018-05-15               | Automatic computer memory management coordination across a group of servers                                                                                                                       |
| 2091                 | 15/005,234                    | 2016-01-25                     | 9,973,256                | 2018-05-15               | Relay gateway for wireless relay signaling in a data communication network                                                                                                                        |
| 2092                 | 12/192,313                    | 2008-08-15                     | 9,973,371                | 2018-05-15               | Requesting a specific website version                                                                                                                                                             |
| 2093                 | 15/483,891                    | 2017-04-10                     | 9,973,910                | 2018-05-15               | Mobile content distribution system                                                                                                                                                                |
| 2094                 | 15/250,817                    | 2016-08-29                     | 9,973,952                | 2018-05-15               | Mobile phone performance management based on personal quality criteria                                                                                                                            |
| 2095                 | 15/059,456                    | 2016-03-03                     | 9,973,997                | 2018-05-15               | Data communication network to provide network access data sets for user equipment selection of a wireless relay                                                                                   |
| 2096                 | 15/054,130                    | 2016-02-25                     | 9,977,914                | 2018-05-22               | Electronic device security through boot cycles                                                                                                                                                    |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------|
| 2097                 | 14/564,063                    | 2014-12-08                     | 9,978,053                | 2018-05-22               | Dynamic promotion code insertion in contactless payment transaction                                                      |
| 2098                 | 14/722,418                    | 2015-05-27                     | 9,979,562                | 2018-05-22               | Network function virtualization requirements to service a long term evolution (lte) network                              |
| 2099                 | 15/655,080                    | 2017-07-20                     | 9,979,699                | 2018-05-22               | System and method of establishing trusted operability between networks in a network functions virtualization environment |
| 2100                 | 15/223,700                    | 2016-07-29                     | 9,979,790                | 2018-05-22               | Long term evolution communication network to route vehicle-to-x (v2x) data communications                                |
| 2101                 | 15/486,826                    | 2017-04-13                     | 9,980,144                | 2018-05-22               | Hardware-trusted wireless data communications over a wireless relay                                                      |
| 2102                 | 14/160,224                    | 2014-01-21                     | 9,984,395                | 2018-05-29               | Advertisement mediation of supply-demand communications                                                                  |
| 2103                 | 11/696,603                    | 2007-04-04                     | 9,985,735                | 2018-05-29               | Broadcast near field communication to mobile device                                                                      |
| 2104                 | 15/217,981                    | 2016-07-23                     | 9,985,866                | 2018-05-29               | Task performance with virtual probes in a network function virtualization (nfv) software defined network (sdn)           |
| 2105                 | 15/131,889                    | 2016-04-18                     | 9,985,938                | 2018-05-29               | User control over wifi network access                                                                                    |
| 2106                 | 11/734,568                    | 2007-04-12                     | 9,986,414                | 2018-05-29               | Dynamic cscf assignment                                                                                                  |
| 2107                 | 15/069,205                    | 2016-03-14                     | 9,986,483                | 2018-05-29               | Handoff target selection based on media type                                                                             |
| 2108                 | 15/153,925                    | 2016-05-13                     | 9,986,487                | 2018-05-29               | Relay control system notification of inter-cell interference coordination (icic) to a donor base station                 |
| 2109                 | 15/396,465                    | 2016-12-31                     | 9,986,513                | 2018-05-29               | Device to-device (d2d) transmission power control                                                                        |
| 2110                 | 15/277,759                    | 2016-09-27                     | 9,986,553                | 2018-05-29               | Wireless signaling between wireless e-node-b base stations over device-to-device (d2d) user equipment (ue) groups        |

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| 2111                 | 14/960,338                    | 2015-12-04                     | 9,990,118                | 2018-06-05               | Dynamic management and display of mobile application installation shortcuts          |
| 2112                 | 15/711,008                    | 2017-09-21                     | 9,992,160                | 2018-06-05               | Optical communication system to automatically configure remote optical nodes         |
| 2113                 | 14/530,666                    | 2014-10-31                     | 9,992,326                | 2018-06-05               | Out of the box experience (oobe) country choice using wi-fi layer transmission       |
| 2114                 | 15/663,743                    | 2017-07-29                     | 9,992,659                | 2018-06-05               | Stream-processing of telecommunication event records                                 |
| 2115                 | 15/247,035                    | 2016-08-25                     | 9,992,679                | 2018-06-05               | Integrated authentication codes for user devices and communication networks          |
| 2116                 | 14/313,968                    | 2014-06-24                     | 10,007,903               | 2018-06-26               | System for transmitting customer data from a device                                  |
| 2117                 | 14/583,582                    | 2014-12-26                     | 10,007,918               | 2018-06-26               | Customer care automation system                                                      |
| 2118                 | 15/244,204                    | 2016-08-23                     | 10,009,142               | 2018-06-26               | Control over modulation and coding schemes used by wireless relay user equipment     |
| 2119                 | 14/501,844                    | 2014-09-30                     | 10,009,450               | 2018-06-26               | Detecting non-touch applications                                                     |
| 2120                 | 15/638,064                    | 2017-06-29                     | 10,009,741               | 2018-06-26               | Content distribution channel selection, transcoding, and tracking gateway            |
| 2121                 | 15/358,468                    | 2016-11-22                     | 10,009,776               | 2018-06-26               | Facilitating desired placement of a small cell                                       |
| 2122                 | 15/005,277                    | 2016-01-25                     | 10,009,826               | 2018-06-26               | Wide area network (wan) backhaul for wireless relays in a data communication network |
| 2123                 | 14/160,215                    | 2014-01-21                     | 10,013,707               | 2018-07-03               | Address modification for advertisement mediation                                     |
| 2124                 | 15/139,293                    | 2016-04-26                     | 10,015,089               | 2018-07-03               | Enhanced node b (enb) backhaul network topology mapping                              |
| 2125                 | 15/185,991                    | 2016-06-17                     | 10,015,110               | 2018-07-03               | Multiplexing data packets over general packet radio service tunneling protocol       |
| 2126                 | 14/522,139                    | 2014-10-23                     | 10,015,235               | 2018-07-03               | Distribution of media content to wireless communication devices                      |

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| 2127                 | 15/184,046                    | 2016-06-16                     | 10,019,281               | 2018-07-10               | Handoff of virtual machines based on security requirements                                                                 |
| 2128                 | 15/364,685                    | 2016-11-30                     | 10,020,869               | 2018-07-10               | Wireless repeater chain to exert frequency control                                                                         |
| 2129                 | 15/847,361                    | 2017-12-19                     | 10,020,870               | 2018-07-10               | Wireless backhaul for wireless relays in a data communication network                                                      |
| 2130                 | 15/268,347                    | 2016-09-16                     | 10,021,240               | 2018-07-10               | System and method of mobile phone customization based on universal manifest with feature override                          |
| 2131                 | 13/460,085                    | 2012-04-30                     | 10,021,250               | 2018-07-10               | Location information control for session initiation protocol messages                                                      |
| 2132                 | 15/219,489                    | 2016-07-26                     | 10,021,521               | 2018-07-10               | Dynamically updating the location of mobile wireless repeaters                                                             |
| 2133                 | 15/006,680                    | 2016-01-26                     | 10,021,589               | 2018-07-10               | Wireless data system that associates internet protocol ports with quality-of-service for user applications                 |
| 2134                 | 15/346,697                    | 2016-11-08                     | 10,025,303               | 2018-07-17               | Interactive behavior engagement and management in subordinate airborne robots                                              |
| 2135                 | 15/429,720                    | 2017-02-10                     | 10,028,172               | 2018-07-17               | Media service delivery over a wireless relay in a data communication network                                               |
| 2136                 | 15/469,269                    | 2017-03-24                     | 10,028,186               | 2018-07-17               | Wireless communication system to redirect use equipment (ue) from a wireless relay to a donor base station                 |
| 2137                 | 15/277,870                    | 2016-09-27                     | 10,028,323               | 2018-07-17               | Wireless network access point to select a device-to-device communication master for a device-to-device communication group |
| 2138                 | 15/057,300                    | 2016-03-01                     | 10,033,660               | 2018-07-24               | Software defined network (sdn) quality-of-service (qos)                                                                    |
| 2139                 | 15/497,175                    | 2017-04-25                     | 10,034,029               | 2018-07-24               | Systems and methods for audio object delivery based on audible frequency analysis                                          |

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|---------------|------------------------|-------------------------|-------------------|-------------------|---------------------------------------------------------------------------------------------------------------|
| 2140          | 15/824,170             | 2017-11-28              | 10,034,134        | 2018-07-24        | Location determination for user equipment (ue) that are served by wireless repeater chains                    |
| 2141          | 15/196,941             | 2016-06-29              | 10,034,181        | 2018-07-24        | Dynamic mitigation of tropospheric ducting and refraction based interference events with dynamic antenna tilt |
| 2142          | 15/254,737             | 2016-09-01              | 10,034,182        | 2018-07-24        | Mitigation of signal conflict in wireless communication networks                                              |
| 2143          | 15/441,434             | 2017-02-24              | 10,034,233        | 2018-07-24        | Selecting a communication session type based on a hop count                                                   |
| 2144          | 15/067,844             | 2016-03-11              | 10,038,491        | 2018-07-31        | Proxy mobile internet protocol (pmip) tunnel selection by a wireless relay in a data communication network    |
| 2145          | 14/466,590             | 2014-08-22              | 10,039,116        | 2018-07-31        | Long term evolution scheduler to mitigate interference                                                        |
| 2146          | 15/210,246             | 2016-07-14              | 10,039,146        | 2018-07-31        | General packet radio service tunneling protocol multiplexing                                                  |
| 2147          | 14/680,406             | 2015-04-07              | 10,042,662        | 2018-08-07        | Network function virtualization (nfv) parameter trust in data communication systems                           |
| 2148          | 15/686,324             | 2017-08-25              | 10,044,572        | 2018-08-07        | Dynamic addition of network function services                                                                 |
| 2149          | 15/151,202             | 2016-05-10              | 10,044,877        | 2018-08-07        | Revised voice traffic call flow                                                                               |
| 2150          | 15/583,998             | 2017-05-01              | 10,045,216        | 2018-08-07        | Wifi access point connection protocol adaptation                                                              |
| 2151          | 15/708,659             | 2017-09-19              | 10,045,267        | 2018-08-07        | Data communication system redirection of a media session to user equipment                                    |
| 2152          | 15/428,529             | 2017-02-09              | 10,050,739        | 2018-08-14        | Optical communication system with hardware root of trust (hrot) and network function virtualization (nfv)     |
| 2153          | 14/616,335             | 2015-02-06              | 10,050,752        | 2018-08-14        | Radial antenna for small cell with a null feature                                                             |
| 2154          | 15/654,358             | 2017-07-19              | 10,051,497        | 2018-08-14        | Optimizing a relay antenna in a communications network                                                        |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2155                 | 15/395,508                    | 2016-12-30                     | 10,051,548               | 2018-08-14               | Wireless relay to control wireless signal scanning based on reattachment attributes                                                                                                          |
| 2156                 | 15/149,544                    | 2016-05-09                     | 10,051,646               | 2018-08-14               | Dynamic allocation of carrier aggregation resources based on device requests                                                                                                                 |
| 2157                 | 15/443,205                    | 2017-02-27                     | 10,051,683               | 2018-08-14               | Wireless repeater chain channel control                                                                                                                                                      |
| 2158                 | 14/318,185                    | 2014-06-27                     | 10,055,516               | 2018-08-21               | Testing open mobile alliance server payload on an open mobile alliance client simulator                                                                                                      |
| 2159                 | 15/157,031                    | 2016-05-17                     | 10,055,578               | 2018-08-21               | Secure software containers                                                                                                                                                                   |
| 2160                 | 14/322,919                    | 2014-07-03                     | 10,055,743               | 2018-08-21               | System and method of managing customer care                                                                                                                                                  |
| 2161                 | 14/160,196                    | 2014-01-21                     | 10,055,757               | 2018-08-21               | Ip address hashing in advertisement gateway                                                                                                                                                  |
| 2162                 | 15/659,140                    | 2017-07-25                     | 10,056,992               | 2018-08-21               | Dynamically adjusting a calibration rate                                                                                                                                                     |
| 2163                 | 14/179,243                    | 2014-02-12                     | 10,057,835               | 2018-08-21               | Micro cell management system and method                                                                                                                                                      |
| 2164                 | 15/139,296                    | 2016-04-26                     | 10,057,882               | 2018-08-21               | System and method of determination of wireless communication service subscriber location based on user equipment self-identifying to a wifi access point without establishing a data session |
| 2165                 | 14/708,178                    | 2015-05-08                     | 10,067,839               | 2018-09-04               | Content object backup between user equipment                                                                                                                                                 |
| 2166                 | 11/558,021                    | 2006-11-09                     | 10,068,261               | 2018-09-04               | In-flight campaign optimization                                                                                                                                                              |
| 2167                 | 15/084,188                    | 2016-03-29                     | 10,069,788               | 2018-09-04               | Controlling a high availability computing system                                                                                                                                             |
| 2168                 | 15/216,677                    | 2016-07-21                     | 10,069,844               | 2018-09-04               | Virtual network function (vnf) hardware trust in a network function virtualization (nfv) software defined network (sdn)                                                                      |
| 2169                 | 15/784,079                    | 2017-10-13                     | 10,069,957               | 2018-09-04               | Token based content distribution to wireless communication devices                                                                                                                           |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2170                 | 14/065,561                    | 2013-10-29                     | 10,070,456               | 2018-09-04               | Selection of resource scheduling mode in an ofdma base station                                                                                                         |
| 2171                 | 15/278,758                    | 2016-09-28                     | 10,070,477               | 2018-09-04               | Modification of non-guaranteed bit rate (non-gbr) bearers through wireless repeater chains into guaranteed bit rate (gbr) bearers through the wireless repeater chains |
| 2172                 | 15/815,031                    | 2017-11-16                     | 10,075,540               | 2018-09-11               | Network function virtualization (nfv) hardware trust in data communication systems                                                                                     |
| 2173                 | 15/286,531                    | 2016-10-05                     | 10,075,559               | 2018-09-11               | Server configuration management system and methods                                                                                                                     |
| 2174                 | 14/454,425                    | 2014-08-07                     | 10,075,843               | 2018-09-11               | Validation service portal for wireless location management                                                                                                             |
| 2175                 | 14/289,650                    | 2014-05-29                     | 10,078,854               | 2018-09-18               | Interface for cross-channel advertising campaign                                                                                                                       |
| 2176                 | 15/175,231                    | 2016-06-07                     | 10,083,098               | 2018-09-25               | Network function virtualization (nfv) virtual network function (vnf) crash recovery                                                                                    |
| 2177                 | 15/162,262                    | 2016-05-23                     | 10,083,199               | 2018-09-25               | Data migration in active data store                                                                                                                                    |
| 2178                 | 15/084,170                    | 2016-03-29                     | 10,083,222               | 2018-09-25               | Automated categorization of web pages                                                                                                                                  |
| 2179                 | 15/417,842                    | 2017-01-27                     | 10,084,527               | 2018-09-25               | Wireless communication system to configure resource block usage in a wireless repeater                                                                                 |
| 2180                 | 15/666,565                    | 2017-08-02                     | 10,085,130               | 2018-09-25               | Differentiated wireless communication service provisioning and connecting alternate pathways                                                                           |
| 2181                 | 14/323,698                    | 2014-07-03                     | 10,085,196               | 2018-09-25               | Wireless communication control based on border gateway protocol                                                                                                        |
| 2182                 | 15/497,435                    | 2017-04-26                     | 10,085,222               | 2018-09-25               | Wireless communication system to control transmit power for a wireless repeater chain                                                                                  |
| 2183                 | 15/405,588                    | 2017-01-13                     | 10,085,223               | 2018-09-25               | Wireless repeater system to modify an automatic gain control timer                                                                                                     |

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| 2184                 | 15/227,166                    | 2016-08-03                     | 10,090,908               | 2018-10-02               | Data services for wireless communication devices that are attached to wireless repeater chains                   |
| 2185                 | 14/152,648                    | 2014-01-10                     | 10,091,553               | 2018-10-02               | Video content distribution system and method                                                                     |
| 2186                 | 15/609,812                    | 2017-05-31                     | 10,091,701               | 2018-10-02               | Information centric network (icn) with content aware routers (cars) to facilitate a user equipment (ue) handover |
| 2187                 | 15/396,456                    | 2016-12-31                     | 10,091,784               | 2018-10-02               | Device-to-device (d2d) scheduling control in orthogonal frequency division multiplexing (ofdm) wireless system   |
| 2188                 | 15/184,298                    | 2016-06-16                     | 10,097,421               | 2018-10-09               | Data service policy control based on software defined network (sdn) key performance indicators (kpis)            |
| 2189                 | 15/365,936                    | 2016-11-30                     | 10,097,439               | 2018-10-09               | Mobile communication device self-testing                                                                         |
| 2190                 | 15/404,194                    | 2017-01-11                     | 10,097,974               | 2018-10-09               | Opportunistic content presentation during temporary operation modes of a mobile communication device             |
| 2191                 | 15/335,410                    | 2016-10-26                     | 10,104,598               | 2018-10-16               | Wireless relay scanning control in a wireless data communication network                                         |
| 2192                 | 15/267,410                    | 2016-09-16                     | 10,110,462               | 2018-10-23               | False positive protection for network function virtualization (nfv) virtual probe deployment                     |
| 2193                 | 15/377,751                    | 2016-12-13                     | 10,111,186               | 2018-10-23               | Controllable transformer tap to dynamically adjust power distribution levels in wireless networks                |
| 2194                 | 15/062,041                    | 2016-03-04                     | 10,115,092               | 2018-10-30               | Service composition in a mobile communication device application framework                                       |
| 2195                 | 15/477,398                    | 2017-04-03                     | 10,116,373               | 2018-10-30               | Dynamically adjusting vertical beamforming weights                                                               |
| 2196                 | 14/858,228                    | 2015-09-18                     | 10,116,571               | 2018-10-30               | Network function virtualization (nfv) management and orchestration (mano) with                                   |

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|                      |                               |                                |                          |                          | application layer traffic optimization (alto)                                                                                  |
| 2197                 | 15/480,059                    | 2017-04-05                     | 10,116,646               | 2018-10-30               | Software-defined network threat control                                                                                        |
| 2198                 | 15/177,340                    | 2016-06-08                     | 10,117,073               | 2018-10-30               | Network solutions for building and leveraging clusters of user equipment associated with a telecommunications service provider |
| 2199                 | 15/271,667                    | 2016-09-21                     | 10,117,214               | 2018-10-30               | Triggering an action based on device presence                                                                                  |
| 2200                 | 15/196,411                    | 2016-06-29                     | 10,117,248               | 2018-10-30               | Dynamic frequency allocation to mitigate tropospheric ducting                                                                  |
| 2201                 | 14/629,147                    | 2015-02-23                     | 10,121,488               | 2018-11-06               | Optimizing call quality using vocal frequency fingerprints to filter voice calls                                               |
| 2202                 | 15/229,117                    | 2016-08-05                     | 10,122,815               | 2018-11-06               | Dynamic class mapping in messaging middleware                                                                                  |
| 2203                 | 14/169,046                    | 2014-01-30                     | 10,123,223               | 2018-11-06               | System and method for evaluating operational integrity of a radio access network                                               |
| 2204                 | 15/604,379                    | 2017-05-24                     | 10,123,248               | 2018-11-06               | Wireless access point control of power amplifiers based on an enclosure temperature                                            |
| 2205                 | 14/203,483                    | 2014-03-10                     | 10,129,411               | 2018-11-13               | System and method of enhancing a mobile device upgrade offer                                                                   |
| 2206                 | 15/847,593                    | 2017-12-19                     | 10,129,762               | 2018-11-13               | Adaptive azimuthal settings for a transmitting-receiving component in a wireless telecommunications network                    |
| 2207                 | 15/244,842                    | 2016-08-23                     | 10,135,509               | 2018-11-20               | Optimization of full-power broadcast beamforming                                                                               |
| 2208                 | 15/002,023                    | 2016-01-20                     | 10,136,377               | 2018-11-20               | Mobile device handoff optimization                                                                                             |
| 2209                 | 15/007,479                    | 2016-01-27                     | 10,136,465               | 2018-11-20               | Enhanced access class barring mechanism in lte                                                                                 |
| 2210                 | 15/380,736                    | 2016-12-15                     | 10,142,008               | 2018-11-27               | Data compression for wireless relays in a data communication network                                                           |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2211                 | 14/837,940                    | 2015-08-27                     | 10,142,450               | 2018-11-27               | Custom mobile telecommunication device configuration management                                                                                                                                   |
| 2212                 | 15/824,786                    | 2017-11-28                     | 10,142,911               | 2018-11-27               | Wireless relay backhaul selection in a data communication network                                                                                                                                 |
| 2213                 | 15/247,332                    | 2016-08-25                     | 10,142,918               | 2018-11-27               | Data communication network to provide hop count data for user equipment selection of a wireless relay                                                                                             |
| 2214                 | 15/363,117                    | 2016-11-29                     | 10,143,028               | 2018-11-27               | Wireless communication system to implement independent wireless connections                                                                                                                       |
| 2215                 | 14/733,738                    | 2015-06-08                     | 10,146,612               | 2018-12-04               | Historical disk error monitoring                                                                                                                                                                  |
| 2216                 | 15/084,759                    | 2016-03-30                     | 10,148,340               | 2018-12-04               | Multi-core communication system to serve wireless relays and user equipment                                                                                                                       |
| 2217                 | 15/862,617                    | 2018-01-04                     | 10,149,300               | 2018-12-04               | Dynamic customization of mobile communication device access point name (apn) selection                                                                                                            |
| 2218                 | 13/902,426                    | 2013-05-24                     | 10,152,717               | 2018-12-11               | Document performance based knowledge content management recommender system                                                                                                                        |
| 2219                 | 15/005,123                    | 2016-01-25                     | 10,154,019               | 2018-12-11               | End-to-end trusted communications infrastructure                                                                                                                                                  |
| 2220                 | 15/498,996                    | 2017-04-27                     | 10,158,415               | 2018-12-18               | Macro base station to manage a frequency list                                                                                                                                                     |
| 2221                 | 15/938,793                    | 2018-03-28                     | 10,158,994               | 2018-12-18               | Hardware-trusted network bearers in network function virtualization infrastructure (nfvi) servers that execute virtual network functions (vnfs) under management and orchestration (mano) control |
| 2222                 | 15/698,974                    | 2017-09-08                     | 10,159,029               | 2018-12-18               | Wireless communication system to optimize device performance across wireless communication networks                                                                                               |
| 2223                 | 15/198,265                    | 2016-06-30                     | 10,159,082               | 2018-12-18               | Data communications over a distributed multi-core long term evolution (lte) network                                                                                                               |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------|
| 2224                 | 13/655,333                    | 2012-10-18                     | 10,162,693               | 2018-12-25               | Evaluation of mobile device state and performance metrics for diagnosis and troubleshooting of performance issues |
| 2225                 | 14/947,295                    | 2015-11-20                     | 10,164,869               | 2018-12-25               | Facilitating routing of data based on an internet protocol version capability of a user device                    |
| 2226                 | 15/352,969                    | 2016-11-16                     | 10,164,914               | 2018-12-25               | Network function virtualization (nfv) software-defined network (sdn) network-to-network interfaces (nnis)         |
| 2227                 | 14/947,117                    | 2015-11-20                     | 10,164,934               | 2018-12-25               | User device parameter allocation based on internet protocol version capabilities                                  |
| 2228                 | 14/678,661                    | 2015-04-03                     | 10,165,091               | 2018-12-25               | User device parameter allocation based on internet protocol version capabilities                                  |
| 2229                 | 15/634,642                    | 2017-06-27                     | 10,165,451               | 2018-12-25               | Controlling coverage in a wireless communications network                                                         |
| 2230                 | 14/876,732                    | 2015-10-06                     | 10,169,380               | 2019-01-01               | Universal database import platform                                                                                |
| 2231                 | 15/632,813                    | 2017-06-26                     | 10,171,150               | 2019-01-01               | Dynamic optimization of beamforming weights                                                                       |
| 2232                 | 15/808,652                    | 2017-11-09                     | 10,171,282               | 2019-01-01               | Dynamic optimization of amplitude weights                                                                         |
| 2233                 | 15/247,526                    | 2016-08-25                     | 10,171,290               | 2019-01-01               | Systems and methods for real-time correction of core applications                                                 |
| 2234                 | 15/866,213                    | 2018-01-09                     | 10,171,450               | 2019-01-01               | Global time based authentication of client devices                                                                |
| 2235                 | 14/449,323                    | 2014-08-01                     | 10,171,466               | 2019-01-01               | Maintaining a common identifier for a user session on a communication network                                     |
| 2236                 | 15/593,877                    | 2017-05-12                     | 10,172,058               | 2019-01-01               | Data gateway alignment in a wireless communication network                                                        |
| 2237                 | 15/386,283                    | 2016-12-21                     | 10,172,063               | 2019-01-01               | Intelligent backhaul in a wireless communication network                                                          |
| 2238                 | 14/314,590                    | 2014-06-25                     | 10,172,097               | 2019-01-01               | Avoiding satellite interference to long term evolution systems                                                    |

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| 2239                 | 15/013,421                    | 2016-02-02                     | 10,172,122               | 2019-01-01               | Identification of uplink interference in a long-term evolution (lte) communication system                      |
| 2240                 | 15/232,363                    | 2016-08-09                     | 10,178,653               | 2019-01-08               | Wireless access node and method for signaling aggregation of a plurality of ue devices through a hub ue device |
| 2241                 | 14/077,207                    | 2013-11-11                     | 10,181,132               | 2019-01-15               | Method for providing personalized, targeted advertisements during playback of media                            |
| 2242                 | 14/955,424                    | 2015-12-01                     | 10,191,950               | 2019-01-29               | Identifying influencers using social information                                                               |
| 2243                 | 15/787,280                    | 2017-10-18                     | 10,192,212               | 2019-01-29               | Prepaid transaction history record synchronization on a mobile communication device                            |
| 2244                 | 15/402,372                    | 2017-01-10                     | 10,194,339               | 2019-01-29               | Detection of base station synchronization failure                                                              |
| 2245                 | 15/363,975                    | 2016-11-29                     | 10,200,855               | 2019-02-05               | Wireless communication system for adaptive multiple-input multiple-output (mimo) transmission modes            |
| 2246                 | 14/504,804                    | 2014-10-02                     | 10,200,856               | 2019-02-05               | Content-delivery footprint and capabilities data transfer from wireless communication devices                  |
| 2247                 | 15/338,791                    | 2016-10-31                     | 10,200,910               | 2019-02-05               | Wireless communication system to dynamically modify a buffer status report (bsr) timer in a wireless relay     |
| 2248                 | 15/669,890                    | 2017-08-04                     | 10,209,978               | 2019-02-19               | Mobile application installation service on a mobile phone                                                      |
| 2249                 | 15/881,969                    | 2018-01-29                     | 10,212,258               | 2019-02-19               | Communication packet header data compression                                                                   |
| 2250                 | 15/702,212                    | 2017-09-12                     | 10,212,640               | 2019-02-19               | Identifying communication paths based on packet data network gateway status reports                            |
| 2251                 | 15/457,666                    | 2017-03-13                     | 10,212,755               | 2019-02-19               | Wireless access point control of discontinuous reception (drx) parameters for user equipment                   |

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|               |                        |                         |                   |                   | (ue)                                                                                                                                   |
| 2252          | 14/197,902             | 2014-03-05              | 10,224,890        | 2019-03-05        | Application controlled variable audio ear plugs                                                                                        |
| 2253          | 15/278,491             | 2016-09-28              | 10,225,821        | 2019-03-05        | Wireless communication system control of carrier aggregation for a wireless relay                                                      |
| 2254          | 14/724,780             | 2015-05-28              | 10,229,431        | 2019-03-12        | Explicit user history input                                                                                                            |
| 2255          | 13/958,338             | 2013-08-02              | 10,237,217        | 2019-03-19        | Controlling access to content based on access network type                                                                             |
| 2256          | 15/944,613             | 2018-04-03              | 10,237,274        | 2019-03-19        | Software defined network (sdn) application integrity                                                                                   |
| 2257          | 14/252,362             | 2014-04-14              | 10,241,641        | 2019-03-26        | Notification of a wireless local area network by a browser application of a wireless communication device                              |
| 2258          | 15/415,753             | 2017-01-25              | 10,243,959        | 2019-03-26        | Secure cloud computing framework                                                                                                       |
| 2259          | 13/803,299             | 2013-03-14              | 10,248,295        | 2019-04-02        | Providing suggested actions in response to textual communications                                                                      |
| 2260          | 15/269,602             | 2016-09-19              | 10,248,736        | 2019-04-02        | Data loader and mapper tool                                                                                                            |
| 2261          | 15/443,127             | 2017-02-27              | 10,250,340        | 2019-04-02        | Wireless relay directional testing                                                                                                     |
| 2262          | 15/284,506             | 2016-10-03              | 10,250,498        | 2019-04-02        | Session aggregator brokering of data stream communication                                                                              |
| 2263          | 15/666,564             | 2017-08-02              | 10,251,053        | 2019-04-02        | Embedded subscriber identity module (esim) implementation on a wireless communication device using distributed ledger technology (dlt) |
| 2264          | 16/024,683             | 2018-06-29              | 10,251,064        | 2019-04-02        | Unlock of a mobile communication device in a locked state using a 2-dimensional barcode                                                |
| 2265          | 16/053,727             | 2018-08-02              | 10,264,427        | 2019-04-16        | Differentiated wireless communication service provisioning and connecting alternate pathways                                           |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2266                 | 14/952,725                    | 2015-11-25                     | 10,268,998               | 2019-04-23               | Prepaid account payment tiers                                                                                                                                                  |
| 2267                 | 14/977,244                    | 2015-12-21                     | 10,275,792               | 2019-04-30               | Real-time mobile communication content distribution manifold                                                                                                                   |
| 2268                 | 15/058,987                    | 2016-03-02                     | 10,276,933               | 2019-04-30               | Antenna system for wireless networks                                                                                                                                           |
| 2269                 | 15/908,050                    | 2018-02-28                     | 10,277,297               | 2019-04-30               | Carrier aggregation (ca) control based on multi-user multiple input multiple output (mimo) usage                                                                               |
| 2270                 | 15/206,053                    | 2016-07-08                     | 10,277,631               | 2019-04-30               | Self-preserving policy engine and policy-based content transmission                                                                                                            |
| 2271                 | 15/071,539                    | 2016-03-16                     | 10,278,100               | 2019-04-30               | Long term evolution (lte) mobility management entity (mme) management of an internet protocol multimedia subsystem (ims) media session service level for a user equipment (ue) |
| 2272                 | 14/939,887                    | 2015-11-12                     | 10,282,719               | 2019-05-07               | Secure and trusted device-based billing and charging process using privilege for network proxy authentication and audit                                                        |
| 2273                 | 15/197,017                    | 2016-06-29                     | 10,284,434               | 2019-05-07               | Virtual network function (vnf) relocation in a software defined network (sdn)                                                                                                  |
| 2274                 | 16/013,723                    | 2018-06-20                     | 10,285,072               | 2019-05-07               | Mitigation of signal conflict in wireless communication networks                                                                                                               |
| 2275                 | 13/041,554                    | 2011-03-07                     | 10,285,074               | 2019-05-07               | Controlling network load                                                                                                                                                       |
| 2276                 | 15/581,238                    | 2017-04-28                     | 10,285,176               | 2019-05-07               | Wireless access point optimization of carrier aggregation using beamforming                                                                                                    |
| 2277                 | 14/258,882                    | 2014-04-22                     | 10,289,995               | 2019-05-14               | Carrier assisted mobile phone on-line payment                                                                                                                                  |
| 2278                 | 14/989,794                    | 2016-01-07                     | 10,290,150               | 2019-05-14               | Compressing spatial data                                                                                                                                                       |
| 2279                 | 15/812,634                    | 2017-11-14                     | 10,291,498               | 2019-05-14               | Mobile communication device diagnostic client and error remediation sharing                                                                                                    |
| 2280                 | 15/472,225                    | 2017-03-28                     | 10,292,037               | 2019-05-14               | Mobile communication device automated home location register                                                                                                                   |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------|
|                      |                               |                                |                          |                          | (hlr) assignment adaptation                                                                                     |
| 2281                 | 15/468,201                    | 2017-03-24                     | 10,292,197               | 2019-05-14               | Evolved packet data gateway priority services                                                                   |
| 2282                 | 14/056,354                    | 2013-10-17                     | 10,295,556               | 2019-05-21               | Event detection using physical vibration and audio sensors on mobile devices                                    |
| 2283                 | 15/814,264                    | 2017-11-15                     | 10,298,449               | 2019-05-21               | Automatically generated virtual network elements for virtualized packet networks                                |
| 2284                 | 15/475,212                    | 2017-03-31                     | 10,298,553               | 2019-05-21               | Hardware trusted data communications over system-on-chip (soc) architectures                                    |
| 2285                 | 15/897,313                    | 2018-02-15                     | 10,299,068               | 2019-05-21               | Device location determination when attached to one or more wireless repeaters                                   |
| 2286                 | 15/472,031                    | 2017-03-28                     | 10,299,184               | 2019-05-21               | Reselection of optimal network elements                                                                         |
| 2287                 | 15/495,755                    | 2017-04-24                     | 10,299,185               | 2019-05-21               | Wireless relay quality-of-service based on relay-delivered media services                                       |
| 2288                 | 15/277,091                    | 2016-09-27                     | 10,299,228               | 2019-05-21               | Wireless radio frequency system to dynamically modify automatic gain control thresholds                         |
| 2289                 | 15/977,093                    | 2018-05-11                     | 10,299,315               | 2019-05-21               | Wide area network (wan) backhaul for wireless relays in a data communication network                            |
| 2290                 | 14/885,687                    | 2015-10-16                     | 10,305,960               | 2019-05-28               | Detection of aberrant multiplexed transport connections                                                         |
| 2291                 | 15/584,001                    | 2017-05-01                     | 10,306,433               | 2019-05-28               | Mobile phone differentiated user set-up                                                                         |
| 2292                 | 15/719,813                    | 2017-09-29                     | 10,311,246               | 2019-06-04               | System and method for secure usim wireless network access                                                       |
| 2293                 | 15/251,187                    | 2016-08-30                     | 10,313,074               | 2019-06-04               | Channel condition estimation using static user data symbols over user equipment (ue) specific reference signals |
| 2294                 | 14/628,361                    | 2015-02-23                     | 10,313,143               | 2019-06-04               | Wireless communication system to provide buffering in a single frequency network                                |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 2295                 | 15/498,410                    | 2017-04-26                     | 10,313,179               | 2019-06-04               | Systems and methods for network element access analysis, collision avoidance, and fault resolution                        |
| 2296                 | 15/637,647                    | 2017-06-29                     | 10,313,193               | 2019-06-04               | Software defined network (sdn) proxy correlation index (pci) information distribution across an sdn data-plane            |
| 2297                 | 15/346,728                    | 2016-11-08                     | 10,313,219               | 2019-06-04               | Predictive intelligent processor balancing in streaming mobile communication device data processing                       |
| 2298                 | 14/166,827                    | 2014-01-28                     | 10,313,221               | 2019-06-04               | Endpoint monitoring for a messaging framework                                                                             |
| 2299                 | 15/299,440                    | 2016-10-20                     | 10,313,282               | 2019-06-04               | Flexible middleware messaging system                                                                                      |
| 2300                 | 15/724,245                    | 2017-10-03                     | 10,313,828               | 2019-06-04               | Systems and methods for operation of network location services via translation of network telemetry                       |
| 2301                 | 15/836,269                    | 2017-12-08                     | 10,313,955               | 2019-06-04               | Carrier aggregation (ca) for user equipment (ue) and wireless relays                                                      |
| 2302                 | 15/714,387                    | 2017-09-25                     | 10,314,055               | 2019-06-04               | Component carrier assignment using sector power ratio                                                                     |
| 2303                 | 15/364,097                    | 2016-11-29                     | 10,318,723               | 2019-06-11               | Hardware-trusted network-on-chip (noc) and system-on-chip (soc) network function virtualization (nfv) data communications |
| 2304                 | 15/582,482                    | 2017-04-28                     | 10,318,954               | 2019-06-11               | Processor routing number for mobile communication service provider billing                                                |
| 2305                 | 15/799,651                    | 2017-10-31                     | 10,320,715               | 2019-06-11               | Automated scaling of computing message architecture                                                                       |
| 2306                 | 15/866,289                    | 2018-01-09                     | 10,321,299               | 2019-06-11               | Mobile data service control for a wireless communication device                                                           |
| 2307                 | 15/875,800                    | 2018-01-19                     | 10,321,334               | 2019-06-11               | Methods and systems for adjusting antenna beamforming settings                                                            |
| 2308                 | 14/972,423                    | 2015-12-17                     | 10,321,434               | 2019-06-11               | Managing signaling resources using hidden public land mobile network signals                                              |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2309                 | 14/795,604                    | 2015-07-09                     | 10,321,460               | 2019-06-11               | Orthogonal frequency division multiplexing (ofdm) transmit protocol selection based on a feedback loop lag condition                                         |
| 2310                 | 16/117,856                    | 2018-08-30                     | 10,326,669               | 2019-06-18               | Data service policy control based on software defined network (sdn) key performance indicators (kpis)                                                        |
| 2311                 | 16/160,430                    | 2018-10-15                     | 10,326,868               | 2019-06-18               | Custom mobile telecommunication device configuration management                                                                                              |
| 2312                 | 16/231,218                    | 2018-12-21                     | 10,326,876               | 2019-06-18               | Mobile communication device self-service client                                                                                                              |
| 2313                 | 15/056,025                    | 2016-02-29                     | 10,340,594               | 2019-07-02               | Systems and methods for adjusting vertical beam width                                                                                                        |
| 2314                 | 15/196,655                    | 2016-06-29                     | 10,341,195               | 2019-07-02               | Virtual network function (vnf) resource management in a software defined network (sdn)                                                                       |
| 2315                 | 15/686,312                    | 2017-08-25                     | 10,348,488               | 2019-07-09               | Tiered distributed ledger technology (dlt) in a network function virtualization (nfv) core network                                                           |
| 2316                 | 13/972,619                    | 2013-08-21                     | 10,354,251               | 2019-07-16               | Assigning risk levels to electronic commerce transactions                                                                                                    |
| 2317                 | 15/654,370                    | 2017-07-19                     | 10,355,752               | 2019-07-16               | Providing dynamic coverage in wireless communications networks                                                                                               |
| 2318                 | 14/330,395                    | 2014-07-14                     | 10,355,965               | 2019-07-16               | Leveraging a capacity indicator of a mobility management entity                                                                                              |
| 2319                 | 15/092,733                    | 2016-04-07                     | 10,359,497               | 2019-07-23               | Directional antenna orientation optimization                                                                                                                 |
| 2320                 | 15/287,299                    | 2016-10-06                     | 10,360,076               | 2019-07-23               | Prioritized rebalancing of distributed file system                                                                                                           |
| 2321                 | 15/421,201                    | 2017-01-31                     | 10,361,922               | 2019-07-23               | Software defined network (sdn) proxy correlation index (pci) data-plane control                                                                              |
| 2322                 | 15/044,819                    | 2016-02-16                     | 10,361,953               | 2019-07-23               | Data communication system to direct a user equipment to re-originate a media session invite having a wireless priority service (wps) prefix over a long term |

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|               |                        |                         |                   |                   | evolution (lte) network                                                                      |
| 2323          | 15/934,592             | 2018-03-23              | 10,362,477        | 2019-07-23        | Mobile phone performance management based on personalized user criteria                      |
| 2324          | 14/956,267             | 2015-12-01              | 10,366,069        | 2019-07-30        | Systems and methods for database management and administration                               |
| 2325          | 15/836,800             | 2017-12-08              | 10,368,243        | 2019-07-30        | System and method for authentication and sharing of subscriber data                          |
| 2326          | 14/198,586             | 2014-03-05              | 10,373,211        | 2019-08-06        | Device and method for presenting tailored advertisement content for multiple platforms       |
| 2327          | 15/724,250             | 2017-10-03              | 10,382,571        | 2019-08-13        | Mobile communication device self-locating framework                                          |
| 2328          | 15/633,737             | 2017-06-26              | 10,382,920        | 2019-08-13        | Delivery of branding content and customizations to a mobile communication device             |
| 2329          | 15/875,774             | 2018-01-19              | 10,383,124        | 2019-08-13        | Method to transmit data packets on a network                                                 |
| 2330          | 15/080,071             | 2016-03-24              | 10,397,182        | 2019-08-27        | Method and procedure to identify a source across a network address translation device        |
| 2331          | 15/808,731             | 2017-11-09              | 10,397,749        | 2019-08-27        | Systems and methods for detection, identification, and use of environmental audio signatures |
| 2332          | 15/953,160             | 2018-04-13              | 10,397,790        | 2019-08-27        | Hardware-trusted wireless data communications over a wireless relay                          |
| 2333          | 14/624,527             | 2015-02-17              | 10,402,765        | 2019-09-03        | Analysis for network management using customer provided information                          |
| 2334          | 15/394,507             | 2016-12-29              | 10,404,456        | 2019-09-03        | Network function virtualization (nfv) hardware trusted hosted mano                           |
| 2335          | 15/333,155             | 2016-10-24              | 10,404,654        | 2019-09-03        | Network address distribution to wireless relays in a wireless data communication network     |

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| 2336                 | 16/178,103                    | 2018-11-01                     | 10,404,858               | 2019-09-03               | Short message service (sms) with geographic data for user equipment (ue)                                  |
| 2337                 | 13/911,074                    | 2013-06-05                     | 10,405,173               | 2019-09-03               | Method and systems of collecting and segmenting device sensor data while in transit via a network         |
| 2338                 | 15/432,918                    | 2017-02-14                     | 10,405,223               | 2019-09-03               | System and methods for intelligent reset delay for cell sites in a network                                |
| 2339                 | 15/624,448                    | 2017-06-15                     | 10,405,281               | 2019-09-03               | Dynamic minimum receiver levels based on carrier aggregation                                              |
| 2340                 | 15/058,981                    | 2016-03-02                     | 10,405,358               | 2019-09-03               | Data communication usage tracking in a wireless relay                                                     |
| 2341                 | 11/474,880                    | 2006-06-26                     | 10,410,237               | 2019-09-10               | Inventory management integrating subscriber and targeting data                                            |
| 2342                 | 14/165,569                    | 2014-01-27                     | 10,410,241               | 2019-09-10               | Swipe screen advertisement metrics and tracking                                                           |
| 2343                 | 16/153,391                    | 2018-10-05                     | 10,411,781               | 2019-09-10               | Dynamically adjusting vertical beamforming weights                                                        |
| 2344                 | 15/646,918                    | 2017-07-11                     | 10,412,616               | 2019-09-10               | Equalized data latency for user applications in a wireless data network                                   |
| 2345                 | 15/336,425                    | 2016-10-27                     | 10,412,644               | 2019-09-10               | Redirection of user equipment from a source frequency band to a target frequency band in a repeater chain |
| 2346                 | 15/408,993                    | 2017-01-18                     | 10,412,648               | 2019-09-10               | Idle-mode handoff control in wireless data communication networks                                         |
| 2347                 | 15/937,774                    | 2018-03-27                     | 10,419,368               | 2019-09-17               | Dynamic scaling of computing message architecture                                                         |
| 2348                 | 15/979,081                    | 2018-05-14                     | 10,432,280               | 2019-10-01               | Antenna array correlation for uplink coverage improvement                                                 |
| 2349                 | 15/259,018                    | 2016-09-07                     | 10,432,472               | 2019-10-01               | Network operation center (noc) tool pattern detection and trigger to real-time monitoring operation mode  |
| 2350                 | 15/961,797                    | 2018-04-24                     | 10,433,156               | 2019-10-01               | Adapting subscriber identity module (sim) card                                                            |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------|
| 2351                 | 16/109,121                    | 2018-08-22                     | 10,439,686               | 2019-10-08               | Wireless base station to control an integrated long term evolution and new radio (lte/nr) antenna array       |
| 2352                 | 15/948,979                    | 2018-04-09                     | 10,439,704               | 2019-10-08               | Relay gateway for wireless relay signaling in a data communication network                                    |
| 2353                 | 15/823,167                    | 2017-11-27                     | 10,439,787               | 2019-10-08               | Long term evolution (lte) network control of carrier aggregation for user equipment                           |
| 2354                 | 15/711,958                    | 2017-09-21                     | 10,447,807               | 2019-10-15               | Dynamic middleware source selection for optimizing data retrieval from network nodes                          |
| 2355                 | 15/393,459                    | 2016-12-29                     | 10,455,062               | 2019-10-22               | Network function virtualization (nfv) multi-protocol virtual probe control                                    |
| 2356                 | 13/468,028                    | 2012-05-09                     | 10,455,071               | 2019-10-22               | Self-identification of brand and branded firmware installation in a generic electronic device                 |
| 2357                 | 15/656,182                    | 2017-07-21                     | 10,460,263               | 2019-10-29               | Pooling network devices                                                                                       |
| 2358                 | 16/407,138                    | 2019-05-08                     | 10,469,650               | 2019-11-05               | Mobile communication device self-service client                                                               |
| 2359                 | 15/944,512                    | 2018-04-03                     | 10,469,981               | 2019-11-05               | Mobile phone mobile viewshed analysis                                                                         |
| 2360                 | 16/265,183                    | 2019-02-01                     | 10,470,032               | 2019-11-05               | Wireless communication service delivery over external wireless communication networks                         |
| 2361                 | 16/016,934                    | 2018-06-25                     | 10,470,055               | 2019-11-05               | Dynamic mitigation of tropospheric ducting and refraction based interference events with dynamic antenna tilt |
| 2362                 | 15/659,121                    | 2017-07-25                     | 10,484,381               | 2019-11-19               | Wireless priority service (wps) authorization                                                                 |
| 2363                 | 14/034,475                    | 2013-09-23                     | 10,489,132               | 2019-11-26               | Authenticating mobile device for on board diagnostic system access                                            |
| 2364                 | 15/438,753                    | 2017-02-21                     | 10,491,459               | 2019-11-26               | Systems and methods for on-device adaptive self-executing diagnostics tool                                    |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 2365                 | 15/646,842                    | 2017-07-11                     | 10,499,249               | 2019-12-03               | Data link layer trust signaling in communication network                                                                                         |
| 2366                 | 15/953,640                    | 2018-04-16                     | 10,505,762               | 2019-12-10               | Network function virtualization requirements to service a long term evolution (lte) network                                                      |
| 2367                 | 15/970,873                    | 2018-05-03                     | 10,506,392               | 2019-12-10               | Stream-processing of telecommunication diameter event records                                                                                    |
| 2368                 | 14/060,719                    | 2013-10-23                     | 10,506,398               | 2019-12-10               | Implementation of remotely hosted branding content and customizations                                                                            |
| 2369                 | 15/947,153                    | 2018-04-06                     | 10,506,414               | 2019-12-10               | Wireless relay delivery of commercial mobile alert system (cmas) information to wireless user devices                                            |
| 2370                 | 16/005,290                    | 2018-06-11                     | 10,506,451               | 2019-12-10               | Facilitating desired placement of a small cell                                                                                                   |
| 2371                 | 15/861,334                    | 2018-01-03                     | 10,511,391               | 2019-12-17               | Dynamic recalibration of a beamformer                                                                                                            |
| 2372                 | 15/461,307                    | 2017-03-16                     | 10,511,990               | 2019-12-17               | Wireless relay backhaul over visitor wireless user devices                                                                                       |
| 2373                 | 16/166,666                    | 2018-10-22                     | 10,512,091               | 2019-12-17               | Data communications over a distributed multi-core wireless communication network                                                                 |
| 2374                 | 15/591,093                    | 2017-05-09                     | 10,515,392               | 2019-12-24               | System and method for geographic, temporal, and location-based detection and analysis of mobile communication devices in a communication network |
| 2375                 | 15/401,925                    | 2017-01-09                     | 10,516,754               | 2019-12-24               | Systems and methods for identity confirmation and rapid response to third party identity queries                                                 |
| 2376                 | 15/337,300                    | 2016-10-28                     | 10,517,136               | 2019-12-24               | Wireless communication system to detect a sleepy-cell condition                                                                                  |
| 2377                 | 15/852,294                    | 2017-12-22                     | 10,522,921               | 2019-12-31               | Multi-antenna control in wireless user devices                                                                                                   |
| 2378                 | 15/677,357                    | 2017-08-15                     | 10,530,453               | 2020-01-07               | Adaptive broadcast beam generation of fd-mimo systems                                                                                            |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| 2379                 | 16/270,592                    | 2019-02-08                     | 10,531,278               | 2020-01-07               | Embedded subscriber identity module (esim) implementation on a wireless communication device using distributed ledger technology (dlt) |
| 2380                 | 15/416,364                    | 2017-01-26                     | 10,531,457               | 2020-01-07               | Wireless access point control over carrier aggregation (ca) through a wireless repeater chain                                          |
| 2381                 | 14/258,878                    | 2014-04-22                     | 10,535,082               | 2020-01-14               | Hybrid selection of target for advertisement campaign                                                                                  |
| 2382                 | 16/276,311                    | 2019-02-14                     | 10,536,373               | 2020-01-14               | Session aggregator brokering of data stream communication                                                                              |
| 2383                 | 14/872,936                    | 2015-10-01                     | 10,542,115               | 2020-01-21               | Securing communications in a network function virtualization (nfv) core network                                                        |
| 2384                 | 15/990,422                    | 2018-05-25                     | 10,542,466               | 2020-01-21               | Mobile phone authentication in wifi coverage                                                                                           |
| 2385                 | 13/917,351                    | 2013-06-13                     | 10,542,524               | 2020-01-21               | Intelligently assigning an ip address to a mobile device                                                                               |
| 2386                 | 15/793,971                    | 2017-10-25                     | 10,546,222               | 2020-01-28               | Universal integrated circuit card (uicc) toolkit                                                                                       |
| 2387                 | 16/184,590                    | 2018-11-08                     | 10,554,236               | 2020-02-04               | Mitigating interference related to wireless network signals                                                                            |
| 2388                 | 15/398,711                    | 2017-01-04                     | 10,554,604               | 2020-02-04               | Low-load message queue scaling using ephemeral logical message topics                                                                  |
| 2389                 | 16/379,784                    | 2019-04-09                     | 10,555,130               | 2020-02-04               | Pre-processing of mobile communication device geolocations according to travel mode in traffic analysis                                |
| 2390                 | 16/400,284                    | 2019-05-01                     | 10,555,211               | 2020-02-04               | Intermodulation interference mitigation in a wireless access point that uses multi-band carrier aggregation                            |
| 2391                 | 15/724,243                    | 2017-10-03                     | 10,564,823               | 2020-02-18               | Mobile device transparent screen overlay                                                                                               |
| 2392                 | 14/656,701                    | 2015-03-12                     | 10,565,563               | 2020-02-18               | Systems and method for benefit administration                                                                                          |
| 2393                 | 15/945,369                    | 2018-04-04                     | 10,567,950               | 2020-02-18               | Content delivery network request handling in wireless                                                                                  |

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|               |                        |                         |                   |                   | communication systems                                                                                                             |
| 2394          | 15/418,390             | 2017-01-27              | 10,574,334        | 2020-02-25        | Wireless relay radio frequency (rf) interference management                                                                       |
| 2395          | 16/368,404             | 2019-03-28              | 10,575,194        | 2020-02-25        | Controlling network load                                                                                                          |
| 2396          | 16/045,721             | 2018-07-25              | 10,579,722        | 2020-03-03        | Structured metadata for dynamic data encapsulation                                                                                |
| 2397          | 16/356,824             | 2019-03-18              | 10,587,321        | 2020-03-10        | Carrier aggregation (ca) control based on multi-user multiple input multiple output (mimo) usage                                  |
| 2398          | 15/399,798             | 2017-01-06              | 10,592,484        | 2020-03-17        | Data migration between different lightweight directory access protocol (ldap) based wireless communication subscriber data stores |
| 2399          | 16/107,907             | 2018-08-21              | 10,595,258        | 2020-03-17        | Wireless communication control based on border gateway protocol                                                                   |
| 2400          | 16/391,675             | 2019-04-23              | 10,595,301        | 2020-03-17        | Managing signaling resources using hidden public land mobile network signals                                                      |
| 2401          | 16/419,312             | 2019-05-22              | 10,605,888        | 2020-03-31        | Selecting optimal directional antenna orientation                                                                                 |
| 2402          | 15/867,700             | 2018-01-11              | 10,606,477        | 2020-03-31        | Intelligent keyboard                                                                                                              |
| 2403          | 14/980,739             | 2015-12-28              | 10,609,117        | 2020-03-31        | Temporal shift of object resolution and optimization priority                                                                     |
| 2404          | 15/650,849             | 2017-07-15              | 10,609,206        | 2020-03-31        | Auto-repairing mobile communication device data streaming architecture                                                            |
| 2405          | 16/246,804             | 2019-01-14              | 10,609,551        | 2020-03-31        | Wireless user data service with enhanced reliability                                                                              |
| 2406          | 16/040,457             | 2018-07-19              | 10,614,212        | 2020-04-07        | Secure software containers                                                                                                        |
| 2407          | 15/440,351             | 2017-02-23              | 10,616,897        | 2020-04-07        | Wireless access point to control wireless user data exchanges through wireless relays                                             |
| 2408          | 15/591,096             | 2017-05-09              | 10,620,973        | 2020-04-14        | System and methods for injection and maintenance of artifact                                                                      |

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|----------------------|-------------------------------|--------------------------------|--------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------|
|                      |                               |                                |                          |                          | objects within user equipment                                                                                           |
| 2409                 | 16/122,926                    | 2018-09-06                     | 10,623,257               | 2020-04-14               | Wireless network slice distributed ledger                                                                               |
| 2410                 | 16/388,106                    | 2019-04-18                     | 10,623,260               | 2020-04-14               | Software defined network (sdn) information distribution across an sdn data-plane                                        |
| 2411                 | 16/044,229                    | 2018-07-24                     | 10,623,415               | 2020-04-14               | Virtual network function (vnf) hardware trust in a network function virtualization (nfv) software defined network (sdn) |
| 2412                 | 15/817,179                    | 2017-11-18                     | 10,623,417               | 2020-04-14               | Software development kit (sdk) fraud prevention and detection                                                           |
| 2413                 | 15/918,272                    | 2018-03-12                     | 10,623,980               | 2020-04-14               | Transmission control protocol (tcp) based control of a wireless user device                                             |
| 2414                 | 16/243,875                    | 2019-01-09                     | 10,624,044               | 2020-04-14               | Dynamic variation of power supply to a split mode antenna array                                                         |
| 2415                 | 14/704,797                    | 2015-05-05                     | 10,628,439               | 2020-04-21               | System and method for movie digital content version control access during file delivery and playback                    |
| 2416                 | 15/591,094                    | 2017-05-09                     | 10,628,827               | 2020-04-21               | Electronic commerce fraud mitigation in a wireless communication network                                                |
| 2417                 | 16/234,891                    | 2018-12-28                     | 10,630,395               | 2020-04-21               | Automated mitigation of atmospheric-based interference events                                                           |
| 2418                 | 15/475,131                    | 2017-03-31                     | 10,631,177               | 2020-04-21               | Mobile phone chipset parameter adaptation framework                                                                     |
| 2419                 | 15/067,756                    | 2016-03-11                     | 10,631,211               | 2020-04-21               | User equipment (ue) hand-over of a media session based on wireless relay characteristics                                |
| 2420                 | 16/052,134                    | 2018-08-01                     | 10,631,358               | 2020-04-21               | Physical layer split in a multi-radio access technology (rat) central unit (cu)                                         |
| 2421                 | 15/653,345                    | 2017-07-18                     | 10,643,234               | 2020-05-05               | Pre-loaded native application tracking service                                                                          |
| 2422                 | 16/157,309                    | 2018-10-11                     | 10,644,782               | 2020-05-05               | Data compression for wireless relays in a data communication                                                            |

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|---------------|------------------------|-------------------------|-------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|               |                        |                         |                   |                   | network                                                                                                                             |
| 2423          | 16/398,254             | 2019-04-29              | 10,645,531        | 2020-05-05        | Route building engine tuning framework                                                                                              |
| 2424          | 15/962,917             | 2018-04-25              | 10,650,159        | 2020-05-12        | Electronic device security through boot cycles                                                                                      |
| 2425          | 15/417,081             | 2017-01-26              | 10,650,414        | 2020-05-12        | Computer implemented framework for selection of mobile device users for third party communication outreach using anonymized handles |
| 2426          | 15/436,673             | 2017-02-17              | 10,650,416        | 2020-05-12        | Live production interface and response testing                                                                                      |
| 2427          | 16/166,847             | 2018-10-22              | 10,652,802        | 2020-05-12        | Data communication network to provide hop count data for user equipment selection of a wireless relay                               |
| 2428          | 16/379,786             | 2019-04-09              | 10,657,806        | 2020-05-19        | Transformation of point of interest geometries to lists of route segments in mobile communication device traffic analysis           |
| 2429          | 16/533,093             | 2019-08-06              | 10,659,113        | 2020-05-19        | Multiple input multiple output (mimo) control in a wireless access node                                                             |
| 2430          | 16/218,888             | 2018-12-13              | 10,659,115        | 2020-05-19        | Dynamic antenna calibration scheduling                                                                                              |
| 2431          | 16/362,522             | 2019-03-22              | 10,659,315        | 2020-05-19        | Virtual network function (vnf) relocation in a software defined network (sdn)                                                       |
| 2432          | 15/227,950             | 2016-08-03              | 10,664,851        | 2020-05-26        | Behavioral analysis engine for profiling wireless subscribers                                                                       |
| 2433          | 16/021,963             | 2018-06-28              | 10,666,349        | 2020-05-26        | Proxy mobile internet protocol (pmip) tunnel selection by a wireless relay in a data communication network                          |
| 2434          | 15/610,385             | 2017-05-31              | 10,674,520        | 2020-06-02        | Wireless user device communications over optimal wireless communication channels                                                    |

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| 2435                 | 15/867,694                    | 2018-01-11                     | 10,679,391               | 2020-06-09               | Mobile phone notification format adaptation                                                                                 |
| 2436                 | 16/546,725                    | 2019-08-21                     | 10,681,598               | 2020-06-09               | Wireless communications with dynamic data splitting between fifth generation new radio (5gnr) and long term evolution (lte) |
| 2437                 | 15/606,880                    | 2017-05-26                     | 10,686,662               | 2020-06-16               | Role-based attachment to optimal wireless network cores in a multi-role wireless communication network                      |
| 2438                 | 15/937,768                    | 2018-03-27                     | 10,686,717               | 2020-06-16               | Dynamic allocation of content requests to content providers                                                                 |
| 2439                 | 16/017,005                    | 2018-06-25                     | 10,686,725               | 2020-06-16               | Software defined network (sdn) quality-of-service (qos)                                                                     |
| 2440                 | 16/268,487                    | 2019-02-05                     | 10,686,791               | 2020-06-16               | Secure cloud computing framework                                                                                            |
| 2441                 | 16/687,310                    | 2019-11-18                     | 10,693,241               | 2020-06-23               | Multi-antenna control in wireless user devices                                                                              |
| 2442                 | 16/290,157                    | 2019-03-01                     | 10,693,511               | 2020-06-23               | Wireless user signal reception based on multiple directions-of-arrival                                                      |
| 2443                 | 16/379,789                    | 2019-04-09                     | 10,694,321               | 2020-06-23               | Pattern matching in point-of-interest (poi) traffic analysis                                                                |
| 2444                 | 15/870,765                    | 2018-01-12                     | 10,694,367               | 2020-06-23               | Subscriber data management logs parsing and conversion to analytics use cases                                               |
| 2445                 | 16/446,396                    | 2019-06-19                     | 10,694,381               | 2020-06-23               | System and method for authentication and sharing of subscriber data                                                         |
| 2446                 | 16/398,258                    | 2019-04-29                     | 10,715,950               | 2020-07-14               | Point of interest (poi) definition tuning framework                                                                         |
| 2447                 | 16/714,277                    | 2019-12-13                     | 10,715,964               | 2020-07-14               | Pre-processing of mobile communication device geolocations according to travel mode in traffic analysis                     |
| 2448                 | 16/751,558                    | 2020-01-24                     | 10,715,969               | 2020-07-14               | Wireless messaging using an enhanced quality-of-service (qos)                                                               |
| 2449                 | 16/505,126                    | 2019-07-08                     | 10,716,015               | 2020-07-14               | Broadcast beam profile assignment                                                                                           |

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| 2450                 | 16/040,462                    | 2018-07-19                     | 10,716,021               | 2020-07-14               | Minimization of drive test (mdt) data donor device selection                                                         |
| 2451                 | 16/397,909                    | 2019-04-29                     | 10,719,601               | 2020-07-21               | Hardware-trusted network function virtualization (nfv) data communications                                           |
| 2452                 | 14/726,276                    | 2015-05-29                     | 10,721,280               | 2020-07-21               | Extended mixed multimedia reality platform                                                                           |
| 2453                 | 15/332,808                    | 2016-10-24                     | 10,721,319               | 2020-07-21               | System and method of targeting internet protocol (ip) notifications to mobile communication devices                  |
| 2454                 | 16/196,639                    | 2018-11-20                     | 10,721,586               | 2020-07-21               | Control over multiple user multiple input multiple output (mu-mimo) by device type and location                      |
| 2455                 | 16/795,318                    | 2020-02-19                     | 10,728,749               | 2020-07-28               | Wireless user data service with enhanced reliability                                                                 |
| 2456                 | 13/865,186                    | 2013-04-17                     | 10,733,630               | 2020-08-04               | Method of accessing services from a mobile communication device                                                      |
| 2457                 | 14/750,723                    | 2015-06-25                     | 10,733,685               | 2020-08-04               | Private information disclosure consent management system                                                             |
| 2458                 | 16/166,940                    | 2018-10-22                     | 10,735,085               | 2020-08-04               | Multi-core communication system to serve wireless relays and user equipment                                          |
| 2459                 | 15/899,367                    | 2018-02-20                     | 10,735,451               | 2020-08-04               | Systems and methods for maintaining it infrastructure security and compliance with security policies and regulations |
| 2460                 | 15/941,511                    | 2018-03-30                     | 10,735,562               | 2020-08-04               | Packet data convergence protocol (pdcp) integration in a wireless network central unit (cu)                          |
| 2461                 | 16/367,018                    | 2019-03-27                     | 10,749,847               | 2020-08-18               | Hardware trusted data communications over system-on-chip (soc) architectures                                         |
| 2462                 | 16/012,001                    | 2018-06-19                     | 10,749,869               | 2020-08-18               | Authentication authorization and accounting (aaa) system roaming management                                          |
| 2463                 | 16/154,609                    | 2018-10-08                     | 10,750,351               | 2020-08-18               | Wireless data network distributed ledger analysis to detect and identify analytic information                        |

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| 2464                 | 15/933,109                    | 2018-03-22                     | 10,756,429               | 2020-08-25               | Dynamic variation of power per antenna to facilitate beamforming of antenna array                                    |
| 2465                 | 15/912,521                    | 2018-03-05                     | 10,757,089               | 2020-08-25               | Mobile phone client application authentication through media access gateway (mag)                                    |
| 2466                 | 16/003,003                    | 2018-06-07                     | 10,757,095               | 2020-08-25               | Unix password replication to a set of computers                                                                      |
| 2467                 | 16/237,033                    | 2018-12-31                     | 10,764,172               | 2020-09-01               | Wireless communication network with wireless relays that serve data content to wireless user devices                 |
| 2468                 | 16/403,614                    | 2019-05-06                     | 10,764,374               | 2020-09-01               | Internet-of-things (iot) device reference network                                                                    |
| 2469                 | 16/447,782                    | 2019-06-20                     | 10,764,378               | 2020-09-01               | Mobile communication device self-locating framework                                                                  |
| 2470                 | 16/665,941                    | 2019-10-28                     | 10,764,746               | 2020-09-01               | Electronic subscriber identity module (esim) transfer from inactive device                                           |
| 2471                 | 16/450,018                    | 2019-06-24                     | 10,771,128               | 2020-09-08               | Multi-user multiple input multiple output (mu-mimo) user equipment (ue) grouping with geographic correlation factors |
| 2472                 | 16/369,057                    | 2019-03-29                     | 10,772,026               | 2020-09-08               | Wireless relay quality-of-service based on relay-delivered media services                                            |
| 2473                 | 16/518,369                    | 2019-07-22                     | 10,778,317               | 2020-09-15               | System and method for intra-cell beam switching based on configurable physical layer event detection                 |
| 2474                 | 16/207,014                    | 2018-11-30                     | 10,778,411               | 2020-09-15               | System for interexchange of state data among disparate block chains                                                  |
| 2475                 | 16/703,856                    | 2019-12-04                     | 10,779,201               | 2020-09-15               | Mobile phone authentication in wifi coverage                                                                         |
| 2476                 | 16/265,645                    | 2019-02-01                     | 10,779,282               | 2020-09-15               | Multiple user multiple input multiple output (mu-mimo) optimization using user equipment (ue) power allocation       |
| 2477                 | 15/183,783                    | 2016-06-16                     | 10,782,864               | 2020-09-22               | Two-axis slider graphical user interface system and method                                                           |

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| 2478                 | 15/887,624                    | 2018-02-02                     | 10,789,957               | 2020-09-29               | Home assistant wireless communication service subscriber self-service                                  |
| 2479                 | 16/417,612                    | 2019-05-20                     | 10,790,965               | 2020-09-29               | Tiered distributed ledger technology (dlt) in a network function virtualization (nfv) core network     |
| 2480                 | 16/017,259                    | 2018-06-25                     | 10,791,461               | 2020-09-29               | Mobile communication device user authenticator                                                         |
| 2481                 | 15/838,038                    | 2017-12-11                     | 10,798,196               | 2020-10-06               | Wireless communication system self-healing transaction state keeper                                    |
| 2482                 | 16/274,428                    | 2019-02-13                     | 10,798,574               | 2020-10-06               | Mobile communication device certification framework                                                    |
| 2483                 | 16/553,378                    | 2019-08-28                     | 10,804,981               | 2020-10-13               | Dynamic determination of antenna array mode                                                            |
| 2484                 | 15/001,785                    | 2016-01-20                     | 10,805,427               | 2020-10-13               | Backup and restore of customer devices                                                                 |
| 2485                 | 16/370,880                    | 2019-03-29                     | 10,805,780               | 2020-10-13               | Mobile phone differentiated user set-up                                                                |
| 2486                 | 16/284,284                    | 2019-02-25                     | 10,805,874               | 2020-10-13               | Frequency channel lock in wireless data relays                                                         |
| 2487                 | 14/640,956                    | 2015-03-06                     | 10,812,317               | 2020-10-20               | Telecommunication network trouble ticket system                                                        |
| 2488                 | 16/120,877                    | 2018-09-04                     | 10,825,462               | 2020-11-03               | Optimizing call quality using vocal frequency fingerprints to filter voice calls                       |
| 2489                 | 16/378,389                    | 2019-04-08                     | 10,827,402               | 2020-11-03               | Handover control for a multi-user multiple input multiple output (mu-mimo) access point                |
| 2490                 | 15/654,308                    | 2017-07-19                     | 10,827,434               | 2020-11-03               | Controlling coverage in a wireless communications network                                              |
| 2491                 | 16/706,223                    | 2019-12-06                     | 10,833,782               | 2020-11-10               | Facilitating desired placement of a small cell                                                         |
| 2492                 | 16/241,869                    | 2019-01-07                     | 10,834,604               | 2020-11-10               | Wireless beamforming to facilitate ultra reliable low latency communication (urllc) service            |
| 2493                 | 16/532,111                    | 2019-08-05                     | 10,834,618               | 2020-11-10               | Wireless communication network access using different functionality splits for different communication |

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|                      |                               |                                |                          |                          | services                                                                                                                                      |
| 2494                 | 16/426,734                    | 2019-05-30                     | 10,834,678               | 2020-11-10               | Proactive determination of an updated transmission power                                                                                      |
| 2495                 | 16/356,229                    | 2019-03-18                     | 10,841,971               | 2020-11-17               | Wireless discontinuous reception (drx) based on user equipment (ue) subscriber data                                                           |
| 2496                 | 16/385,340                    | 2019-04-16                     | 10,849,174               | 2020-11-24               | Media-conferencing service and internet-access service from a fifth generation new radio long term evolution (5gnr/lte) wireless access point |
| 2497                 | 16/418,049                    | 2019-05-21                     | 10,855,344               | 2020-12-01               | Reducing massive multiple-input multiple-output/5g interference with an adjacent band                                                         |
| 2498                 | 16/109,255                    | 2018-08-22                     | 10,856,166               | 2020-12-01               | Wireless relay measurement reporting in a wireless communication network                                                                      |
| 2499                 | 16/162,028                    | 2018-10-16                     | 10,868,808               | 2020-12-15               | Server application access authentication based on sim                                                                                         |
| 2500                 | 16/248,131                    | 2019-01-15                     | 10,869,298               | 2020-12-15               | Wireless communication system control of carrier aggregation for a wireless relay                                                             |
| 2501                 | 15/831,504                    | 2017-12-05                     | 10,871,814               | 2020-12-22               | Reducing transitions between idle and active states                                                                                           |
| 2502                 | 15/869,033                    | 2018-01-12                     | 10,872,001               | 2020-12-22               | Big data propagation agent framework                                                                                                          |
| 2503                 | 16/429,889                    | 2019-06-03                     | 10,872,005               | 2020-12-22               | Fixed length message generation tool                                                                                                          |
| 2504                 | 16/134,858                    | 2018-09-18                     | 10,873,915               | 2020-12-22               | Dual connectivity (dc) power control                                                                                                          |
| 2505                 | 16/589,659                    | 2019-10-01                     | 10,879,626               | 2020-12-29               | Separation-based antenna signal combining techniques                                                                                          |
| 2506                 | 16/162,248                    | 2018-10-16                     | 10,880,088               | 2020-12-29               | Data communication target control with contact tokens                                                                                         |
| 2507                 | 16/430,914                    | 2019-06-04                     | 10,880,702               | 2020-12-29               | Data communications for user applications that are executing in a wireless user device                                                        |

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| 2508                 | 16/799,960                    | 2020-02-25                     | 10,880,711               | 2020-12-29               | Electronic subscriber identity module (esim) management platform                                                                         |
| 2509                 | 16/750,147                    | 2020-01-23                     | 10,880,840               | 2020-12-29               | Dynamic allocation of maximum uplink power                                                                                               |
| 2510                 | 16/807,637                    | 2020-03-03                     | 10,880,843               | 2020-12-29               | System and methods for dynamic and selective antenna transmission power modifications                                                    |
| 2511                 | 16/821,950                    | 2020-03-17                     | 10,887,741               | 2021-01-05               | Activation communication addresses of internet of things devices                                                                         |
| 2512                 | 16/112,642                    | 2018-08-25                     | 10,891,017               | 2021-01-12               | Rotating icon selection and interaction software development kit (sdk)                                                                   |
| 2513                 | 15/626,438                    | 2017-06-19                     | 10,891,656               | 2021-01-12               | Ad management using ads cached on a mobile electronic device                                                                             |
| 2514                 | 16/398,777                    | 2019-04-30                     | 10,893,526               | 2021-01-12               | Dynamically modifying radio states of a user device                                                                                      |
| 2515                 | 16/260,955                    | 2019-01-29                     | 10,897,498               | 2021-01-19               | Distributed ledger technology (dlt) control over wireless data relays that serve user equipment (ue)                                     |
| 2516                 | 16/451,180                    | 2019-06-25                     | 10,897,742               | 2021-01-19               | Dynamic adjustment of power supply using qci                                                                                             |
| 2517                 | 16/508,230                    | 2019-07-10                     | 10,901,732               | 2021-01-26               | System and method using a blockchain matrix                                                                                              |
| 2518                 | 16/692,758                    | 2019-11-22                     | 10,902,307               | 2021-01-26               | Universal integrated circuit card (uicc) toolkit                                                                                         |
| 2519                 | 16/414,466                    | 2019-05-16                     | 10,904,862               | 2021-01-26               | Wireless access point assistance to wireless user devices for wireless communication network selection                                   |
| 2520                 | 16/433,787                    | 2019-06-06                     | 10,904,936               | 2021-01-26               | Wireless communication service delivery over a fifth generation new radio (5gnr) access node and a long term evolution (lte) access node |
| 2521                 | 14/872,992                    | 2015-10-01                     | 10,909,576               | 2021-02-02               | Virtual environment creation, scaling, and population with multiple display opportunities                                                |
| 2522                 | 15/723,080                    | 2017-10-02                     | 10,909,602               | 2021-02-02               | Mobile communication device upgrade delivery differentiation                                                                             |

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| 2523          | 16/860,719             | 2020-04-28              | 10,911,888        | 2021-02-02        | Pattern matching in point-of-interest (poi) traffic analysis                                                                    |
| 2524          |                        |                         |                   |                   | DETERMINING PLACEMENT OF A SMALL CELL                                                                                           |
| 2525          | 09/558,448             | 2000-04-25              |                   |                   | CORRELATING POLARIZATION MODE DISPERSION AND BIT ERROR RATE                                                                     |
| 2526          | 09/867,195             | 2001-05-29              |                   |                   | GEOGRAPHIC DISPLAY OF PROFIT DATA                                                                                               |
| 2527          | 10/054,126             | 2002-01-22              |                   |                   | SYSTEM AND METHOD FOR DEVELOPMENT, HOSTING AND INTEGRATION OF COMMERCIAL WEB SITES                                              |
| 2528          | 11/103,024             | 2005-04-11              |                   |                   | PERFORMANCE MONITORING FOR AN ETHERNET BACKHAUL SYSTEM FOR WIRELESS BASE STATIONS                                               |
| 2529          | 11/756,475             | 2007-05-31              |                   |                   | SYSTEMS AND METHODS FOR TRACKING DISRUPTIVE PROJECTS                                                                            |
| 2530          | 11/835,772             | 2007-08-08              |                   |                   | RESTARTING AN ACCESS DEVICE IN A NETWORK HAVING MULTIPLE CALL MANAGEMENT SERVERS                                                |
| 2531          | 12/886,277             | 2010-09-20              |                   |                   | SELECTION OF SUPPLEMENTAL CONTENT FOR WIRELESS COMMUNICATION DEVICES BASED ON DEVICE STATUS                                     |
| 2532          | 13/795,241             | 2013-03-12              |                   |                   | PERIODIC TRAFFIC IDENTIFICATION                                                                                                 |
| 2533          | 13/802,365             | 2013-03-13              |                   |                   | DYNAMIC RESOURCE REFRESH                                                                                                        |
| 2534          | 14/016,275             | 2013-09-03              |                   |                   | PROXY PASSWORD RESET                                                                                                            |
| 2535          | 14/314,257             | 2014-06-25              |                   |                   | ANTENNA MODULE COMMUNICATION CONTROL IN AN ANTENNA ENCLOSURE SYSTEM                                                             |
| 2536          | 14/326,137             | 2014-07-08              |                   |                   | WIRELESS COMMUNICATION SYSTEM TO DELIVER PAGES TO WIRELESS COMMUNICATION DEVICES BASED ON WIRELESS FIDELITY NETWORK IDENTIFIERS |

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| 2537          | 14/326,244             | 2014-07-08              |                   |                   | INTERACTION HISTORY DATABASE                                                                                |
| 2538          | 14/455,934             | 2014-08-10              |                   |                   | THREE TIER DATA STRUCTURES FOR TARGETING DATA                                                               |
| 2539          | 14/639,057             | 2015-03-04              |                   |                   | ENHANCED DIALER FOR A MOBILE COMMUNICATION DEVICE                                                           |
| 2540          | 14/800,564             | 2015-07-15              |                   |                   | SYSTEM AND METHOD OF ELECTRONIC MESSAGE DELIVERY BASED ON SENSITIVITY OF PERFORMANCE FOR DYNAMIC ADJUSTMENT |
| 2541          | 14/819,180             | 2015-08-05              |                   |                   | USER DEVICE PARAMETER ALLOCATION BASED ON INTERNET PROTOCOL VERSION CAPABILITIES AND PROFILE PARAMETERS     |
| 2542          | 14/882,064             | 2015-10-13              |                   |                   | SYSTEM AND METHOD FOR IDENTIFYING FRAUD INDICATORS WITHIN TELECOMMUNICATIONS NETWORKS                       |
| 2543          | 14/884,942             | 2015-10-16              |                   |                   | RECEIVER PATH IGNORE BASED ON PASSIVE INTERMODULATION                                                       |
| 2544          | 15/009,429             | 2016-01-28              |                   |                   | ADAPTABLE ANTENNA MOUNTING                                                                                  |
| 2545          | 15/014,692             | 2016-02-03              |                   |                   | RECONCILING CONTACT INFORMATION BETWEEN USERS                                                               |
| 2546          | 15/621,742             | 2017-06-13              |                   |                   | DYNAMICALLY DETECTING AND CORRECTING THE DEACTIVATION OF BEAMFORMING                                        |
| 2547          | 15/825,092             | 2017-11-28              |                   |                   | Presentation of Messages by an In-Vehicle Head Unit                                                         |
| 2548          | 15/826,592             | 2017-11-29              |                   |                   | Content Distribution Based on Device-Side Client Monitoring of User Actions                                 |
| 2549          | 15/838,016             | 2017-12-11              |                   |                   | ADAPTING CONTENT PRESENTATION BASED ON MOBILE VIEWSHEDS                                                     |
| 2550          | 15/844,496             | 2017-12-15              |                   |                   | MOBILE COMMUNICATION DEVICE IN-KIND PAYMENT VERIFICATION                                                    |
| 2551          | 15/844,500             | 2017-12-15              |                   |                   | BLOCK CHAIN RECORDATION OF IN-KIND PAYMENTS                                                                 |

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| 2552                 | 15/867,698                    | 2018-01-11                     |                          |                          | ATTRIBUTION OF NETWORK EVENTS PURSUANT TO CONFIGURING MOBILE COMMUNICATION DEVICES                   |
| 2553                 | 15/922,461                    | 2018-03-15                     |                          |                          | DYNAMIC WIRELESS NETWORK ARCHITECTURE TO SERVE UPLINK-CENTRIC AND DOWNLINK-CENTRIC USER APPLICATIONS |
| 2554                 | 15/929,177                    | 2019-12-05                     |                          |                          | CONTROL OF HANDOVER BASED ON REMAINING INACTIVITY TIMER DURATION                                     |
| 2555                 | 15/987,900                    | 2018-05-24                     |                          |                          | SYSTEM FOR EASING CUSTOMER DATA ENTRY FROM INTERNET ADVERTISING                                      |
| 2556                 | 16/017,048                    | 2018-06-25                     |                          |                          | METHOD FOR GENERATING AND USING A 2D BARCODE                                                         |
| 2557                 | 16/044,235                    | 2018-07-24                     |                          |                          | NETWORK GENERATED PRECISION TIME                                                                     |
| 2558                 | 16/144,924                    | 2018-09-27                     |                          |                          | SECURE UNLOCK OF MOBILE PHONE                                                                        |
| 2559                 | 16/149,015                    | 2018-10-01                     |                          |                          | SERVICE COMPOSITION IN A MOBILE COMMUNICATION DEVICE APPLICATION FRAMEWORK                           |
| 2560                 | 16/152,976                    | 2018-10-05                     |                          |                          | CONTROL CHANNEL RESOURCE ALLOCATION                                                                  |
| 2561                 | 16/158,299                    | 2018-10-12                     |                          |                          | BATTERY COUPLED RADIO FREQUENCY IDENTITY (RFID)                                                      |
| 2562                 | 16/162,273                    | 2018-10-16                     |                          |                          | WIRELESS NETWORK ACCESS FOR DATA APPLIANCES                                                          |
| 2563                 | 16/181,695                    | 2018-11-06                     |                          |                          | HARDWARE-TRUSTED LEDGER CLIENT FOR DISTRIBUTED LEDGERS THAT SERVE WIRELESS NETWORK SLICES            |
| 2564                 | 16/204,098                    | 2018-11-29                     |                          |                          | REDUCING HIGH POWER USER EQUIPMENT INDUCED FREQUENCY INTERFERENCE                                    |
| 2565                 | 16/206,536                    | 2018-11-30                     |                          |                          | ADAPTIVE PRIMARY COMPONENT CARRIER SWITCHING IN MASSIVE MIMO BASED ON BEAMFORMING CALIBRATION STATUS |

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| 2566                 | 16/218,412                    | 2018-12-12                     |                          |                          | SYSTEM AND METHOD OF DETECTING END-OF-LIFE OF INTERNET OF THINGS (IOT) DEVICE AND CLOSING ASSOCIATED BLOCK CHAIN                                |
| 2567                 | 16/225,682                    | 2018-12-19                     |                          |                          | CONTENT-DELIVERY FOOTPRINT AND CAPABILITIES DATA TRANSFER FROM WIRELESS COMMUNICATION DEVICES                                                   |
| 2568                 | 16/230,172                    | 2018-12-21                     |                          |                          | WIRELESS MEDIA CONFERENCING                                                                                                                     |
| 2569                 | 16/231,233                    | 2018-12-21                     |                          |                          | EXPLICIT USER HISTORY INPUT                                                                                                                     |
| 2570                 | 16/242,429                    | 2019-01-08                     |                          |                          | DYNAMIC FREQUENCY ALLOCATION                                                                                                                    |
| 2571                 | 16/249,119                    | 2019-01-16                     |                          |                          | NOTIFICATION OF A WIRELESS LOCAL AREA NETWORK BY A BROWSER APPLICATION OF A WIRELESS COMMUNICATION DEVICE                                       |
| 2572                 | 16/259,351                    | 2019-01-28                     |                          |                          | DYNAMIC RADIO ACCESS TECHNOLOGY ALLOCATION                                                                                                      |
| 2573                 | 16/276,087                    | 2019-02-14                     |                          |                          | DATA MESSAGING SERVICE WITH DISTRIBUTED LEDGER CONTROL                                                                                          |
| 2574                 | 16/276,210                    | 2019-02-14                     |                          |                          | DATA COMMUNICATION SYSTEM TO SELECTIVELY AND SECURELY COUPLE DISTRIBUTED LEDGERS WITH ARTIFICIAL INTELLIGENCE (AI) ENGINES                      |
| 2575                 | 16/289,983                    | 2019-03-01                     |                          |                          | WIRELESS SIGNAL TRANSMISSION POWER CONTROL BASED ON USER EQUIPMENT (UE) LOCATIONS AND QUADRATURE AMPLITUDE MODULATION (QAM) CONSTELLATION SIZES |
| 2576                 | 16/292,794                    | 2019-03-05                     |                          |                          | PERFORMANCE METRICS COLLECTION AND PROMULGATION FROM WITHIN A MOBILE APPLICATION                                                                |

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| 2577                 | 16/299,833                    | 2019-03-12                     |                          |                          | ADVANCED METERING WITH DISTRIBUTED LEDGER CONTROL                                                                                                                              |
| 2578                 | 16/351,795                    | 2019-03-13                     |                          |                          | LONG TERM EVOLUTION (LTE) MOBILITY MANAGEMENT ENTITY (MME) MANAGEMENT OF AN INTERNET PROTOCOL MULTIMEDIA SUBSYSTEM (IMS) MEDIA SESSION SERVICE LEVEL FOR A USER EQUIPMENT (UE) |
| 2579                 | 16/353,838                    | 2019-03-14                     |                          |                          | ANTENNA SYSTEM FOR WIRELESS NETWORKS                                                                                                                                           |
| 2580                 | 16/359,888                    | 2019-03-20                     |                          |                          | CARRIER ASSISTED MOBILE PHONE ON-LINE PAYMENT                                                                                                                                  |
| 2581                 | 16/361,681                    | 2019-03-22                     |                          |                          | RECOVERY OF VIRTUAL NETWORK FUNCTION (VNF) BOOT FUNCTIONALITY                                                                                                                  |
| 2582                 | 16/363,581                    | 2019-03-25                     |                          |                          | SECONDARY DEVICE AUTHENTICATION PROXIED FROM AUTHENTICATED PRIMARY DEVICE                                                                                                      |
| 2583                 | 16/374,615                    | 2019-04-03                     |                          |                          | SYSTEM AND METHOD OF ADAPTING CUSTOMER CARE BASED ON SUBSCRIBER STATE                                                                                                          |
| 2584                 | 16/379,774                    | 2019-04-09                     |                          |                          | MOBILE COMMUNICATION DEVICE LOCATION DATA ANALYSIS SUPPORTING BUILD-OUT DECISIONS                                                                                              |
| 2585                 | 16/379,781                    | 2019-04-09                     |                          |                          | ROUTE SEGMENTATION ANALYSIS FOR POINTS OF INTEREST                                                                                                                             |
| 2586                 | 16/379,791                    | 2019-04-09                     |                          |                          | SYSTEM AND METHOD OF MOBILE PHONE LOCATION IN A SUBWAY TRANSIT ENVIRONMENT                                                                                                     |
| 2587                 | 16/394,675                    | 2019-04-25                     |                          |                          | WIRELESS BEARER ENHANCEMENT BETWEEN A WIRELESS RELAY AND A WIRELESS ACCESS POINT                                                                                               |
| 2588                 | 16/412,060                    | 2019-05-14                     |                          |                          | WIRELESS COMMUNICATION OVER NEW RADIO (NR) PACKET DATA CONVERGENCE PROTOCOL (PDCP) CIRCUITRY THAT ALLOCATES USER DATA TO RADIO LINK CONTROL (RLC) CIRCUITRY                    |

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| 2589          | 16/419,154             | 2019-05-22              |                   |                   | VIRTUAL NETWORK FUNCTION (VNF) RESOURCE MANAGEMENT IN A SOFTWARE DEFINED NETWORK (SDN)                         |
| 2590          | 16/419,365             | 2019-05-22              |                   |                   | EFFICIENT USER EQUIPMENT (UE) HANDOVER FROM LONG TERM EVOLUTION (LTE) TO NEW RADIO (NR)                        |
| 2591          | 16/430,382             | 2019-06-03              |                   |                   | NETWORK PROFILE ANTI-SPOOFING ON WIRELESS GATEWAYS                                                             |
| 2592          | 16/431,054             | 2019-06-04              |                   |                   | ASSIGNING RISK LEVELS TO ELECTRONIC COMMERCE TRANSACTIONS                                                      |
| 2593          | 16/431,550             | 2019-06-04              |                   |                   | PRIORITIZED ORDERING SYSTEM AND METHOD                                                                         |
| 2594          | 16/439,691             | 2019-06-12              |                   |                   | TRAFFIC ANALYSIS OF MOBILE PHONES PARTITIONED BY GEOHASH                                                       |
| 2595          | 16/440,980             | 2019-06-13              |                   |                   | PRIVATE GATEWAY MESSAGE ARCHIVAL AND RETRIEVAL                                                                 |
| 2596          | 16/442,362             | 2019-06-14              |                   |                   | METHOD AND SYSTEM FOR SENSING-DATA COLLECTION AND TRANSPORT FROM MINIMIZATION-OF-DRIVE-TESTS DEVICE            |
| 2597          | 16/443,917             | 2019-06-18              |                   |                   | CROSS-RELAY INTERFERENCE MITIGATION IN WIRELESS RELAYS THAT SERVE WIRELESS USER DEVICES                        |
| 2598          | 16/502,926             | 2019-07-03              |                   |                   | QUALITY-OF-SERVICE MONITORING FOR A FIFTH GENERATION NEW RADIO (5G NR) ACCESS NODE AND A NON-5G NR ACCESS NODE |
| 2599          | 16/503,109             | 2019-07-03              |                   |                   | DETERMINING PLACEMENT OF A SMALL CELL                                                                          |
| 2600          | 16/505,222             | 2019-07-08              |                   |                   | USE OF AUGMENTED REALITY FOR PLACEMENT OF A SMALL CELL                                                         |

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| 2601                 | 16/505,246                    | 2019-07-08                     |                          |                          | DYNAMIC BEAM MANAGEMENT OF AN ANTENNA ARRAY WITH A FAULTY ELEMENT                                                 |
| 2602                 | 16/508,244                    | 2019-07-10                     |                          |                          | TRUSTED OPERATING SYSTEM IN AN INTERNET OF THINGS (IOT) DEVICE                                                    |
| 2603                 | 16/511,917                    | 2019-07-15                     |                          |                          | BLOCKCHAIN FOUNDRY BUILT INTO INTEGRATED CIRCUIT                                                                  |
| 2604                 | 16/514,656                    | 2019-07-17                     |                          |                          | NETWORK FUNCTION VIRTUALIZATION (NFV) HARDWARE TRUSTED HOSTED MANO                                                |
| 2605                 | 16/518,260                    | 2019-07-22                     |                          |                          | DATA COMMUNICATIONS USAGE TRACKING IN A WIRELESS RELAY                                                            |
| 2606                 | 16/522,289                    | 2019-07-25                     |                          |                          | NETWORK FUNCTION VIRTUALIZATION (NFV) MULTI-PROTOCOL VIRTUAL PROBE CONTROL                                        |
| 2607                 | 16/530,822                    | 2019-08-02                     |                          |                          | WIRELESS COMMUNICATION SERVICE USING MULTIPLE RADIO ACCESS TECHNOLOGY (RAT) TYPES                                 |
| 2608                 | 16/538,316                    | 2019-08-12                     |                          |                          | DYNAMIC ANTENNA CALIBRATION SCHEDULING                                                                            |
| 2609                 | 16/546,171                    | 2019-08-20                     |                          |                          | SIMULTANEOUS WIRELESS COMMUNICATION SERVICE OVER FIFTH GENERATION NEW RADIO (5G NR) AND LONG TERM EVOLUTION (LTE) |
| 2610                 | 16/546,681                    | 2019-08-21                     |                          |                          | BEAMFORMING IN MASSIVE MIMO NETWORKS                                                                              |
| 2611                 | 16/554,559                    | 2019-08-28                     |                          |                          | AUTHORIZATION FOR ACCESS TO FUNCTIONS IN A NETWORK SLICE                                                          |
| 2612                 | 16/556,971                    | 2019-08-30                     |                          |                          | SYSTEMS AND METHODS FOR BEAM SWEEPING OPTIMIZATION BASED ON A SERVICE THRESHOLD                                   |
| 2613                 | 16/559,401                    | 2019-09-03                     |                          |                          | OPERATIONS SUPPORT SYSTEM (OSS) TEST TOOL                                                                         |
| 2614                 | 16/561,411                    | 2019-09-05                     |                          |                          | DYNAMICALLY ALLOCATING CONTROL CHANNEL RESOURCES                                                                  |

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| 2615                 | 16/570,857                    | 2019-09-13                     |                          |                          | WIRELESS GATEWAY WITH MULTIPLE PROCESSORS MANAGED BY TRUSTED PROCESSOR                  |
| 2616                 | 16/573,782                    | 2019-09-17                     |                          |                          | A METHOD OF SENSING-DATA COLLECTION AND TRANSPORT AT REMOTE RADIO HEAD                  |
| 2617                 | 16/578,635                    | 2019-09-23                     |                          |                          | SYSTEM AND METHOD FOR DETERMINING MODIFICATIONS OF MEDIA FILES                          |
| 2618                 | 16/581,113                    | 2019-09-24                     |                          |                          | SECURING PRIVATE WIRELESS GATEWAYS                                                      |
| 2619                 | 16/601,719                    | 2019-10-15                     |                          |                          | WIRELESS ACCESS POINT TO CONTROL WIRELESS DATA EXCHANGES THROUGH WIRELESS RELAYS        |
| 2620                 | 16/653,436                    | 2019-10-15                     |                          |                          | DISTRIBUTED LEDGER DIRECTORY SERVICE FOR WIRELESS COMMUNICATION NETWORKS                |
| 2621                 | 16/653,966                    | 2019-10-15                     |                          |                          | SUBSCRIBER IDENTITY MODULE (SIM) REMOTE UPDATE AGENT                                    |
| 2622                 | 16/665,737                    | 2019-10-28                     |                          |                          | WIRELESS NETWORK ACCESS TO WIRELESS NETWORK SLICES OVER A COMMON RADIO CHANNEL          |
| 2623                 | 16/665,925                    | 2019-10-28                     |                          |                          | NETWORK INTERFACE CONTROLLER (NIC) WITH TRUSTED EXECUTION ENVIRONMENT (TEE)             |
| 2624                 | 16/672,049                    | 2019-11-01                     |                          |                          | DATA COMMUNICATION SERVICE IN A TRUSTED EXECUTION ENVIRONMENT (TEE) AT THE NETWORK EDGE |
| 2625                 | 16/673,919                    | 2019-11-04                     |                          |                          | USER EQUIPMENT RELAY MEDIATED NETWORK CHANNELS WITH BLOCKCHAIN LOGGING                  |
| 2626                 | 16/675,183                    | 2019-11-05                     |                          |                          | HYBRID SELECTION OF TARGET FOR ADVERTISEMENT CAMPAIGN                                   |
| 2627                 | 16/675,188                    | 2019-11-05                     |                          |                          | ELECTRONIC SUBSCRIBER IDENTITY MODULE (eSIM) TRANSFER VIA ACTIVATION CODE               |

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| 2628                 | 16/676,412                    | 2019-11-06                     |                          |                          | ADAPTATION OF BLOCKCHAIN CONSENSUS CRITERIA BASED ON A COMPUTING CONTEXT                                     |
| 2629                 | 16/678,025                    | 2019-11-08                     |                          |                          | WIRELESS RELAY CONSENSUS FOR MESH NETWORK ARCHITECTURES                                                      |
| 2630                 | 16/682,272                    | 2019-11-13                     |                          |                          | WIRELESS COMMUNICATION SERVICE DELIVERY OVER CO-LOCATED GATEWAY USER PLANES                                  |
| 2631                 | 16/682,344                    | 2019-11-13                     |                          |                          | DOMAIN NAME SYSTEM (DNS) TRANSLATIONS FOR CO-LOCATED GATEWAY USER PLANES IN WIRELESS COMMUNICATIONS NETWORKS |
| 2632                 | 16/688,029                    | 2019-11-19                     |                          |                          | WIRELESS COMMUNICATION DEVICE HANDOVERS BETWEEN WIRELESS COMMUNICATION NETWORK SLICES                        |
| 2633                 | 16/689,077                    | 2019-11-20                     |                          |                          | ADAPTIVE MOBILE COMMUNICATION DEVICE                                                                         |
| 2634                 | 16/689,561                    | 2019-11-20                     |                          |                          | WIRELESS ACCESS POINT CONTROL OVER CARRIER AGGREGATION (CA) THROUGH A WIRELESS REPEATER CHAIN                |
| 2635                 | 16/689,736                    | 2019-11-20                     |                          |                          | DYNAMIC ANTENNA ARRAY ROTATION                                                                               |
| 2636                 | 16/694,792                    | 2019-11-25                     |                          |                          | TRANSMISSION CONTROL PROTOCOL (TCP) CONTROL OVER RADIO COMMUNICATIONS                                        |
| 2637                 | 16/698,639                    | 2019-11-27                     |                          |                          | SECURING COMMUNICATIONS IN A NETWORK FUNCTION VIRTUALIZATION (NFV) CORE NETWORK                              |
| 2638                 | 16/703,752                    | 2019-12-04                     |                          |                          | FILE CONTROL FOR DATA PACKET ROUTERS USING CONSENSUS AND INTER-PLANETARY FILE SYSTEM (IPFS)                  |
| 2639                 | 16/707,495                    | 2019-12-09                     |                          |                          | PRIMARY COMPONENT CARRIER SELECTION IN A WIRELESS ACCESS NODE THAT USES MULTIPLE RADIO FREQUENCY BANDS       |

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| 2640          | 16/707,558             | 2019-12-09              |                   |                   | PRIMARY COMPONENT CARRIER CONTROL IN A WIRELESS ACCESS NODE THAT USES MULTIPLE RADIO FREQUENCY BANDS            |
| 2641          | 16/715,665             | 2019-12-16              |                   |                   | SYSTEM AND METHODS FOR MONITORING AND CHANGING DUAL TECHNOLOGY ANTENNA OPERATION                                |
| 2642          | 16/717,087             | 2019-12-17              |                   |                   | WIRELESS COMMUNICATION NETWORK FAULT RECOVERY USING INTEGRATED ACCESS AND BACKHAUL                              |
| 2643          | 16/719,979             | 2019-12-18              |                   |                   | POST-ACTIVATION INSTALLATION OF CUSTOM APPLICATIONS WITH SYSTEM PRIVILEGES                                      |
| 2644          | 16/721,266             | 2019-11-20              |                   |                   | ENHANCED INCOMING CALL NOTIFICATIONS                                                                            |
| 2645          | 16/723,023             | 2019-12-20              |                   |                   | WIRELESS DATA COMMUNICATION SERVICE OVER MULTIPLE FIFTH GENERATION NEW RADIO (5G NR) LAYERS                     |
| 2646          | 16/731,366             | 2019-12-31              |                   |                   | MOBILE DEVICE TRANSPARENT SCREEN OVERLAY                                                                        |
| 2647          | 16/736,072             | 2020-01-07              |                   |                   | SIMULTANEOUS WIRELESS DATA COMMUNICATION OVER FIFTH GENERATION NEW RADIO (5G NR) AND LONG TERM EVOLUTION (LTE)  |
| 2648          | 16/745,156             | 2020-01-16              |                   |                   | CONFIGURATION OF A WIRELESS NETWORK CENTRALIZED UNIT (CU) AND MULTIPLE WIRELESS NETWORK DISTRIBUTED UNITS (DUS) |
| 2649          | 16/747,950             | 2020-01-21              |                   |                   | DYNAMIC ASSIGNMENT OF WIRELESS COMMUNICATION PROTOCOL TO ANTENNA ELEMENTS OF AN ANTENNA ARRAY                   |
| 2650          | 16/776,390             | 2020-01-29              |                   |                   | AUTOMATED MOBILE APPLICATION TESTING TOOL                                                                       |

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| 2651          | 16/779,616             | 2020-02-02              |                   |                   | CELL SITE REPAIR PART PREDICTION MACHINE LEARNING SYSTEM                                                              |
| 2652          | 16/782,292             | 2020-02-05              |                   |                   | WIRELESS COMMUNICATION RELAY SERVICE OVER MULTIPLE NETWORK TRANSCEIVERS                                               |
| 2653          | 16/786,653             | 2020-02-10              |                   |                   | WIRELESS DATA SERVICE CONTROL OVER RADIO BANDS IN A WIRELESS COMMUNICATION NETWORK                                    |
| 2654          | 16/789,008             | 2020-02-12              |                   |                   | USE OF SEMANTICALLY SEGMENTED FILE NAMES                                                                              |
| 2655          | 16/793,795             | 2020-02-18              |                   |                   | WIRELESS COMMUNICATION HANDOVER RESPONSIVE TO UPLINK INTERFERENCE AT A SERVING CELL                                   |
| 2656          | 16/793,872             | 2020-02-18              |                   |                   | CONSOLIDATION OF USER PLANE AND CONTROL PLANE REPORTS IN A 5G COMMUNICATION NETWORK                                   |
| 2657          | 16/793,927             | 2020-02-18              |                   |                   | POWER MANAGEMENT OF SECONDARY NODE BASED ON NETWORK CONDITIONS                                                        |
| 2658          | 16/796,373             | 2020-02-20              |                   |                   | MOBILE PHONE PEER-TO-PEER ELECTRONIC SUBSCRIBER IDENTITY MODULE (ESIM) TRANSFER                                       |
| 2659          | 16/798,055             | 2020-02-21              |                   |                   | PHYSICAL LAYER SPLIT IN A MULTI-RADIO ACCESS TECHNOLOGY (RAT) CENTRAL UNIT (CU)                                       |
| 2660          | 16/799,400             | 2020-02-24              |                   |                   | WIRELESS COMMUNICATION TRANSMIT POWER CONTROL BASED ON HYBRID AUTOMATIC REPEAT REQUEST (HARQ) BLOCK ERROR RATE (BLER) |
| 2661          | 16/799,561             | 2020-02-24              |                   |                   | MANAGING UPLINK CONNECTIVITY IN HIGH NOISE ENVIRONMENTS                                                               |
| 2662          | 16/806,314             | 2020-03-02              |                   |                   | TRANSMISSION CONTROL PROTOCOL (TCP) BASED CONTROL OF A WIRELESS USER DEVICE                                           |
| 2663          | 16/806,896             | 2020-03-02              |                   |                   | ELECTRONIC COMMERCE FRAUD MITIGATION IN A WIRELESS                                                                    |

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|               |                        |                         |                   |                   | COMMUNICATION NETWORK                                                                    |
| 2664          | 16/809,425             | 2020-03-04              |                   |                   | MULTI-FREQUENCY DATA COMMUNICATION SERVICE OVER MULTIPLE WIRELESS ACCESS NODES           |
| 2665          | 16/810,561             | 2020-03-05              |                   |                   | DYNAMIC MODIFICATION OF USER DEVICE TRANSMIT POWER                                       |
| 2666          | 16/814,940             | 2020-03-10              |                   |                   | CROSS-CHANNEL UNIFICATION OF USER IDENTITY                                               |
| 2667          | 16/817,367             | 2020-03-12              |                   |                   | USER EQUIPMENT (UE) HAND-OVER OF A MEDIA SESSION BASED ON WIRELESS RELAY CHARACTERISTICS |
| 2668          | 16/821,937             | 2020-03-17              |                   |                   | BOOTSTRAP ELECTRONIC SUBSCRIBER IDENTITY MODULE CONFIGURATION                            |
| 2669          | 16/821,943             | 2020-03-17              |                   |                   | TRIGGERING ELECTRONIC SUBSCRIBER IDENTITY MODULE ACTIVATION                              |
| 2670          | 16/823,996             | 2020-03-19              |                   |                   | WIRELESS ACCESS NODE UPLINK POWER CONTROL BASED ON UPLINK ERROR RATE                     |
| 2671          | 16/825,510             | 2020-03-20              |                   |                   | WIRELESS MESSAGING WITH HIGH-PRIORITY QUALITY-OF-SERVICE                                 |
| 2672          | 16/830,958             | 2020-03-26              |                   |                   | SYSTEM AND METHODS FOR DYNAMIC SYNCHRONIZATION SIGNAL BLOCK PERIODICITY MODIFICATIONS    |
| 2673          | 16/838,850             | 2020-04-02              |                   |                   | LOCATION-BASED ERROR CORRECTION FOR WIRELESS DATA COMMUNICATIONS                         |
| 2674          | 16/841,388             | 2020-04-06              |                   |                   | DATABASE ARCHITECTURE FOR REDUCING THE BURDEN ON AN ON-DISK DATABASE                     |
| 2675          | 16/843,657             | 2020-04-08              |                   |                   | UPLINK BEAMFORMING BETWEEN AN AIRBORNE TRANSCEIVER AND A TERRESTRIAL TRANSCEIVER         |

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| 2676                 | 16/847,304                    | 2020-04-13                     |                          |                          | FIFTH GENERATION CORE (5GC) AUTHENTICATION FOR LONG TERM EVOLUTION (LTE) DATA SERVICE                    |
| 2677                 | 16/854,626                    | 2020-04-21                     |                          |                          | WIRELESS COMMUNICATIONS OVER MULTIPLE INPUT MULTIPLE OUTPUT (MIMO) LAYERS BASED ON BACKHAUL LINK QUALITY |
| 2678                 | 16/860,680                    | 2020-04-28                     |                          |                          | NETWORK GENERATED PRECISION TIME                                                                         |
| 2679                 | 16/860,916                    | 2020-04-28                     |                          |                          | MITIGATING AUTHENTICATION-BASED HACKING OF ACCESS RESTRICTED TELECOMMUNICATION SERVICES                  |
| 2680                 | 16/861,013                    | 2020-04-28                     |                          |                          | MITIGATING DENIAL OF SERVICE ATTACKS ON TELECOMMUNICATION SERVICES                                       |
| 2681                 | 16/865,211                    | 2020-05-01                     |                          |                          | DYNAMIC BEAM SWEEPING BASED ON NETWORK USAGE PATTERNS                                                    |
| 2682                 | 16/865,218                    | 2020-05-01                     |                          |                          | DYNAMIC BEAM SWEEPING BASED ON CONTENT USAGE                                                             |
| 2683                 | 16/869,319                    | 2020-05-07                     |                          |                          | RADIO ACCESS NETWORK (RAN) AFFILIATION LIST PROPAGATION                                                  |
| 2684                 | 16/874,426                    | 2020-05-14                     |                          |                          | SYNCHRONIZED DATA COMMUNICATIONS OVER MULTIPLE WIRELESS LINKS AND ACCESS NODES                           |
| 2685                 | 16/874,573                    | 2020-05-14                     |                          |                          | TECHNICAL LAYER FOR PORTABLE ELECTRONIC ASSISTANT                                                        |
| 2686                 | 16/874,576                    | 2020-05-14                     |                          |                          | PRESENTATION LAYER FOR PORTABLE ELECTRONIC ASSISTANT                                                     |
| 2687                 | 16/875,093                    | 2020-05-15                     |                          |                          | WIRELESS USER SIGNAL RECEPTION BASED ON MULTIPLE DIRECTIONS-OF-ARRIVAL                                   |
| 2688                 | 16/875,406                    | 2020-05-15                     |                          |                          | PUBLIC STEWARDSHIP ENTITY WIRELESS COMMUNICATION NETWORK PORTAL                                          |
| 2689                 | 16/879,461                    | 2020-05-20                     |                          |                          | WIRELESS ACCESS NODE USAGE BASED ON SECTOR POWER RATIO                                                   |

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| 2690                 | 16/880,601                    | 2020-05-21                     |                          |                          | WIRELESS USER EQUIPMENT (UE) AUTHORIZATION BASED ON THE UE TYPE AND NETWORK IDENTIFIER                |
| 2691                 | 16/880,723                    | 2020-05-21                     |                          |                          | EMBEDDED SUBSCRIBER IDENTITY MODULE (eSIM) PROFILE ADAPTATION BASED ON CONTEXT                        |
| 2692                 | 16/886,521                    | 2020-05-28                     |                          |                          | INTERNET OF THINGS (IOT) DEVICE WIRELESS COMMUNICATION SERVICE MANAGEMENT PLATFORM                    |
| 2693                 | 16/891,240                    | 2020-06-03                     |                          |                          | MITIGATION OF DENIAL OF SERVICE ATTACKS ON EMERGENCY SERVICES                                         |
| 2694                 | 16/894,392                    | 2020-06-05                     |                          |                          | CONTROL OVER MULTIPLE USER MULTIPLE INPUT MULTIPLE OUTPUT (MU-MIMO) BY DEVICE TYPE AND LOCATION       |
| 2695                 | 16/895,462                    | 2020-06-08                     |                          |                          | SYSTEMS AND METHODS FOR CONNECTING A DEVICE TO A WIRELESS TELECOMMUNICATIONS NETWORK                  |
| 2696                 | 16/895,867                    | 2020-06-08                     |                          |                          | ORDERING COMMITS OF CODE IN MULTI-BRANCH PARALLEL DEVELOPMENT PROJECTS                                |
| 2697                 | 16/897,446                    | 2020-06-10                     |                          |                          | DYNAMIC SYNCHRONIZATION SIGNAL BLOCK BEAM OPTIMIZATION                                                |
| 2698                 | 16/897,457                    | 2020-06-10                     |                          |                          | SOFTWARE PRODUCTION LOAD AND SOFTWARE TEST LOAD SYNCHRONIZATION FEEDBACK SYSTEM                       |
| 2699                 | 16/901,271                    | 2020-06-15                     |                          |                          | WIRELESS NETWORK SLICE SELECTION IN WIRELESS USER EQUIPMENT (UE)                                      |
| 2700                 | 16/905,562                    | 2020-06-18                     |                          |                          | ADAPTING WIRELESS COMMUNICATION DEVICE ANTENNA SELECTION BASED ON USER IDENTITY AND OPERATION CONTEXT |

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| 2701                 | 16/906,356                    | 2020-06-19                     |                          |                          | WIRELESS DATA SERVICE DELIVERY OVER WIRELESS REPEATERS                                               |
| 2702                 | 16/906,407                    | 2020-06-19                     |                          |                          | SYSTEMS AND METHODS TO DETERMINE A LOCATION OF A DEVICE                                              |
| 2703                 | 16/907,737                    | 2020-06-22                     |                          |                          | SYNCHRONIZING DISPARATE SOURCES OF HEALTH ACTIVITY INFORMATION                                       |
| 2704                 | 16/907,950                    | 2020-06-22                     |                          |                          | WIRELESS ACCESS NODE USAGE BASED ON MOBILE ACTIVE USERS                                              |
| 2705                 | 16/911,167                    | 2020-06-24                     |                          |                          | WIRELESS GUARANTEED BIT RATE (GBR)                                                                   |
| 2706                 | 16/913,929                    | 2020-06-26                     |                          |                          | PROVISIONING A VOICEMAIL PLATFORM                                                                    |
| 2707                 | 16/914,568                    | 2020-06-29                     |                          |                          | DATA GATEWAY SELECTION FOR WIRELESS USER EQUIPMENT (UE) HANDOVER                                     |
| 2708                 | 16/924,557                    | 2020-07-09                     |                          |                          | OPTIMIZING EN-DC ANCHOR SELECTION IN A MULTI-BAND AND MULTI-ANCHOR NETWORK                           |
| 2709                 | 16/925,676                    | 2020-07-10                     |                          |                          | DYNAMIC ASSIGNMENT OF USERS IN A DUAL-CONNECTIVITY NETWORK USING SECTOR POWER RATIO                  |
| 2710                 | 16/926,060                    | 2020-07-10                     |                          |                          | WIRELESS ACCESS NODE USAGE BASED ON PACKET DROP RATE                                                 |
| 2711                 | 16/926,329                    | 2020-07-10                     |                          |                          | DYNAMIC MODIFICATION OF BEAMFORMING WEIGHTS                                                          |
| 2712                 | 16/928,702                    | 2020-07-14                     |                          |                          | WIRELESS DATA COMMUNICATION SERVICE OVER MULTIPLE UPLINKS                                            |
| 2713                 | 16/929,993                    | 2020-07-15                     |                          |                          | SYSTEM AND METHOD OF ACCESS POINT NAME (APN) DYNAMIC MAPPING                                         |
| 2714                 | 16/932,209                    | 2020-07-17                     |                          |                          | INTERNET OF THINGS COMMUNICATION SERVICE                                                             |
| 2715                 | 16/932,446                    | 2020-07-17                     |                          |                          | SYSTEM AND METHOD FOR INTRA-CELL BEAM SWITCHING BASED ON CONFIGURABLE PHYSICAL LAYER EVENT DETECTION |

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| 2716                 | 16/933,989                    | 2020-07-20                     |                          |                          | ELECTRONIC SUBSCRIBER IDENTITY MODULE (eSIM) TRANSFER FROM INACTIVE DEVICE                                           |
| 2717                 | 16/938,349                    | 2020-07-24                     |                          |                          | SYSTEM FOR INTEREXCHANGE OF STATE DATA AMONG DISPARATE BLOCK CHAINS                                                  |
| 2718                 | 16/940,184                    | 2020-07-27                     |                          |                          | WIRELESS USER DEVICE HANDOVERS BASED ON QUALITY-OF-SERVICE                                                           |
| 2719                 | 16/940,309                    | 2020-07-27                     |                          |                          | AUTOMATION FAILURE DIAGNOSTIC TOOL                                                                                   |
| 2720                 | 16/941,408                    | 2020-07-28                     |                          |                          | COMMUNICATION HUB FOR INFORMATION TECHNOLOGY (IT) SERVICES                                                           |
| 2721                 | 16/942,527                    | 2020-07-29                     |                          |                          | MAINTAINING ELECTRONIC SUBSCRIBER IDENTITY MODULE (eSIM) PROFILES ACROSS MULTIPLE MOBILE NETWORK OPERATORS (MNOs)    |
| 2722                 | 16/943,306                    | 2020-07-30                     |                          |                          | MULTI-USER MULTIPLE INPUT MULTIPLE OUTPUT (MU-MIMO) USER EQUIPMENT (UE) GROUPING WITH GEOGRAPHIC CORRELATION FACTORS |
| 2723                 | 16/950,849                    | 2020-11-17                     |                          |                          | MULTI-ACTIVE ELECTRONIC SUBSCRIBER IDENTITY MODULE PROFILES FOR MULTI-SERVICE USER EQUIPMENT                         |
| 2724                 | 16/951,527                    | 2020-11-18                     |                          |                          | DYNAMIC ANTENNA 5G NR SYNCHRONIZATION SIGNAL BLOCK BEAM DEACTIVATION                                                 |
| 2725                 | 16/983,120                    | 2020-08-03                     |                          |                          | ENHANCED ERROR HANDLING                                                                                              |
| 2726                 | 16/987,280                    | 2020-08-06                     |                          |                          | HYPERLEDGER AUTHORIZATION INTO A RADIO ACCESS NETWORK (RAN)                                                          |
| 2727                 | 16/988,885                    | 2020-08-10                     |                          |                          | WIRELESS COMMUNICATION HANDOVER CONTROL BASED ON USER EQUIPMENT (UE) THROUGHPUT                                      |

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| 2728          | 16/989,548             | 2020-08-10              |                   |                   | INTEGRATED TEST ENVIRONMENT AVAILABILITY SYSTEM AND METHODS                       |
| 2729          | 16/990,563             | 2020-08-11              |                   |                   | WIRELESS COMMUNICATION THROUGH A PHYSICAL BARRIER USING BEAMFORMING POWER CONTROL |
| 2730          | 16/990,592             | 2020-08-11              |                   |                   | ANTENNA SPR AS A BASIS TO DYNAMICALLY CAP THE MCS INDEX ON 5G NR                  |
| 2731          | 16/994,210             | 2020-08-14              |                   |                   | SYSTEM AND METHODS FOR OVER-THE-AIR SIM PROFILE TRANSFER                          |
| 2732          | 16/999,898             | 2020-08-21              |                   |                   | LOAD BALANCING WIRELESS ACCESS NODE USAGE BASED ON ACTIVE USERS                   |
| 2733          | 17/003,003             | 2020-08-26              |                   |                   | SYSTEM AND METHODS FOR PREVENTING UNAUTHORIZED REPLAY OF A SOFTWARE CONTAINER     |
| 2734          | 17/004,480             | 2020-08-27              |                   |                   | WIRELESS ACCESS NETWORK ELEMENT STATUS REPORTING                                  |
| 2735          | 17/006,209             | 2020-08-28              |                   |                   | REFERENCE SIGNAL ENHANCEMENT IN A WIRELESS COMMUNICATION NETWORK                  |
| 2736          | 17/009,604             | 2020-09-01              |                   |                   | 5G NETWORK EXPOSURE FUNCTION (NEF) CAPTURING PROCESSOR IDENTITY                   |
| 2737          | 17/014,304             | 2020-09-08              |                   |                   | MULTIPLE INPUT MULTIPLE OUTPUT (MIMO) LAYER CONTROL FOR WIRELESS USER EQUIPMENT   |
| 2738          | 17/015,886             | 2020-09-09              |                   |                   | DUPLICATE MESSAGE MANAGEMENT                                                      |
| 2739          | 17/017,161             | 2020-09-10              |                   |                   | MEASUREMENT TIME PERIOD BASED ON LOCATION RADIO METRIC VARIANCE                   |
| 2740          | 17/018,569             | 2020-09-11              |                   |                   | DUAL CONNECTIVITY (DC) POWER CONTROL                                              |
| 2741          | 17/020,266             | 2020-09-14              |                   |                   | WIRELESS ACCESS POINT ASSISTANCE TO WIRELESS USER DEVICES FOR WIRELESS            |

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|                      |                               |                                |                          |                          | COMMUNICATION NETWORK SELECTION                                                                                                                                         |
| 2742                 | 17/023,347                    | 2020-09-16                     |                          |                          | ELECTRONIC SUBSCRIBER IDENTITY MODULE (eSIM) PROFILE DELIVERY AND ACTIVATION SYSTEM AND METHODS                                                                         |
| 2743                 | 17/023,352                    | 2020-09-16                     |                          |                          | ELECTRONIC SUBSCRIBER IDENTITY MODULE (eSIM) PROFILE PROVISIONING                                                                                                       |
| 2744                 | 17/023,749                    | 2020-09-17                     |                          |                          | REQUESTING UPGRADED QUALITY OF SERVICE (QOS) DELIVERED VIA TEMPORARY SPECTRUM ALLOCATION                                                                                |
| 2745                 | 17/024,484                    | 2020-09-17                     |                          |                          | RFID DEVICE WITH TWO-STAGE POWER HARVESTING                                                                                                                             |
| 2746                 | 17/025,891                    | 2020-09-18                     |                          |                          | DRX CONTROL FOR WIRELESS USER EQUIPMENT                                                                                                                                 |
| 2747                 | 17/028,122                    | 2020-09-22                     |                          |                          | A SYSTEM AND METHOD FOR PROVISIONING A COMMUNICATION NETWORK TO PERFORM ELECTRONIC SURVEILLANCE                                                                         |
| 2748                 | 17/030,184                    | 2020-09-23                     |                          |                          | DYNAMIC CHANNEL SIZING IN A WIRELESS COMMUNICATION NETWORK                                                                                                              |
| 2749                 | 17/031,748                    | 2020-09-24                     |                          |                          | VNF SLICE PORTABILITY                                                                                                                                                   |
| 2750                 | 17/036,570                    | 2020-09-29                     |                          |                          | SPR AS A CRITERION TO DETERMINE THE FREQUENCIES THAT WOULD BE ALLOCATED FOR INTER-BAND CARRIER AGGREGATION, INTRA-BAND CARRIER AGGREGATION, OR DYNAMIC SPECTRUM SHARING |
| 2751                 | 17/061,083                    | 2020-10-01                     |                          |                          | DYNAMIC ENABLEMENT OF USER SPECIFIC FEATURES IN A DUAL CONNECTIVITY NETWORK                                                                                             |
| 2752                 | 17/063,446                    | 2020-10-05                     |                          |                          | COMMUNICATION NETWORK EDGE COMPUTING AUTHORIZATION                                                                                                                      |

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| 2753          | 17/063,490             | 2020-10-05              |                   |                   | WIRELESS COMMUNICATION NETWORK ACCESS USING DIFFERENT FUNCTIONALITY SPLITS FOR DIFFERENT COMMUNICATION SERVICES |
| 2754          | 17/066,775             | 2020-10-09              |                   |                   | WIRELESS RELAY SLICES IN A WIRELESS COMMUNICATION NETWORK                                                       |
| 2755          | 17/066,920             | 2020-10-09              |                   |                   | ADDITION THRESHOLDS FOR WIRELESS ACCESS NODES BASED ON FREQUENCY CHANNEL SIZE                                   |
| 2756          | 17/068,353             | 2020-10-12              |                   |                   | WIRELESS DISCONTINUOUS RECEPTION (DRX) BASED ON USER EQUIPMENT (UE) SUBSCRIBER DATA                             |
| 2757          | 17/071,286             | 2020-10-15              |                   |                   | ADDITION THRESHOLDS FOR WIRELESS ACCESS NODES BASED ON CELL SITE DENSITY                                        |
| 2758          | 17/074,581             | 2020-10-19              |                   |                   | FIFTH GENERATION (5G) EDGE APPLICATION AUTHENTICATION                                                           |
| 2759          | 17/075,361             | 2020-10-20              |                   |                   | DYNAMIC ANCHOR ASSIGNMENT USING SECTOR POWER RADIO                                                              |
| 2760          | 17/075,647             | 2020-10-20              |                   |                   | TRUSTED BACKUP OF COMPUTER INCLUDING OPERATING SYSTEM, FIRMWARE AND ESSENTIAL DATA                              |
| 2761          | 17/076,120             | 2020-10-21              |                   |                   | ADDITION THRESHOLDS FOR WIRELESS ACCESS NODES BASED ON INSERTION LOSS                                           |
| 2762          | 17/076,389             | 2020-10-21              |                   |                   | SERVICE RECORD TRACKER NETWORK FUNCTION                                                                         |
| 2763          | 17/076,570             | 2020-10-21              |                   |                   | SYSTEM AND METHODS FOR AN AUTOMATED CORE DUMP TO A JAVA HEAD DUMP CONVERSION                                    |
| 2764          | 17/079,163             | 2020-10-23              |                   |                   | SYSTEM AND METHOD OF INTERFACING MULTIPLE PLATFORMS TO GENERATE A CUSTOMIZED GRAPHICAL USER INTERFACE           |
| 2765          | 17/080,554             | 2020-10-26              |                   |                   | TRUSTED 5G NETWORK FUNCTION VIRTUALIZATION OF VIRTUAL NETWORK FUNCTION ELEMENTS                                 |

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|               |                        |                         |                   |                   | EMBEDDED ON A SYSTEM-ON-CHIP                                                                          |
| 2766          | 17/081,813             | 2020-10-27              |                   |                   | SUBSCRIBER IDENTIFICATION MODULE (SIM) AUTHENTICATION PROTECTIONS                                     |
| 2767          | 17/081,828             | 2020-10-27              |                   |                   | METHODS FOR DELIVERING NETWORK SLICES TO A USER                                                       |
| 2768          | 17/083,038             | 2020-10-28              |                   |                   | ELECTRONIC SUBSCRIBER IDENTITY MODULE (ESIM) MANAGEMENT PLATFORM                                      |
| 2769          | 17/083,052             | 2020-10-28              |                   |                   | DYNAMIC RADIO RESOURCE PROVISIONING BASED ON NETWORK CAPABILITY PARAMETER                             |
| 2770          | 17/085,253             | 2020-10-30              |                   |                   | WIRELESS DATA SERVICE USING DYNAMIC DATA RATES BASED ON SERVING RADIO BANDS AND HISTORICAL DATA RATES |
| 2771          | 17/089,420             | 2020-11-04              |                   |                   | WIRELESS DATA SERVICE BASED ON GEOGRAPHIC DATA NETWORK NAMES                                          |
| 2772          | 17/089,647             | 2020-11-04              |                   |                   | SMART DEVICE PROVISIONING                                                                             |
| 2773          | 17/090,759             | 2020-11-05              |                   |                   | REMOTE MONITORING AND ASSESSMENT OF OPERATING SYSTEM PARAMETERS                                       |
| 2774          | 17/090,763             | 2020-11-05              |                   |                   | SMART COMPUTING DEVICE IMPLEMENTING NETWORK SECURITY AND DATA ARBITRATION                             |
| 2775          | 17/091,888             | 2020-11-06              |                   |                   | DUAL CONNECTIVITY (DC) POWER CONTROL                                                                  |
| 2776          | 17/092,527             | 2020-11-09              |                   |                   | UTILIZING SPR TO MANAGE USER DEVICES SERVED BY MU-MIMO GROUPS                                         |
| 2777          | 17/099,704             | 2020-11-16              |                   |                   | ROLLING PRODUCTION TEST                                                                               |
| 2778          | 17/100,681             | 2020-11-20              |                   |                   | SMART COMPUTING DEVICE IMPLEMENTING ARTIFICIAL INTELLIGENCE ELECTRONIC ASSISTANT                      |

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| 2779                 | 17/101,695                    | 2020-11-23                     |                          |                          | DYNAMIC MODIFICATION OF ANTENNA BEAMFORMING FUNCTIONALITY                                                 |
| 2780                 | 17/102,627                    | 2020-11-24                     |                          |                          | ACTIVATION COMMUNICATION ADDRESSES OF INTERNET OF THINGS DEVICES                                          |
| 2781                 | 17/102,897                    | 2020-11-24                     |                          |                          | DATA COMMUNICATION TARGET CONTROL WITH CONTACT TOKENS                                                     |
| 2782                 | 17/102,949                    | 2020-11-24                     |                          |                          | HANDOVER BASED ON WIRELESS USER EQUIPMENT (UE) CAPABILITIES                                               |
| 2783                 | 17/107,590                    | 2020-11-30                     |                          |                          | SMART DEVICE SPECTRUM ASSIGNMENT                                                                          |
| 2784                 | 17/115,267                    | 2020-12-08                     |                          |                          | SYSTEMS AND METHODS FOR LIMITING DEVICE TRANSMIT POWER                                                    |
| 2785                 | 17/115,596                    | 2020-12-08                     |                          |                          | MULTI-TIER IDENTITIES IN AN RFID CHIP                                                                     |
| 2786                 | 17/122,118                    | 2020-12-15                     |                          |                          | WIRELESS COMMUNICATION NETWORK HANDOVERS OF WIRELESS USER EQUIPMENT THAT EXECUTE LOW-LATENCY APPLICATIONS |
| 2787                 | 17/125,676                    | 2020-12-17                     |                          |                          | AVOIDING OR CORRECTING INTER-CELL INTERFERENCE BASED ON AN AZIMUTHAL MODIFICATION                         |
| 2788                 | 17/127,703                    | 2020-12-18                     |                          |                          | TOOL FOR MANAGEMENT OF A POOL OF AUTHORIZATIONS TO USE SOFTWARE                                           |
| 2789                 | 17/138,650                    | 2020-12-30                     |                          |                          | SECURE DATA ANALYTICS SAMPLING WITHIN A 5G VIRTUAL SLICE                                                  |
| 2790                 | 17/140,991                    | 2021-01-04                     |                          |                          | METHOD OF BUILDING AND SEARCHING A MULTI-DIMENSIONAL CROSS-LINKED DISTRIBUTED LEDGER                      |
| 2791                 | 17/143,471                    | 2021-01-07                     |                          |                          | UPLINK DATA BURST IN A WIRELESS COMMUNICATION NETWORK                                                     |

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| 2792          | 17/146,644             | 2021-01-12              |                   |                   | USER EQUIPMENT (UE) ROAMING BASED ON NETWORK PERFORMANCE                                                                    |
| 2793          | 17/147,421             | 2021-01-12              |                   |                   | DATA PRIVACY PROTECTION SYSTEM AND METHOD                                                                                   |
| 2794          | 17/147,853             | 2021-01-13              |                   |                   | SYSTEM AND METHOD OF DETECTING END-OF-LIFE OF INTERNET OF THINGS (IOT) DEVICE AND CLOSING ASSOCIATED BLOCK CHAIN            |
| 2795          | 17/148,983             | 2021-01-14              |                   |                   | TOWER MOUNTED AMPLIFIER (TMA) CONTROL BASED ON USER EQUIPMENT (UE) CONCENTRATION                                            |
| 2796          | 17/149,440             | 2021-01-14              |                   |                   | TRUST ZONE HOSTED SECURE SCREEN MODE FOR DISCRETIONARY PRESENTATION OF SENSITIVE CORPORATE INFORMATION TO TRUSTED ENDPOINTS |
| 2797          | 17/150,744             | 2021-01-15              |                   |                   | DETERMINING RADIO SIGNAL METRICS FOR SPECIFIED RESOURCE BLOCKS                                                              |
| 2798          | 17/151,826             | 2021-01-19              |                   |                   | NETWORK-ASSISTED CHARGING PRIORITIZATION FOR CELLULAR UNMANNED AERIAL VEHICLES                                              |
| 2799          | 17/151,872             | 2021-01-19              |                   |                   | WIRELESS COMMUNICATION NETWORK EXPOSURE FUNCTION (NEF) THAT INDICATES NETWORK STATUS                                        |
| 2800          | 17/151,894             | 2021-01-19              |                   |                   | WIRELESS ACCESS NODE FAULT RECOVERY USING INTEGRATED ACCESS AND BACKHAUL                                                    |
| 2801          | 17/153,308             | 2021-01-20              |                   |                   | HANDOVER CONTROL IN A WIRELESS USER EQUIPMENT (UE)                                                                          |
| 2802          | 17/154,494             | 2021-01-21              |                   |                   | WIRELESS COMMUNICATION SERVICE DELIVERY RESPONSIVE TO USER EQUIPMENT (UE) HANDOVERS                                         |
| 2803          | 17/154,908             | 2021-01-21              |                   |                   | SLICING POLICY FOR USER EQUIPMENT                                                                                           |

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| 2804          | 17/155,904             | 2021-01-22              |                   |                   | USER EQUIPMENT (UE) HANDOVER BASED ON AN ACTIVE MEDIA SESSION                                                |
| 2805          | 17/157,425             | 2021-01-25              |                   |                   | DYNAMICALLY DETECTING AND CORRECTING THE DEACTIVATION OF BEAMFORMING                                         |
| 2806          | 17/160,715             | 2021-01-28              |                   |                   | USER CHARGING OVER AN EXPOSURE FUNCTION IN A WIRELESS COMMUNICATION NETWORK                                  |
| 2807          | 17/161,415             | 2021-01-28              |                   |                   | BATTERY COUPLED RADIO FREQUENCY IDENTITY (RFID)                                                              |
| 2808          | 17/161,924             | 2021-01-29              |                   |                   | MEDIA CONTENT SERVICE DELIVERY IN A WIRELESS COMMUNICATION NETWORK                                           |
| 2809          | 17/166,127             | 2021-02-03              |                   |                   | WIRELESS COMMUNICATION NETWORK OPTIMIZATION FOR USER APPLICATIONS IN WIRELESS USER EQUIPMENT (UE)            |
| 2810          | 17/166,363             | 2021-02-03              |                   |                   | WIRELESS NETWORK ACCESS FOR DATA APPLIANCES                                                                  |
| 2811          | 17/166,458             | 2021-02-03              |                   |                   | DOMAIN NAME SYSTEM (DNS) TRANSLATIONS FOR CO-LOCATED GATEWAY USER PLANES IN WIRELESS COMMUNICATIONS NETWORKS |
| 2812          | 17/166,858             | 2021-02-03              |                   |                   | WIRELESS COMMUNICATION SERVICE DELIVERY USING MULTIPLE DATA NETWORK NAMES (DNNs)                             |
| 2813          | 60/158,262             | 1999-10-07              |                   |                   | METHOD AND APPARATUS FOR ACCESSING A DATABASE                                                                |
| 2814          | 60/226,789             | 2000-08-21              |                   |                   | SYSTEM AND METHOD FOR THE AUTOMATED TESTING OF A TELECOMMUNICATIONS SYSTEM                                   |
| 2815          | 60/241,048             | 2000-10-17              |                   |                   | BROADBAND WIRELESS COMMUNICATION SYSTEM                                                                      |
| 2816          | 60/254,419             | 2000-12-08              |                   |                   | METHOD OF TUNING HANDOFF NEIGHBOR LISTS                                                                      |

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| 2817                 | 60/271,834                    | 2001-02-27                     |                          |                          | WIRELESS COMMUNICATION SYSTEM INCLUDING OMNI-DIRECTIONAL TRANSMITTER AND DIRECTIONAL RECEIVER                   |
| 2818                 | 60/271,842                    | 2001-02-27                     |                          |                          | DESIGNING ANTENNA SYSTEMS                                                                                       |
| 2819                 | 60/340,046                    | 2001-11-30                     |                          |                          | METHOD AND SYSTEM FOR PROVISIONING SERVERS                                                                      |
| 2820                 | 60/404,788                    | 2002-08-19                     |                          |                          | TELECOM PROVISIONING WORKFLOW MODELS                                                                            |
| 2821                 | 60/404,824                    | 2002-08-19                     |                          |                          | ENTERPRISE ARCHITECTURE DEVELOPMENT PROCESS                                                                     |
| 2822                 | 60/410,036                    | 2002-09-12                     |                          |                          | WebCall2                                                                                                        |
| 2823                 | 60/483,388                    | 2003-06-27                     |                          |                          | INTERFACE AND METHOD FOR EXTENDING A TARGET APPLICATION OVER AN INSTANT MESSAGE LINK OF A COMMUNICATION NETWORK |
| 2824                 | 60/526,157                    | 2003-12-02                     |                          |                          | SYSTEM AND METHOD FOR PACKET-BASED VOICE TELEPHONY FOR USE IN RECEIVING CALLS DURING DIAL-UP INTERNET SESSIONS  |
| 2825                 | 60/566,663                    | 2004-04-30                     |                          |                          | METHOD AND SYSTEM FOR DETERMINING WHEN TO TRIGGER AN ALARM EVENT IN A COMMUNICATIONS NETWORKING ENVIRONMENT     |
| 2826                 | 60/566,886                    | 2004-04-30                     |                          |                          | METHOD AND SYSTEM FOR AUTOMATICALLY GENERATING NETWORK TROUBLE TICKETS                                          |
| 2827                 | 60/566,906                    | 2004-04-30                     |                          |                          | METHOD AND SYSTEM FOR DETERMINING ROOT CAUSES OF COMMUNICATIONS NETWORK ALARMS                                  |
| 2828                 | 60/566,907                    | 2004-04-30                     |                          |                          | METHOD AND SYSTEM FOR MANAGING ALARMS IN A COMMUNICATIONS NETWORK                                               |

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|---------------|------------------------|-------------------------|-------------------|-------------------|--------------------------------------------------------------------------------------------|
| 2829          | 60/567,079             | 2004-04-30              |                   |                   | METHOD AND SYSTEM FOR AUTOMATICALLY RECOGNIZING ALARM PATTERNS IN A COMMUNICATIONS NETWORK |
| 2830          | 60/567,242             | 2004-04-30              |                   |                   | METHOD AND SYSTEM FOR DEDUPLICATING STATUS INDICATIONS IN A COMMUNICATIONS NETWORK         |
| 2831          | 60/567,243             | 2004-04-30              |                   |                   | METHOD AND SYSTEM FOR DISPLAYING STATUS INDICATIONS FROM COMMUNICATIONS NETWORK            |
| 2832          | 60/567,391             | 2004-04-30              |                   |                   | METHOD AND SYSTEM FOR SELECTIVELY DISPLAYING ALARMS IN A COMMUNICATIONS NETWORK            |
| 2833          | 60/604,731             | 2004-08-26              |                   |                   | SYSTEM, METHOD AND APPARATUS FOR DELIVERING A PHOTO CAPTURED DURING A VOICE CALL           |
| 2834          | 60/604,778             | 2004-08-26              |                   |                   | METHOD AND SYSTEM FOR DELIVERING PHOTOS TO CALLED DESTINATIONS                             |
| 2835          | 60/604,794             | 2004-08-26              |                   |                   | SYSTEM, METHOD AND APPARATUS FOR AUTOMATIC TRANSMISSION OF RECENTLY CAPTURED IMAGES        |
| 2836          | 60/675,291             | 2005-04-27              |                   |                   | METHOD, SYSTEM AND APPARATUS FOR ESTIMATING VOICE QUALITY IN A VOICE OVER PACKET NETWORK   |
| 2837          | 60/675,722             | 2005-04-28              |                   |                   | SPRINT ITV SERVICES                                                                        |
| 2838          | 60/676,594             | 2005-04-29              |                   |                   | MODULAR CELL SITE WITH AIR-TURBINE BACKUP                                                  |
| 2839          | 60/685,916             | 2005-05-31              |                   |                   | MESSAGE NOTIFICATION VIA TELEVISION                                                        |
| 2840          | 60/696,369             | 2005-07-02              |                   |                   | IN-SITU PMD MONITORING USING COHERENT DETECTION                                            |

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|---------------|------------------------|-------------------------|-------------------|-------------------|------------------------------------------------------------------------------------|
| 2841          | 60/764,995             | 2006-02-03              |                   |                   | OPPORTUNISTIC DATA TRANSFER OVER HETEROGENEOUS WIRELESS NETWORKS                   |
| 2842          | 60/794,784             | 2006-04-24              |                   |                   | SYSTEMS AND METHODS OF CONFIGURATION MANAGEMENT FOR ENTERPRISE SOFTWARE            |
| 2843          | 60/853,306             | 2006-09-29              |                   |                   | MULTIDOMAIN, INTERCARRIER NETWORK-TO-NETWORK INTERFACE                             |
| 2844          | 60/853,307             | 2006-09-29              |                   |                   | CASCADING NETWORK LOGIN                                                            |
| 2845          | 60/864,340             | 2006-11-03              |                   |                   | MULTIDOMAIN, INTERCARRIER NETWORK-TO-NETWORK INTERFACE AND CASCADING NETWORK LOGIN |
| 2846          | 61/040,149             | 2008-03-28              |                   |                   | OPERATING A MOBILE COMMUNICATIONS DEVICE                                           |
| 2847          | 61/263,193             | 2009-11-20              |                   |                   | MANAGING SUBSCRIPTION MESSAGES ON BEHALF OF A MOBILE DEVICE                        |
| 2848          | 61/353,706             | 2010-06-11              |                   |                   | CALLING TYPE IDENTIFICATION SYSTEM                                                 |
| 2849          | 61/371,988             | 2010-08-09              |                   |                   | CRADLE FOR EXTENDING DATA CAPABILITIES TO A WIRELESS DEVICE                        |
| 2850          | 61/383,477             | 2010-09-16              |                   |                   | BROADBAND WIRELESS ROUTER                                                          |
| 2851          | 61/450,910             | 2011-03-09              |                   |                   | STATISTICAL METHOD FOR DETERMINING THE LOCATION OF A MOBILE DEVICE                 |
| 2852          | 61/534,635             | 2011-09-14              |                   |                   | TEMPORAL AND SPATIAL METHODS FOR ANONYMIZING CELL PHONE LOCATION DATA              |
| 2853          | 61/693,250             | 2012-08-25              |                   |                   | REAL-TIME BROKERING OF DIGITAL CONTENT DELIVERY                                    |
| 2854          | 61/910,001             | 2013-11-27              |                   |                   | SWIPE SCREEN ADVERTISEMENT METRICS AND TRACKING                                    |
| 2855          | 61/910,002             | 2013-11-27              |                   |                   | WIPE SCREEN ADS METHOD AND IMPLEMENTATION AND COLLECTIVE CONTRIBUTION              |

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|               |                        |                         |                   |                   | GATHERING AND REPORTING |
|               |                        |                         |                   |                   |                         |