PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7515356

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

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| POLTE CORPORATION | 08/25/2022 |

RECEIVING PARTY DATA

| Name: | QUALCOMM TECHNOLOGIES, INC. |
|-----------------|-----------------------------|
| Street Address: | 5775 MOREHOUSE DRIVE |
| City: | SAN DIEGO |
| State/Country: | CALIFORNIA |
| Postal Code: | 92121 |

PROPERTY NUMBERS Total: 59

| Property Type | Number |
|---------------------|----------|
| Application Number: | 60449702 |
| Patent Number: | 7822424 |
| Application Number: | 10785742 |
| Patent Number: | 7787886 |
| Patent Number: | 8423042 |
| Patent Number: | 8886223 |
| Application Number: | 60661994 |
| Patent Number: | 7423580 |
| Patent Number: | 7760132 |
| Application Number: | 60597649 |
| Patent Number: | 7561048 |
| Application Number: | 61103270 |
| Patent Number: | 7872583 |
| Patent Number: | 7969311 |
| Patent Number: | 8305215 |
| Patent Number: | 8648722 |
| Patent Number: | 9507007 |
| Application Number: | 61744828 |
| Patent Number: | 9288623 |
| Patent Number: | 9699607 |
| | |

PATENT REEL: 061362 FRAME: 0242

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| Property Type | Number |
|---------------------|----------|
| Patent Number: | 9955301 |
| Patent Number: | 10506376 |
| Patent Number: | 10834531 |
| Patent Number: | 11012811 |
| Application Number: | 62068537 |
| Patent Number: | 9913244 |
| Patent Number: | 10117218 |
| Application Number: | 16152826 |
| Application Number: | 62032371 |
| Patent Number: | 10281557 |
| Application Number: | 15595702 |
| Patent Number: | 11131744 |
| Application Number: | 16389827 |
| Patent Number: | 11125850 |
| Application Number: | 62578340 |
| Patent Number: | 10863313 |
| Patent Number: | 11395105 |
| Application Number: | 17837944 |
| Patent Number: | 11388554 |
| Patent Number: | 10873830 |
| Patent Number: | 11375341 |
| Application Number: | 62648883 |
| Application Number: | 62653450 |
| Patent Number: | 10845453 |
| Patent Number: | 11255945 |
| Application Number: | 17592377 |
| Application Number: | 61514839 |
| Application Number: | 61554945 |
| Application Number: | 61618472 |
| Application Number: | 61662270 |
| Application Number: | 61736458 |
| Application Number: | 62290087 |
| Application Number: | 62239195 |
| Patent Number: | 9813867 |
| Patent Number: | 10091616 |
| Patent Number: | 10433111 |
| Patent Number: | 10440512 |
| Patent Number: | 11070942 |

| Property Type | Number | |
|---------------------|----------|--|
| Application Number: | 17342398 | |

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 8588456445

Email: tracta@gualcomm.com

Correspondent Name: QUALCOMM INCORPORATED
Address Line 1: 5775 MOREHOUSE DRIVE

Address Line 4: SAN DIEGO, CALIFORNIA 92121

| NAME OF SUBMITTER: | TRACY TA |
|--------------------|------------|
| SIGNATURE: | /TRACY TA/ |
| DATE SIGNED: | 08/31/2022 |

Total Attachments: 20

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PATENT ASSIGNMENT

This PATENT ASSIGNMENT (the "Assignment") is made and entered into effective as of August 25, 2022, by and between Qualcomm Technologies, Inc., a Delaware corporation with its principal office at 5775 Morehouse Dr., San Diego, CA 92121 ("Assignee"), and PoLTE Corporation, a Delaware corporation with its principal office at 15301 Dallas Parkway, Suite 125, Addison, TX 75001 ("Assignor"). Capitalized terms used but not defined herein have the meanings ascribed to them in the Asset Purchase Agreement (defined below).

RECITALS

WHEREAS, Assignor, Assignee and Fortis Advisors LLC, a Delaware limited liability company, solely in its capacity as the representative, agent, and attorney-in-fact for and on behalf of Seller and Seller Stockholders (as defined in the Asset Purchase Agreement), are parties to that certain Asset Purchase Agreement, dated as of the date hereof (the "Asset Purchase Agreement"), pursuant to which Assignor has agreed to, among other things, sell, assign, transfer, convey and deliver to Assignee all of Assignor's right, title, and interest in, to and under the Assigned Patents for consideration and upon the terms and conditions set forth in the Asset Purchase Agreement.

AGREEMENT

NOW, THEREFORE, pursuant to the Asset Purchase Agreement, and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree to be legally bound as follows:

- 1. <u>Assigned Patents.</u> "Assigned Patents" means the Patents listed on <u>Exhibit A</u> hereto.
- 2. <u>Conveyance.</u> Subject to the terms and conditions of the Asset Purchase Agreement, Assignor hereby sells, assigns, transfers, conveys and delivers to Assignee all of Assignor's right, title and interest to the Assigned Patents in and throughout the United States of America, its territories and all foreign countries, together with all patents issuing therefrom, all inventions and improvements claimed or described in any of the foregoing, all rights to collect royalties, products and proceeds in connection with any of the foregoing, all rights to claim priority to the foregoing under international treaties and conventions, and all rights to sue and bring other claims for past, present and future infringement, misappropriation or other violation of any of the foregoing and all rights to recover damages (including attorney's fees and expenses), lost profits or other remedies (including injunctive relief) in connection therewith.
- 3. Recordation. Assignor hereby requests the United States Patent and Trademark Office Commissioner for Patents and any other applicable governmental entity or registrar (including any applicable foreign or international office or registrar) to record Assignee as the assignee and owner of the Assigned Patents. Assignor further authorizes the respective patent office or governmental agency in each other jurisdiction to issue any and all patents or certificates of invention which may be granted upon any of the Assigned Patents in the name of Assignee, as the assignee to the entire interest therein.
 - 4. Information and Assistance.

- 4.1 Upon Assignee's reasonable request and without further compensation, Assignor shall execute, acknowledge and deliver all such other instruments and documents and shall take all such other actions reasonably necessary or required by law to consummate and make fully effective the transaction contemplated by this Assignment.
- 4.2 If Assignee is unable for any reason to secure Assignor's signature to any document required to file, prosecute, register or memorialize the assignment of any rights under any Assigned Patents as provided under this Assignment, Assignor hereby irrevocably designates and appoints Assignee and Assignee's duly authorized officers and agents as Assignor's agents and attorneys-in-fact to act for and on Assignor's behalf and instead of Assignor to take all lawfully permitted acts to further the filing, prosecution, registration, memorialization of assignment, issuance and enforcement of rights under such Assigned Patents, all with the same legal force and effect as if executed by Assignor. The foregoing is deemed a power coupled with an interest and is irrevocable.
- 5. <u>Conflicts</u>. This Assignment is executed and provided pursuant to the Asset Purchase Agreement, to which reference is made for a further statement of the rights and obligations of Assignors and Assignee with respect to the Assigned Patents. Nothing contained in this Assignment shall change, amend, extend, or alter the terms or conditions of the Asset Purchase Agreement in any manner whatsoever. In the event of any conflict or other difference between the Asset Purchase Agreement and this Assignment, the provisions of the Asset Purchase Agreement shall control.
- 6. <u>Successors and Assigns</u>. This Assignment and all the provisions hereof shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and permitted assigns, and nothing herein express or implied shall give, or be construed to give, to any Person, other than the parties hereto and their respective successors and permitted assigns, any legal or equitable rights hereunder.
- 7. <u>Amendment and Waiver</u>. No modification, waiver or termination of this Assignment shall be binding unless executed in writing by each of the parties hereto. No waiver of any of the provisions of this Assignment shall be deemed or shall constitute a waiver of any other provision hereof, nor shall such waiver constitute a continuing waiver unless otherwise expressly provided.
- 8. Governing Law. This Assignment shall be governed by and construed in accordance with the internal laws of the State of Delaware applicable to parties residing in Delaware, without regard to applicable principles of conflicts of law. Each of the parties hereto irrevocably consents to the exclusive jurisdiction of any court located within Wilmington, Delaware, in connection with any matter based upon or arising out of this Assignment or the matters contemplated hereby, and it agrees that process may be served upon it in any manner authorized by the laws of the State of Delaware for such Persons and waives and covenants not to assert or plead any objection which it might otherwise have to such jurisdiction and such process. Each of the parties hereto irrevocably waives any and all rights to trial by jury in any Legal Proceeding (whether at law, in contract, in tort or otherwise) arising out of or related to this Assignment.

- 9. <u>Counterparts</u>. This Assignment may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.
- 10. <u>Headings</u>. The section headings contained in this Assignment are for reference purposes only and shall not in any way affect the meaning or interpretation of this Assignment.

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IN WITNESS WHEREOF, Assignor and Assignee have caused this Patent Assignment to be executed and delivered by each of them or their respective officers thereunto duly authorized, all as of the date first written above.

ASSIGNEE:

QUALCOMM TECHNOLOGIES, INC.

By: Duare d. Alles III

Name: Duane Nelles III

Title: SVP, Corporate Development

[SIGNATURE PAGE TO PATENT ASSIGNMENT]

IN WITNESS WHEREOF, Assignor and Assignee have caused this Patent Assignment to be executed and delivered by each of them or their respective officers thereunto duly authorized, all as of the date first written above.

ASSIGNOR:

PoLTE Corporation

CEO, POLITE

By:

Name: Title:

NOTARIAL CERTIFICATE

| UNITED STATES OF AMERICA) | |
|--|---|
| STATE OF Texas :ss.: | |
| CITY/COUNTY OF Collin | |
| that Edward Chao, as, a per large the foregoing Assignment of the day of the content of the foregoing Assignment of the foregoing Assi | rsigned Notary Public do hereby certify |
| A LEGY, a DEGY, who signed the foregoing Assignm | ent document, was authorized on the nent document on behalf of and to |
| me acknowledged that he/she did sign the said document | nt. |
| | |
| | |

EXHIBIT A

Assigned Patents

[See attached.]

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EXHIBIT A

Assigned Patents

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------|-------------|---------------|---|-----------------------|------------|-------------------|--------------------|
| 7328 | US | Expired | Method and system for determining the location of stationary or mobile subjects | 60/449,702 | 2/23/2003 | | |
| 101604. 000003 | US | Granted | Method and system for rangefinding using RFID and virtual triangulation | 10/806,242 | 3/24/2004 | 7822424 | 10/26/2010 |
| | US | Abandon ed | | 10/785,742 | 2/24/2003 | | |
| 101604. 000002 | US | Granted | System and method for locating a target using RFID | 10/786,144 | 2/24/2004 | 7787886 | 8/31/2010 |
| 101604. 000005 | US | Granted | Method and system for positional finding using RF, continuous and/or combined movement | 11/532,946 | 9/19/2006 | 8423042 | 4/16/2013 |
| 101604. 000031 | US | Granted | Method and system for positional finding using RF, continuous and/or combined movement | 13/792,875 | 3/11/2013 | 8886223 | 11/11/2014 |
| P1013U S00 | US | Expired | Method and system of three- dimensional positional finding | 60/661,994 | 3/14/2005 | | |
| 101604. 000004 | US | Granted | Method and system of three- dimensional positional finding | 11/375,161 | 3/14/2006 | 7423580 | 9/9/2008 |
| 101604. 000010 | US | Granted | Method and system of three- dimensional positional finding | 12/185,767 | 8/4/2008 | 7760132 | 7/20/2010 |
| 2437.00 50000 | US | Expired | Methods and system for reduced attenuation in tracking objects using multi- band RF technology | 60/597,649 | 12/15/2005 | | |
| 101604. 000006 | US | Granted | Methods and system for reduced attenuation in tracking objects using RF technology | 11/610,595 | 12/14/2006 | 7561048 | 7/14/2009 |
| 2437.00 5PC01 | WO | Expired | Methods and system for reduced attenuation in tracking objects using RF technology | PCT/US2006 /062133 | 12/15/2006 | WO20071364 19 | 10/09/2008 |
| | EP | Refused | Methods and system for reduced attenuation in | 06851205.2 | 12/15/2006 | EP1960977 | 8/27/2008 |

272368368 y7

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------------|-------------|---------|--|-----------------------|------------|-------------------|--------------------|
| | | | tracking objects using RF technology | | | | |
| | JР | Refused | Methods and system for reduced attenuation in tracking objects using RF technology | 2008-545984 | 12/15/2006 | 2009-520193 | 5/21/2009 |
| | JP | Refused | Methods and system for reduced attenuation in tracking objects using RF technology | 2013-153034 | 7/23/2013 | 2014-013240 | 1/23/2014 |
| | JP | Refused | Methods and system for reduced attenuation in tracking objects using RF technology | 2016-007362 | 1/18/2016 | .2016-105102 | 6/09/2016 |
| | JР | Refused | Methods and system for reduced attenuation in tracking objects using RF technology | 2018-005670 | 1/17/2018 | 2018-081109 | 5/24/2018 |
| 101604. 000023 | KR | Granted | Methods and system for reduced attenuation in tracking objects using RF technology | 10-2008- 7017249 | 12/15/2006 | 10-1305386 | 9/2/2013 |
| 101604. 000025 | US | Expired | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | 61/103,270 | 10/7/2008 | | |
| 101604. 000011 | US | Granted | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | 12/502,809 | 7/14/2009 | 7872583 | 1/18/2011 |
| 300067- 00002P CT | WO | Expired | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | PCT/US2009 /059472 | 10/5/2009 | WO20101349 33 | 11/25/2010 |
| 101604. 000016 | EP | Granted | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | 09845044.8 | 10/5/2009 | EP2347280 | 6/14/2017 |
| 101604. 000080 | DE | Granted | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | 60200904666 3.1 | 10/5/2009 | EP2347280 | 6/14/2017 |

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| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------|-------------|---------|--|---------------------|------------|----------------------|--------------------|
| 101604, 000079 | FR | Granted | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | 09845044.8 | 10/5/2009 | EP2347280 | 6/14/2017 |
| 101604. 000081 | GB | Granted | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | 09845044.8 | 10/5/2009 | EP2347280 | 6/14/2017 |
| 101604, 000017 | НК | Granted | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | 12100764.0 | 10/5/2009 | HK1160224 | 7/27/2018 |
| 101604. 000019 | KR | Granted | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | 10-2011- 7008061 | 10/5/2009 | 10-1728921 | 4/14/2017 |
| 101604. 000018 | Ъ | Granted | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | 2011-530285 | 10/5/2009 | 5631320 | 10/17/2014 |
| 101604. 000015 | CN | Granted | Methods and system for multi-path mitigation in tracking objects using reduced attenuation RF technology | 20098013910 3,3 | 10/5/2009 | ZL200980139 103.3 | 10/30/2013 |
| 101604. 000012 | US | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 13/008,519 | 1/18/2011 | 7969311 | 6/28/2011 |
| 101604. 000013 | US | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 13/109,904 | 5/17/2011 | 8305215 | 11/6/2012 |
| 101604. 000026 | US | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 13/630,134 | 9/28/2012 | 8648722 | 2/11/2014 |
| 101604, 000027 | US | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 13/566,993 | 8/3/2012 | 9507007 | 11/29/2016 |
| ISTR- 0029 | US | Expired | Multi-path mitigation in rangefinding and tracking | 61/744.828 | 10/3/2012 | | |

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------|-------------|---------------|---|-----------------------|------------|-------------------|--------------------|
| | | | objects using reduced attenuation RF technology | | | | |
| 101604. 000033 | US | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 14/043,785 | 10/1/2013 | 9288623 | 3/15/2016 |
| 101604. 000039 | US | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 14/105.098 | 12/12/2013 | 9699607 | 7/4/2017 |
| 101604. 000046 | WO | Expired | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | PCT/US2014 /070184 | 12/12/2014 | WO20151163 22 | 12/23/2015 |
| 101604. 000058 | US | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 15/017,327 | 2/5/2016 | 9955301 | 4/24/2018 |
| 101604. 000100 | US | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 15/908,488 | 2/28/2018 | 10506376 | 12/10/2019 |
| 101604. 000108 | US | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 16/517,133 | 7/19/2019 | 10834531 | 11/10/2020 |
| 101604. 000124 | US | Granted | Multi-path mitigation in tracking objects using a distributed antenna system | 16/782,870 | 2/5/2020 | 11012811 | 5/18/2021 |
| 101604. 000045 | US | Expired | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 62/068,537 | 10/24/2014 | | |
| 101604. 000059 | US | Granted | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 14/923,299 | 10/26/2015 | 9913244 | 3/6/2018 |
| 101604. 000074 | US | Granted | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 15/442,277 | 2/24/2017 | 10117218 | 10/30/2018 |
| | US | Abandon ed | Methods And Systems For UE Positional Finding Using RF | 16/152,826 | 10/5/2018 | | |

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------|-------------|---------|---|-----------------------|------------|----------------------|--------------------|
| 101604. 000044 | US | Expired | Partially synchronized multilateration/trilateration method and system for positional finding using RF | 62/032,371 | 8/1/2014 | | |
| 101604. 000054 | WO | Expired | Partially synchronized multilateration/trilateration method and system for positional finding using RF | PCT/US2015 /043321 | 7/31/2015 | WO20160193 54 | 2/04/2016 |
| 101604. 000067 | CN | Granted | Partially synchronized multilateration/trilateration method and system for positional finding using RF | 20158005307 2.5 | 7/31/2015 | ZL201580053 072.5 | 12/4/2020 |
| 101604. 000094 | НК | Granted | Partially synchronized multilateration/trilateration method and system for positional finding using RF | 18100106.1 | 7/31/2015 | HK1240742 | 6/18/2021 |
| 101604. 800078 | KR | Granted | Partially synchronized multilateration/trilateration method and system for positional finding using RF | 10-2017- 7005271 | 7/31/2015 | 10-2166578 | 10/12/2020 |
| 101604. 000069 | JР | Granted | Partially synchronized multilateration/trilateration method and system for positional finding using RF | 2017-505477 | 7/31/2015 | 6557849 | 7/26/2019 |
| 101604. 000068 | EP | Pending | Partially synchronized multilateration/trilateration method and system for positional finding using RF | 15827815.0 | 7/31/2015 | EP3175668 | 6/07/2017 |
| | JP | Refused | Partially synchronized multilateration/trilateration method and system for positional finding using RF | 2019-110504 | 6/13/2019 | 2019-194607 | 11/07/2019 |
| 101604. 000156 | JP | Pending | Partially synchronized multilateration/trilateration method and system for positional finding using RF | 2021-160815 | 9/30/2021 | 2022-008675 | 1/13/2022 |
| 101604. 000071 | US | Granted | Partially synchronized multilateration/trilateration method and system for positional finding using RF | 15/501,169 | 2/1/2017 | 10281557 | 5/7/2019 |
| 101604. 000073 | US | Pending | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 15/595.702 | 5/15/2017 | 20170248678 | 8/31/2017 |
| 101604. 000097 | US | Granted | Partially synchronized multilateration or | 15/900,654 | 2/20/2018 | 11131744 | 9/28/2021 |

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| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------|-------------|---------|---|-----------------------|------------|-------------------|--------------------|
| | | | trilateration method and system for positional finding using RF | | | | |
| 101604. 000116 | US | Pending | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 16/389,827 | 4/19/2019 | 20190242967 | 8/08/2019 |
| 101604. 000122 | US | Granted | Systems and methods for determining a timing offset of emitter antennas in a wireless network | 16/734,205 | 1/3/2020 | 11125850 | 9/21/2021 |
| 101604. 000083 | US | Expired | Network architecture and methods for location services | 62/578,340 | 10/27/2017 | | |
| 101604. 000110 | US | Granted | Network architecture and methods for location services | 16/164,724 | 10/18/2018 | 10863313 | 12/8/2020 |
| 101604. 000115 | WO | Expired | Network architecture and methods for location services | PCT/US2019 /024415 | 3/27/2019 | WO20191913 18 | 10/03/2019 |
| 101604. 000140 | JР | Pending | Network architecture and methods for location services | 2020-551851 | 3/27/2019 | 2021-519422 | 8/10/2021 |
| 101604. 000139 | EP | Pending | Network architecture and methods for location services | 19776168.7 | 3/27/2019 | EP3759510 | 1/06/2021 |
| 101604. 000143 | CN | Pending | Network architecture and methods for location services | 20198003543 8.4 | 3/27/2019 | CN112368589 | 2/12/2021 |
| 101604. 000152 | НК | Pending | Network architecture and methods for location services | 62021031032 .7 | 3/27/2019 | HK40042706 | 9/3/2021 |
| 101604. 000141 | US | Granted | Network architecture and methods for location services | 17/090,397 | 11/5/2020 | 11,395,105 | 7/19/2022 |
| 101604. 000161 | US | Pending | Network architecture and methods for location services | 17/837,944 | 6/10/2022 | | |
| 101604. 000145 | US | Granted | Network architecture and methods for location services | 17/090,486 | 11/5/2020 | 11,388,554 | 7/12/2022 |
| 101604. 000113 | US | Granted | Network architecture and methods for location services | 16/398,121 | 4/29/2019 | 10873830 | 12/22/2020 |
| 101604 000142 | US | Granted | Network architecture and | 17/090,247 | 11/5/2020 | 11,375,341 | 6/28/2022 |

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------|-------------|---------|---|--------------------|------------|----------------------|--------------------|
| | | | methods for location | | | | |
| | | | services | | | | |
| 101604. 000095 | US | Expired | Network architecture and methods for location services | 62/648,883 | 3/27/2018 | | |
| 101604. 000105 | US | Expired | Network architecture and methods for location services | 62/653,450 | 4/5/2018 | | |
| 101604, 000114 | US | Granted | Network architecture and methods for location services | 16/367,014 | 3/27/2019 | 10845453 | 11/24/2020 |
| 101604. | US | Granted | Multi-path mitigation in | 16/791,898 | 2/14/2020 | 11255945 | 2/22/2022 |
| 000123 | | | tracking objects using compressed RF data | | | | |
| 101604. 000159 | US | Pending | Multi-path mitigation in tracking objects using compressed RF data | 17/592,377 | 2/3/2022 | 20220155405 | 5/19/2022 |
| ISTR- 0020 | US | Expired | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 61/514,839 | 8/3/2011 | | |
| ISTR- 0021 | US | Expired | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 61/554,945 | 11/2/2011 | | |
| ISTR- 0022 | US | Expired | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 61/618,472 | 3/30/2012 | | |
| ISTR- 0024 | US | Expired | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 61/662,270 | 6/20/2012 | | |
| 101604. | WO | Expired | Multi-path mitigation in | PCT/US2012 | 8/3/2012 | WO20130201 | 7/04/2013 |
| 000028 | | | rangefinding and tracking objects using reduced | /049664 | | 22 | |
| | | | attenuation RF technology | | | | |
| 101604. 000040 | CN | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 20128004859 2.3 | 8/3/2012 | ZL201280048 592.3 | 11/7/2017 |
| 101604. 000041 | EP | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced | 12819568.2 | 8/3/2012 | EP2739986 | 1/10/2018 |
| 101604. 000086 | DE | Granted | attenuation RF technology Multi-path mitigation in rangefinding and tracking | 60201204200 6.5 | 8/3/2012 | EP2739986 | 1/10/2018 |

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------|-------------|---------|---|---------------------|------------|-------------------|--------------------|
| | | | objects using reduced attenuation RF technology | | | | |
| 101604. 000085 | FR | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 12819568.2 | 8/3/2012 | EP2739986 | 1/10/2018 |
| 101604. 000087 | GB | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 12819568.2 | 8/3/2012 | EP2739986 | 1/10/2018 |
| 101604. 000063 | EP | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 16173140.1 | 6/6/2016 | EP3091367 | 10/9/2019 |
| 101604. 000128 | DE | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 60201206482 8.7 | 6/6/2016 | EP3091367 | 10/9/2019 |
| 101604. 000127 | FR | Granted | Multi-path mutigation in rangefinding and tracking objects using reduced attenuation RF technology | 16173140.1 | 6/6/2016 | EP3091367 | 10/9/2019 |
| 101604. 000129 | GB | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 16173140.1 | 6/6/2016 | EP3091367 | 10/9/2019 |
| 101604. 000042 | JP | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 2014-524146 | 8/3/2012 | 6166260 | 6/30/2017 |
| | JP | Refused | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 2017-002166 | 1/10/2017 | 2017-096970 | 6/01/2017 |
| 101604. 000112 | JP | Refused | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 2018-240732 | 12/25/2018 | 2019-060899 | 4/18/2019 |
| 101604. 000148 | JР | Pending | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 2021-110036 | 7/1/2021 | 2021-165748 | 10/14/2021 |
| 101604. 000043 | KR | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 10-2014- 7005459 | 8/3/2012 | 10-1876784 | 7/4/2018 |
| 101604. | KR | Granted | Multi-path mitigation in | 10-2017- | 8/2/2017 | 10-1995213 | 6/26/2019 |

272368368 y7

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------|-------------|---------|---|-----------------------|------------|----------------------|--------------------|
| 000082 | | | rangefinding and tracking objects using reduced attenuation RF technology | 7021654 | | | |
| 101604. 000030 | US | Expired | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 61/736,458 | 12/12/2012 | | |
| 101604. 000038 | WO | Expired | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | PCT/US2013 /074212 | 12/10/2013 | WO20140934 00 | 6/19/2014 |
| 101604. 000047 | CN | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 20138007083 0.5 | 12/10/2013 | ZL201380070 830.5 | 1/14/2020 |
| 101604. 000133 | HK | Pending | Method for determining location of user equipment in wireless system | 42020009624 .6 | 10/12/2013 | HK40019562 | 10/16/2020 |
| 101604. 000125 | CN | Pending | Method for determining location of user equipment in wireless system | 20191088121 2.8 | 4/14/2020 | CN110895326 | 3/20/2020 |
| | JP | Refused | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 2015-547479 | 12/10/2013 | 2016-508217 | 3/17/2016 |
| 101604. 000089 | JP | Refused | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 2018-009883 | 1/24/2018 | 2018-100973 | 6/28/2018 |
| | JP | Refused | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 2019-188328 | 10/15/2019 | 2020-076751 | 5/21/2020 |
| 101604. 000154 | JР | Pending | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 2021-119707 | 7/20/2021 | 2021-180512 | 11/18/2021 |
| 101604. 000050 | KR | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 10-2015- 7018677 | 12/10/2013 | 10-2278860 | 7/13/2021 |
| 101604. 000048 | EP | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 13863113.0 | 12/10/2013 | EP2932740 | 4/29/2020 |
| 101604. 000052 | DE | Granted | Multi-path mitigation in rangefinding and tracking | 60201306855 9.2 | 12/10/2013 | EP2932740 | 4/29/2020 |

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
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| | | | objects using reduced attenuation RF technology | | | | |
| 101604. 000051 | FR | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 13863113.0 | 12/10/2013 | EP2932740 | 4/29/2020 |
| 101604. 000053 | GB | Granted | Multi-path mitigation in rangefinding and tracking objects using reduced attenuation RF technology | 13863113.0 | 12/10/2013 | EP2932740 | 4/29/2020 |
| 101604. 000060 | WO | Expired | Partially synchronized multilateration or trilateration method and system for positional finding using RF | PCT/US2015 /057418 | 10/26/2015 | WO20160653 68 | 4/28/2016 |
| 101604, 000075 | CN | Granted | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 20158007116 0.8 | 10/26/2015 | ZL201580071 160.8 | 10/13/2020 |
| 101604. 000099 | НК | Granted | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 18106291.3 | 10/26/2015 | HK1246856 | 3/26/2021 |
| 101604. 000088 | CN | Granted | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 20171095482 7.X | 4/6/2018 | ZL201710954 827.X | 7/13/2021 |
| 101604. 000107 | HK | Granted | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 18106299.5 | 10/26/2015 | HK1246857 | 11/19/2021 |
| 101604. 000078 | KR | Granted | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 10-2017- 7013881 | 10/26/2015 | 10-2145095 | 8/10/2020 |
| 101604, 000092 | KR | Granted | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 10-2018- 7000024 | 1/2/2018 | 10-2166575 | 10/12/2020 |
| 101604. 000077 | JP | Granted | Partially synchronized multilateration or trilateration method and | 2017-522391 | 10/26/2015 | 6697451 | 4/28/2020 |

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------|--------------|---------------|--|-----------------------|------------|----------------------|--------------------|
| | ************ | | system for positional finding using RF | | | | |
| | JP | Refused | Partially synchronized multilateration or trilateration method and system for positional finding | 2018-026810 | 2/19/2018 | 2018-109639 | 7/12/2018 |
| | | | using RF | | | | |
| | EP | Withdra wn | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 15853177.2 | 10/26/2015 | EP3210040 | 8/30/2017 |
| 101604. 000090 | EP | Pending | Partially synchronized multilateration or trilateration method and system for positional finding using RF | 18157335.3 | 1/14/2019 | EP3349032 | 7/18/2018 |
| 101604, 000061 | US | Expired | Angle of arrival (AOA) positioning method and system for positional finding and tracking objects using reduced attenuation RF technology | 62/290,087 | 2/2/2016 | | |
| 101604. 000057 | US | Expired | Angle of arrival (AOA) positioning method and system for positional finding and tracking objects using reduced attenuation RF technology | 62/239,195 | 10/8/2015 | | |
| 101604. 000066 | WO | Expired | Angle of arrival positioning system for tracking objects | PCT/US2016 /056173 | 10/7/2016 | WO20170629 02 | 4/13/2017 |
| 101604. 000101 | CN | Granted | Angle of arrival positioning system for tracking objects | 20168006674 2.1 | 10/7/2016 | ZL201680066 742.1 | 11/5/2021 |
| 101604. 000111 | HK | Granted | Angle of arrival positioning system for tracking objects | 18113403.4 | 10/7/2016 | HK1254259 | 3/18/2022 |
| | CN | Withdra wn | Angle of arrival positioning system for tracking objects | 20191097392 7.6 | 10/7/2016 | CN110794366 | 2/14/2020 |
| 101604. 000157 | CN | Pending | Angle of arrival positioning system for tracking objects | 20211121185 4.0 | 2/8/2022 | CN113949990 | 1/18/2022 |
| 101604. 000102 | EP | Granted | Angle of arrival positioning system for tracking objects | 16854515.0 | 10/7/2016 | EP3360201 | 7/7/2021 |
| 101604. 000150 | DE | Granted | Angle of arrival positioning system for tracking objects | 60201606043 1.0 | 10/7/2016 | EP3360201 | 7/7/2021 |
| 101604. 000149 | FR | Granted | Angle of arrival positioning system for tracking objects | 16854515.0 | 10/7/2016 | EP3360201 | 7/7/2021 |
| 101604. 000151 | GB | Granted | Angle of arrival positioning | 16854515.0 | 10/7/2016 | EP3360201 | 7/7/2021 |

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
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| ************* | | | system for tracking objects | | | | |
| | EP | Withdra wn | Angle of arrival positioning system for tracking objects | 19198079.6 | 8/18/2019 | EP3609021 | 2/12/2020 |
| 101604. 000104 | KR | Granted | Angle of arrival positioning system for tracking objects | 10-2018- 7012179 | 10/7/2016 | 10-1993211 | 6/20/2019 |
| | KR | Rejected | Angle of arrival positioning system for tracking objects | 10-2019- 7017736 | 6/20/2019 | 10-2019- 0075167 | 6/28/2019 |
| | JP | Refused | Angle of arrival positioning system for tracking objects | 2018-517754 | 10/7/2016 | 2018-538515 | 12/27/2018 |
| | JP | Refused | Angle of arrival positioning system for tracking objects | 2019-166403 | 9/12/2019 | 2020-020801 | 2/06/2020 |
| 101604. 000126 | JP | Granted | Angle of arrival positioning system for tracking objects | 2019-166405 | 9/12/2019 | 6970720 | 11/2/2021 |
| 101604. 000158 | JP | Pending | Angle of arrival positioning system for tracking objects | 2021-177402 | 10/29/2021 | 2022-023944 | 2/08/2022 |
| 101604. 000065 | US | Granted | Angle of arrival (AOA) positioning method and system for positional finding and tracking objects using reduced attenuation RF technology | 15/289,033 | 10/7/2016 | 9813867 | 11/7/2017 |
| 101604, 900084 | US | Granted | Angle of arrival (AOA) positioning method and system for positional finding and tracking objects using reduced attenuation RF technology | 15/728,424 | 10/9/2017 | 10091616 | 10/2/2018 |
| 101604. 000109 | US | Granted | Angle of arrival (AOA) positioning method and system for positional finding and tracking objects using reduced attenuation RF technology | 16/137,435 | 9/20/2018 | 10433111 | 10/1/2019 |
| 101604. 000106 | US | Granted | Angle of arrival (AOA) positioning method and system for positional finding and tracking objects using reduced attenuation RF technology | 16/137,417 | 9/20/2018 | 10440512 | 10/8/2019 |
| 101604. 000130 | US | Granted | Angle of arrival (AOA) positioning method and system for positional finding and tracking objects using reduced attenuation RF technology | 16/592,183 | 10/3/2019 | 11070942 | 7/20/2021 |
| 101604. 000153 | US | Pending | Angle of arrival (AOA) positioning method and | 17/342,398 | 6/8/2021 | 20210306800 | 9/30/2021 |

| File No. | Cou ntry | Status | Title | App. No. | Filed Date | Pub./Grant No. | Pub./Grant Date |
|-------------------|-------------|----------|---|----------|------------|-------------------|--------------------|
| | | | system for positional finding and tracking objects using reduced attenuation RF technology | | | | |
| 101604. 000160 | US | Docketed | Systems And Methods For Utilizing Rf Fingerprints For Location Verification | | | | |

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272368368 v7

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