

TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM555674

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
Parallel Wireless, Inc.		12/20/2019	Corporation: DELAWARE

RECEIVING PARTY DATA

Name:	Venture Lending & Leasing IX, Inc.
Street Address:	104 La Mesa Drive, Suite 102
City:	Portola Valley
State/Country:	CALIFORNIA
Postal Code:	94028
Entity Type:	Corporation: MARYLAND
Name:	Venture Lending & Leasing VIII, Inc.
Street Address:	104 La Mesa Drive, Suite 102
City:	Portola Valley
State/Country:	CALIFORNIA
Postal Code:	94028
Entity Type:	Corporation: MARYLAND

PROPERTY NUMBERS Total: 23

Property Type	Number	Word Mark
Registration Number:	4573333	PARALLEL WIRELESS
Registration Number:	4590063	LMLTE
Registration Number:	4744465	BYOC
Registration Number:	4832579	P
Registration Number:	5022996	PARALLEL WIRELESS HETNET SERVICES CLOUD
Registration Number:	4914400	UNI-MANAGE EMS
Registration Number:	5015420	PARALLEL WIRELESS
Registration Number:	5106713	CONVERGED WIRELESS SYSTEM
Registration Number:	4923518	UNI-MANAGE
Registration Number:	3047186	RAINHA
Registration Number:	1248887	CHOOSE-A-CHAIN
Registration Number:	5083877	HETNET SERVICES CLOUD
Registration Number:	5056404	HETNET GATEWAY

OP \$590.00 4573333

Property Type	Number	Word Mark
Registration Number:	5277022	CWS
Registration Number:	1046816	PILLAR
Registration Number:	1302609	'33'
Registration Number:	1323793	OVER THE TOP
Serial Number:	86903595	PARALLEL WIRELESS
Serial Number:	87640948	BHM
Serial Number:	88337537	ALL G
Serial Number:	88411438	5G STARTS HERE
Serial Number:	88539835	PARALLEL WIRELESS
Serial Number:	88578830	REIMAGINE YOUR NETWORK

CORRESPONDENCE DATA

Fax Number: 4157774961

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: 415 981 1400

Email: nsust@greeneradovsky.com

Correspondent Name: JEFFREY T. KLUGMAN

Address Line 1: 1 FRONT STREET

Address Line 2: SUITE 3200

Address Line 4: SAN FRANCISCO, CALIFORNIA 94111

NAME OF SUBMITTER: JEFFREY T. KLUGMAN

SIGNATURE: /JEFFREY T. KLUGMAN/

DATE SIGNED: 01/02/2020

Total Attachments: 22

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INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement (this "Agreement") is made as of December 20, 2019, between PARALLEL WIRELESS, INC., a Delaware corporation ("Grantor"), and VENTURE LENDING & LEASING VIII, INC. ("VLL8") and VENTURE LENDING & LEASING IX, INC. ("VLL9"), both Maryland corporations (sometimes referred to herein individually and together as "Secured Party").

RECITALS

A. Pursuant to that certain Loan and Security Agreement of even date herewith between Grantor, as borrower, and Secured Party, as lender (as amended, restated, supplemented or otherwise modified from time to time, the "Loan Agreement"), Secured Party has agreed to make certain advances of money and to extend certain financial accommodations to Grantor (the "Loans") in the amounts and manner set forth in the Loan Agreement. All capitalized terms used herein without definition shall have the meanings ascribed to them in the Loan Agreement.

B. Secured Party is willing to make the Loans to Grantor, but only upon the condition, among others, that Grantor shall grant to Secured Party a security interest in substantially all of Grantor's personal property whether presently existing or hereafter acquired. To that end, Grantor has executed in favor of Secured Party the Loan Agreement granting a security interest in all Collateral, and is executing this Agreement with respect to certain items of Intellectual Property, in particular.

NOW, THEREFORE, THE PARTIES HERETO AGREE AS FOLLOWS:

I. Grant of Security Interest. As collateral security for the prompt and complete payment and performance of all of Grantor's present or future Obligations, Grantor hereby grants a security interest and mortgage to Secured Party, as security, in and to Grantor's entire right, title and interest in, to and under the following Intellectual Property, now owned or hereafter acquired by Grantor or in which Grantor now holds or hereafter acquires any interest (all of which shall collectively be called the "Collateral" for purposes of this Agreement):

(a) Any and all copyrights, whether registered or unregistered, held pursuant to the laws of the United States, any State thereof or of any other country; all registrations, applications and recordings in the United States Copyright Office or in any similar office or agency of the United States, and State thereof or any other country; all continuations, renewals, or extensions thereof; and any registrations to be issued under any pending applications, including without limitation those set forth on Exhibit A attached hereto (collectively, the "Copyrights");

(b) All letters patent of, or rights corresponding thereto in, the United States or any other country, all registrations and recordings thereof, and all applications for letters patent of, or rights corresponding thereto in, the United States or any other country, including, without limitation, registrations, recordings and applications in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof or any other country; all reissues, continuations, continuations-in-part or extensions thereof; all petty patents, divisionals, and patents of addition; and all patents to be issued under any such applications, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the "Patents");

(c) All trademarks, trade names, corporate names, business names, trade styles, service marks, logos, other source or business identifiers, prints and labels on which any of the foregoing have appeared or appear, designs and general intangibles of like nature, now existing or hereafter adopted or acquired, all registrations and recordings thereof, and any applications in connection therewith, including, without limitation, registrations, recordings and applications in the United States Patent and Trademark Office or in any similar office or agency of the United States, any State thereof or any other country or any political subdivision thereof, and reissues,

extensions or renewals thereof, and the entire goodwill of the business of Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the "Trademarks");

(d) Any and all claims for damages by way of past, present and future infringement of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(e) All licenses or other rights to use any of the Copyrights, Patents or Trademarks, and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(f) All amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents; and

(g) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

Notwithstanding the foregoing the term "Collateral" shall not include: (a) "intent-to-use" trademarks at all times prior to the first use thereof, whether by the actual use thereof in commerce, the recording of a statement of use with the United States Patent and Trademark Office or otherwise, but only to the extent the granting of a security interest in such "intent to use" trademarks would be contrary to applicable law or (b) any contract, instrument or chattel paper in which Grantor has any right, title or interest if and to the extent such contract, instrument or chattel paper includes a provision containing a restriction on assignment such that the creation of a security interest in the right, title or interest of Grantor therein would be prohibited and would, in and of itself, cause or result in a default thereunder enabling another person party to such contract, instrument or chattel paper to enforce any remedy with respect thereto; provided, however, that the foregoing exclusion shall not apply if (i) such prohibition has been waived or such other person has otherwise consented to the creation hereunder of a security interest in such contract, instrument or chattel paper, or (ii) such prohibition would be rendered ineffective pursuant to Sections 9-407(a) or 9-408(a) of the UCC, as applicable and as then in effect in any relevant jurisdiction, or any other applicable law (including the Bankruptcy Code or principles of equity); provided further that immediately upon the ineffectiveness, lapse or termination of any such provision, the term "Collateral" shall include, and Grantor shall be deemed to have granted a security interest in, all its rights, title and interests in and to such contract, instrument or chattel paper as if such provision had never been in effect; and provided further that the foregoing exclusion shall in no way be construed so as to limit, impair or otherwise affect Secured Party's unconditional continuing security interest in and to all rights, title and interests of Grantor in or to any payment obligations or other rights to receive monies due or to become due under any such contract, instrument or chattel paper and in any such monies and other proceeds of such contract, instrument or chattel paper.

2. Covenants and Warranties. Grantor represents, warrants, covenants and agrees as follows:

(a) Grantor has rights (as defined in the UCC) in the Collateral, except for Permitted Liens;

(b) During the term of this Agreement, Grantor will not transfer or otherwise encumber any interest in the Collateral, except for Permitted Liens and except for transfers otherwise permitted under the Loan Agreement;

(c) To its knowledge, each of the material Patents is valid and enforceable, and no material part of the Collateral has been judged invalid or unenforceable, in whole or in part, and no claim has been made that any material part of the Collateral violates the rights of any third party;

(d) Grantor shall deliver to Secured Party within thirty (30) days of the last day of each fiscal quarter, a report signed by Grantor, in form reasonably acceptable to Secured Party, listing (i) any

applications or registrations that Grantor has made or filed in respect of any patents, copyrights or trademarks, (ii) the status of any outstanding applications or registrations and (iii) any material change in the composition of the Collateral;

(e) Grantor shall use reasonable commercial efforts to (i) protect, defend and maintain the validity and enforceability of the Trademarks, Patents and Copyrights material to Grantor's business, (ii) detect infringements of the Trademarks, Patents and Copyrights material to Grantor's business and promptly advise Secured Party in writing of material infringements detected, and (iii) not allow any material Trademarks, Patents or Copyrights material to Grantor's business to be abandoned, forfeited or dedicated to the public unless Grantor deems it to be in the best interest of Grantor's business;

(f) Grantor shall apply for registration (to the extent registerable and not already registered) with the United States Patent and Trademark Office or the United States Copyright Office, as applicable: (i) those intellectual property rights listed on Exhibits A, B and C hereto within thirty (30) days of the date of this Agreement; and (ii) those additional intellectual property rights developed or acquired by Grantor from time to time in connection with any product or service, prior to the sale or licensing of such product or the rendering of such service to any third party (including without limitation revisions or additions to the intellectual property rights listed on such Exhibits A, B and C), except, in each case, with respect to such rights that Grantor determines in its sole but reasonable commercial judgment need not be registered to protect its own business interests. Grantor shall, from time to time, execute and file such other instruments, and take such further actions as Secured Party may reasonably request from time to time to perfect or continue the perfection of Secured Party's interest in the Collateral; and

(g) Grantor shall not enter into any agreement that would materially impair or conflict with Grantor's obligations hereunder without Secured Party's prior written consent, which consent shall not be unreasonably withheld or delayed. Grantor shall not permit the inclusion in any material contract to which it becomes a party of any provisions that would prevent the creation of a security interest in Grantor's rights and interests in any property included within the definition of the Collateral acquired under such contracts, except for provisions in such material contracts as are referenced in the last paragraph of Section 1 of this Agreement.

3. Further Assurances; Attorney in Fact.

(a) On a continuing basis, Grantor will make, execute, acknowledge and deliver, and file and record in the proper filing and recording places in the United States, all such instruments, including appropriate financing and continuation statements and collateral agreements and filings with the United States Patent and Trademark Office and the Register of Copyrights, and take all such action as may reasonably be deemed necessary or advisable, or as reasonably requested by Secured Party, to perfect Secured Party's security interest in all Copyrights, Patents and Trademarks and otherwise to carry out the intent and purposes of this Agreement, or for assuring and confirming to Secured Party the grant or perfection of a security interest in all Collateral.

(b) Grantor hereby irrevocably appoints Secured Party as Grantor's attorney-in-fact, with full authority in the place and stead of Grantor and in the name of Grantor, from time to time in Secured Party's discretion, to take any action and to execute any instrument which Secured Party may deem necessary or advisable to accomplish the purposes of this Agreement, including (i) to modify, in its sole discretion, this Agreement without first obtaining Grantor's approval of or signature to such modification by amending Exhibits A, B and C, hereof, as appropriate, to include reference to any right, title or interest in any Copyrights, Patents or Trademarks acquired by Grantor after the execution hereof or to delete any reference to any right, title or interest in any Copyrights, Patents or Trademarks in which Grantor no longer has or claims any right, title or interest, (ii) to file, in its sole discretion, one or more financing or continuation statements and amendments thereto, relative to any of the Collateral without the signature of Grantor where permitted by law, and (iii) subject to the Forbearance Period, after the occurrence and during the continuance of an Event of Default, to transfer the Collateral into the name of Secured Party or a third party to the extent permitted under the California Uniform Commercial Code.

4. Events of Default. The occurrence of any of the following shall constitute an Event of Default under this Agreement:

(a) An Event of Default under the Loan Agreement; or

(b) Grantor breaches in any material respect any warranty or agreement made by Grantor in this Agreement and, as to any breach that is capable of cure, Grantor fails to cure such breach within thirty (30) days of the sooner to occur of Grantor's receipt of notice of such breach from Secured Party or the date on which such breach first becomes known to a responsible officer of Grantor.

5. Amendments. This Agreement may be amended only by a written instrument signed by both parties hereto, except for amendments permitted under Section 3 hereof to be made by Secured Party alone.

6. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute the same instrument.

7. Several Nature of Secured Party's Obligations and Rights; Pari Passu Security Interests. This Agreement is and shall be interpreted for all purposes as separate and distinct agreements between Grantor and VLL8, on the one hand, and Grantor and VLL9, on the other hand, and nothing in this Agreement shall be deemed a joint venture, partnership or other association between VLL8 and VLL9. Each reference in this Agreement to "Secured Party" shall mean and refer to each of VLL8 and VLL9, singly and independent of one another. Without limiting the generality of the foregoing, the covenants and other obligations of "Secured Party" under this Agreement are several and not joint obligations of VLL8 and VLL9, and all rights and remedies of "Secured Party" under this Agreement may be exercised by VLL8 and/or VLL9 independently of one another. The security interests granted by Grantor to each of VLL8 and VLL9 hereunder and under the Loan Agreement shall be deemed to have been granted and perfected at the same time and shall be of equal priority.

[Signature Pages Follow]

[Signature page to Intellectual Property Security Agreement]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

GRANTOR:

PARALLEL WIRELESS, INC.

By: Christopher Sullivan
Name: Christopher Sullivan
Title: CFO

Address for Notices:

100 Innovative Way
Nashua, NH 03062
Attn: General Counsel
Phone #: 603-589-9937

SECURED PARTY:

VENTURE LENDING & LEASING VIII, INC.

By: _____
Name: _____
Title: _____

Address for Notices:

104 La Mesa Dr., Suite 102
Portola Valley, CA 94028
Attn: Chief Financial Officer
Fax # 650-234-4343
Phone # 650-234-4300

SECURED PARTY:

VENTURE LENDING & LEASING IX, INC.

By: _____
Name: _____
Title: _____

Address for Notices:

104 La Mesa Dr., Suite 102
Portola Valley, CA 94028
Attn: Chief Financial Officer
Fax # 650-234-4343
Phone # 650-234-4300

[Signature page to Intellectual Property Security Agreement]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first above written.

GRANTOR:

PARALLEL WIRELESS, INC.

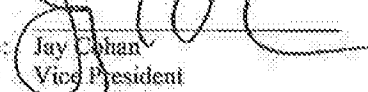
By: _____
Name: _____
Title: _____

Address for Notices:

100 Innovative Way
Nashua, NH 03062
Attn: General Counsel
Phone #: 603-589-9937

SECURED PARTY:

VENTURE LENDING & LEASING VIII, INC.

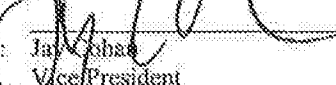
By: 
Name: Jay Cohen
Title: Vice President

Address for Notices:

104 La Mesa Dr., Suite 102
Portola Valley, CA 94028
Attn: Chief Financial Officer
Fax # 650-234-4343
Phone # 650-234-4300

SECURED PARTY:

VENTURE LENDING & LEASING IX, INC.

By: 
Name: Jay Cohen
Title: Vice President

Address for Notices:

104 La Mesa Dr., Suite 102
Portola Valley, CA 94028
Attn: Chief Financial Officer
Fax # 650-234-4343
Phone # 650-234-4300

EXHIBIT A

Copyrights

Description

Registration Number

Registration Date

None

49013/0544
JTK/559633.3

TRADEMARK
REEL: 006829 FRAME: 0922

EXHIBIT B

Patents

Utility or PCT:

Filing Date	App. No.	Title
5/8/2013	13/889631	Heterogeneous Mesh Network and a Multi-RAT Node Used Therein
9/12/2013	14/024717	Heterogeneous Self-Organizing Network for Access and Backhaul
9/24/2013	14/034915	Dynamic Multi-Access Wireless Network Virtualization
9/25/2013	PCT/US13/61677	Heterogeneous Mesh Network and a Multi-RAT Node Used Therein
9/25/2013	PCT/US13/61656	Heterogeneous Self-Organizing Network for Access and Backhaul
9/25/2013	PCT/US13/61599	Dynamic Multi-Access Wireless Network Virtualization
10/18/2013	PCT/US13/65573	Methods of incorporating an Ad Hoc Cellular Network into a Fixed Cellular Network
1/3/2014	14/146857	Heterogeneous Self-Organizing Network for Access and Backhaul
2/18/2014	14/183176	Methods of incorporating an Ad Hoc Cellular Network into a Fixed Cellular Network
2/18/2014	PCT/US14/16938	Methods of incorporating an Ad Hoc Cellular Network into a Fixed Cellular Network
3/14/2014	14/211355	Start-Up Sequence and Configuration for a Radio Node
3/14/2014	PCT/US14/29145	Methods of Enabling Base Station Functionality in a User Equipment
5/29/2014	14/289821	Method of Connecting Security Gateway to a Mesh Network
5/29/2014	14/290280	Intelligent Mesh Network Selection
6/23/2014	14/311765	Methods of Incorporating an Ad Hoc Cellular Network into a Fixed Cellular Network
6/23/2014	14/311829	Methods of Incorporating an Ad Hoc Cellular Network into a Fixed Cellular Network
6/23/2014	14/311835	Methods of Incorporating an Ad Hoc Cellular Network into a Fixed Cellular Network
6/23/2014	14/311839	Methods of Incorporating an Ad Hoc Cellular Network into a Fixed Cellular Network
8/6/2014	14/453365	Systems and Methods for Providing LTE-Based Backhaul
8/7/2014	14/454670	Multi-RAT Node Used for Search and Rescue
8/7/2014	PCT/US14/50238	Multi-RAT Node Used for Search and Rescue
9/29/2014	14/500989	Adjusting Transmit Power Across a Network
10/3/2014	14/506587	Multicast and Broadcast Services Over a Mesh Network
10/8/2014	14/510074	Parameter Optimization and Event Prediction Based on Cell Heuristics
10/24/2014	14/523401	Full Duplex Services Using RTS/CTS
11/3/2014	14/531996	Heterogeneous Mesh Network and a Multi-RAT Node Used Therein
11/14/2014	14/542544	Adjacent Channel Interference Cancellation in Multi-Channel Systems
12/15/2014	14/571250	Virtualization of the Evolved Packet Core to Create a Local EPC
3/9/2015	14/642544	Federated X2 Gateway

3/9/2015	PCT/US15/19501	Federated X2 Gateway
4/17/2015	14/436852	Wireless Broadband Network with Integrated Streaming Multimedia Services
5/13/2015	14/711293	Multi-Egress Backhaul
5/13/2015	PCT/US15/30668	Multi-Egress Backhaul
6/9/2015	14/735007	Frequency and Phase Synchronization Using Full Duplex Radios Over Wireless Mesh Networks
7/20/2015	14/804016	Heterogeneous Self-Organizing Network for Access and Backhaul
7/22/2015	14/806594	Signaling Storm Reduction from Radio Networks
7/22/2015	PCT/US15/41631	Signaling Storm Reduction from Radio Networks
8/10/2015	14/822839	Congestion and Overload Reduction
8/17/2015	14/828432	Inter-Cell Interference Mitigation
9/14/2015	14/853647	Low-Latency Inter-eNodeB Coordinated Multi-Point Transmission
9/15/2015	14/777246	Methods of Enabling Base Station Functionality in a User Equipment
9/24/2015	14/864194	Radio Operation Switch Based on GPS Mobility Data
9/28/2015	14/868074	Enabling High-Power UE Transmission
10/6/2015	14/876808	Full-Duplex Mesh Networks
10/26/2015	14/923392	Out-of-Band Power Down Notification
11/2/2015	14/930535	Improved Tracking Area Planning
11/2/2015	PCT/US15/58689	Improved Tracking Area Planning
11/9/2015	14/936267	Self-Calibrating and Self-Adjusting Network
11/9/2015	PCT/US15/59771	Self-Calibrating and Self-Adjusting Network
11/16/2015	14/942950	Seamless Mobile Handover
11/19/2015	14/946749	Enhanced Mobile Base Station
11/19/2015	14/946129	HealthCheck Access Point
1/5/2016	14/988508	Methods of Incorporating an Ad Hoc Cellular Network into a Fixed Cellular Network
1/20/2016	15/002383	Multi-RAT Heterogeneous Carrier Aggregation
3/2/2016	15/059284	Software-Enabled Remote Licensing and Provisioning
3/21/2016	15/076644	Content-Aware Inter-RAT RAB Steering
3/30/2016	15/086030	Power Management for Vehicle-Mounted Base Station
3/30/2016	PCT/US16/25101	Power Management for Vehicle-Mounted Base Station
4/18/2016	15/132229	MaxMesh: Mesh Backhaul Routing
4/21/2016	15/135535	SIM Whitelisting and Multi-Operator Core Networks
4/21/2016	PCT/US16/28718	SIM Whitelisting and Multi-Operator Core Networks
5/9/2016	15/149941	Virtual Guard Bands
5/24/2016	15/162593	Wireless Backhaul Resiliency
5/31/2016	15/169274	Dynamic Multi-Access Wireless Network Virtualization
6/3/2016	15/173613	Inter-PGW Handover Architecture

6/8/2016	15/177336	Single-Radome Multi-Antenna Assembly
6/20/2016	15/187762	SSID to QCI Mapping
7/5/2016	15/202496	Systems and Methods for Providing LTE-Based Backhaul
7/11/2016	15/207494	Enhanced X2 Protocol
7/11/2016	PCT/US16/41824	Enhanced X2 Protocol
7/25/2016	15/219267	SON Controlled-DFS
8/18/2016	15/241060	Cell ID Disambiguation
8/18/2016	PCT/US16/47660	Cell ID Disambiguation
9/8/2016	15/260315	RAN for Multimedia Delivery
9/12/2016	15/263365	Antenna-Integrated Radio with Wireless Fronthaul
9/12/2016	PCT/US16/51400	Antenna-Integrated Radio with Wireless Fronthaul
9/27/2016	15/278017	Method of Connecting Security Gateway to a Mesh Network
10/20/2016	15/299459	X2 Protocol Programmability
10/20/2016	PCT/US16/58003	X2 Protocol Programmability
10/25/2016	15/334270	Virtualization of the Evolved Packet Core to Create a Local EPC
10/31/2016	15/339916	Elastic Scheduling
10/31/2016	PCT/US16/59799	Elastic Scheduling
11/15/2016	15/351914	Intelligent Mesh Network Selection
11/19/2016	16/688292	Dynamic Multi-Access Wireless Network Virtualization
1/13/2017	15/406660	Inter-Cell Fractional Frequency Reuse Scheduler
1/13/2017	PCT/US17/13577	Inter-Cell Fractional Frequency Reuse Scheduler
2/17/2017	15/436758	Handling Unresponsive MMEs
2/21/2017	15/438641	Adjusting Transmit Power Across a Network
2/28/2017	15/445531	Radio Operation Switch Based on GPS Mobility Data
3/20/2017	15/464333	LuGW Architecture
3/20/2017	PCT/US17/23265	LuGW Architecture
3/27/2017	15/470430	Base Station Grouping for Topology Hiding
4/3/2017	15/478206	Signal Quality Database
4/4/2017	15/479273	PHY Error Indication Messaging
4/10/2017	15/484121	Uplink Measurements for Wireless Systems
4/17/2017	15/489722	Mitigation of Negative Delay via Half CP Shift
5/16/2017	15/597095	Antenna-Integrated Radio with Wireless Fronthaul
5/26/2017	15/607425	End-to-End Prioritization for Mobile Base Station
5/26/2017	PCT/US17/34873	End-to-End Prioritization for Mobile Base Station
6/30/2017	15/640429	Intelligent RAN Flow Management and Distributed Policy Enforcement
6/30/2017	PCT/US17/40528	Intelligent RAN Flow Management and Distributed Policy Enforcement
8/15/2017	15/678104	S2 Proxy for Multi-Architecture Virtualization

8/15/2017	PCT/US17/47038	S2 Proxy for Multi-Architecture Virtualization
8/24/2017	15/686152	Optimized Train Solution
9/1/2017	15/694762	Multi-Radio Access Technology Paging
9/7/2017	15/698638	Multi-Stage Handover
9/15/2017	15/706663	VoIP and Native Carrier Call Integration
9/22/2017	15/713584	LuGW Architecture with RTP Localization
9/26/2017	15/716428	Enabling High-Power UE Transmission
9/29/2017	15/721728	Handovers with Simplified Network Topology
9/29/2017	PCT/US17/54639	Handovers with Simplified Network Topology
10/12/2017	15/782819	X2 Brokering Between Inter-3GPP Release eNodeB's
10/31/2017	15/800030	Multicast and Broadcast Services Over a Mesh Network
11/3/2017	15/803737	Traffic Shaping and End-to-End Prioritization
11/10/2017	15/810003	Hand-in With Topology Hiding
11/28/2017	15/823808	Multi-Egress Backhaul
11/30/2017	15/828427	Enhanced CSFB
11/30/2017	PCT/US17/64100	Enhanced CSFB
12/8/2017	15/836754	Dynamic Public Warning System for In-Vehicle eNodeB
1/8/2018	15/865252	X2 Brokering with Aggregation Optimization
1/9/2018	PCT/US18/12852	X2 Brokering with Aggregation Optimization
1/16/2018	15/872889	Multi-Stage Secure Network Element Certificate Provisioning in a Distributed Mobile Access Network
1/23/2018	15/878412	Systems and Methods for a Scalable Heterogeneous Network Orchestrator
1/27/2018	15/883083	CDMA/EVDO Virtualization
2/5/2018	15/889202	UE Mobility Across Super-Cells
2/16/2018	15/932241	Sinter and Intra-search Beacon
2/20/2018	15/900615	Congestion and Overload Reduction
2/20/2018	15/900439	X2 Protocol Programmability
2/26/2018	15/905820	SON Accounting for Max Supported Geographical Distance
3/6/2018	15/913618	Enhanced Mobile Base Station
3/7/2018	15/914891	Enhanced Mobile Base Station
3/20/2018	15/926739	Radio Operation Switch Based on GPS Mobility Data
3/20/2018	15/926723	Full-Duplex Mesh Networks
3/20/2018	15/926769	HealthCheck Access Point
4/1/2018	16/372082	TV Whitespace for Public Safety
4/24/2018	15/961121	HealthCheck Access Point
4/24/2018	15/961719	X2 Brokering with Aggregation Optimization
5/8/2018	15/974669	Base Station with Interference Monitoring Circuit
5/15/2018	15/980320	SON Controlled-DFS

5/15/2018	15/980346	Virtual Guard Bands
5/18/2018	15/984318	Mobile Base Station Drive Test Optimization
5/29/2018	15/991741	Methods of Enabling Base Station Functionality in a User Equipment
6/19/2018	16/012601	RAN for Multimedia Delivery
6/19/2018	16/012105	RAN for Multimedia Delivery
6/21/2018	16/013727	Heterogeneous Mesh Network and a Multi-RAT Node Used Therein
7/3/2018	16/026772	Heterogeneous Self-Organizing Network for Access and Backhaul
7/5/2018	16/028069	Hand-in With Topology Hiding
7/10/2018	16/031735	Methods of Incorporating an Ad Hoc Cellular Network into a Fixed Cellular Network
7/10/2018	16/031670	SIM Whitelisting and Multi-Operator Core Networks
7/31/2018	16/051345	Paging Optimization for VeNB
8/22/2018	16/107656	Software-Enabled Remote Licensing and Provisioning
10/9/2018	16/155514	Power Management for Vehicle-Mounted Base Station
10/18/2018	16/164790	Virtualized Cell Architecture
10/18/2018	PCT/US18/56599	Virtualized Cell Architecture
10/23/2018	16/168247	MaxMesh: Mesh Backhaul Routing
10/30/2018	16/174976	SSID to QCI Mapping
11/6/2018	16/181794	Signaling Storm Reduction from Radio Networks
11/6/2018	16/182601	Updating Multiple Packet Filters in a Single Bearer Context IE
11/13/2018	16/189907	Multi-RAT Heterogeneous Carrier Aggregation
11/20/2018	16/196763	PHY Error Indication Messaging
11/27/2018	16/202083	Access Network Collective Admission Control
11/27/2018	PCT/US18/62681	Access Network Collective Admission Control
12/10/2018	16/215200	Seamless Mobile Handover
12/14/2018	16/220960	Systems and Methods for Providing LTE-Based Backhaul
12/15/2018	16/192794	Two-Factor Authentication in a Cellular Radio Access Network
12/31/2018	16/237191	Cell ID Disambiguation
1/7/2019	16/241527	Antenna-Integrated Radio with Wireless Fronthaul
1/8/2019	16/243002	RAN for Multimedia Delivery
1/31/2019	16/264429	Community Self-Managed Radio Access Network
2/5/2019	16/267970	Multi-RAT Node Used for Search and Rescue
2/8/2019	16/271778	Data Pipeline for Scalable Analytics and Management
2/8/2019	PCT/US19/17381	Data Pipeline for Scalable Analytics and Management
2/19/2019	16/279744	Tracking Area Planning
2/19/2019	16/279601	Out-of-Band Monitoring and Provisioning
2/26/2019	16/286548	Microcomponent Massive MIMO Arrays
2/26/2019	PCT/US19/19689	Microcomponent Massive MIMO Arrays

3/5/2019	16/293461	Base Station Power Management Using Solar Panel and Battery Forecasting
3/11/2019	16/298072	Role Assignment for Caching
3/11/2019	16/298562	Optimized Train Solution
3/12/2019	16/299233	Low-Latency Inter-eNodeB Coordinated Multi-Point Transmission
3/18/2019	16/357222	Base Station Grouping for Topology Hiding
3/19/2019	16/257385	Convergence Proxy for Core Network Virtualization
4/9/2019	16/378850	Uplink Measurements for Wireless Systems
4/12/2019	16/383134	Extended Data Indication for Indication of DPCCH Decoding Problems
4/16/2019	16/385565	4G/LTE Architecture
4/24/2019	PCT/US19/28875	Xx Brokering with Aggregation Optimization
4/30/2019	16/399280	Fluid Spray to Cool Telecommunications Equipment
5/7/2019	16/405311	Sinter and Intra-search Beacon
5/20/2019	16/417492	Machine Learning for Channel Estimation
5/20/2019	PCT/US19/33174	Machine Learning for Channel Estimation
5/28/2019	16/424479	5G Interoperability Architecture
5/28/2019	PCT/US19/34231	5G Interoperability Architecture
6/4/2019	16/430757	Mitigation of Negative Delay via Half CP Shift
6/10/2019	16/436072	Adjusting Transmit Power Across a Network
6/11/2019	16/437950	Inter-PGW Handover Architecture
6/18/2019	16/444704	4G/LTE Architecture
6/25/2019	16/451271	Radio Operation Switch Based on GPS Mobility Data
7/2/2019	16/460228	Enabling High-Power UE Transmission
7/2/2019	16/460162	End-to-End Prioritization for Mobile Base Station
7/9/2019	16/506624	Enhanced Mobile Base Station
7/23/2019	16/520242	Multipath TCP with Mesh Access
7/30/2019	PCT/US19/44246	System and Method for Massive MIMO Communication
7/31/2019	16/528608	Distributed Multi-HNG SON
7/31/2019	16/528616	Service Bus for Telecom Infrastructure
7/31/2019	PCT/US19/44562	Distributed Multi-HNG SON
8/5/2019	16/532322	SIB Scheduling for Private Networks
8/12/2019	16/538742	Network Address Translation with TEID
8/13/2019	16/539690	Virtual Guard Bands
9/9/2019	16/564929	Statistical Projection for Controlling BLER
9/16/2019	16/573014	Parameter Optimization and Event Prediction Based on Cell Heuristics
9/19/2019	16/576369	High Resolution Timing Advance Estimation Based on PRACH
9/25/2019	16/582811	High Resolution Timing Advance Estimation Based on PRACH and Sparse IFFT Algorithm for LTE PRACH
10/8/2019	16/596153	Content-Aware Inter-RAT RAB Steering

10/15/2019	16/653359	Multi-Egress Backhaul
10/16/2019	16/655225	Radio Access Network Dynamic Functional Splits
10/16/2019	PCT/US19/56623	Radio Access Network Dynamic Functional Splits
10/22/2019	16/660344	SON Accounting for Max Supported Geographical Distance
11/5/2019	16/675220	Locally-Generated TEIDs for Core High Availability
11/5/2019	PCT/US19/59948	Locally-Generated TEIDs for Core High Availability
11/14/2019	16/684585	Idle Mode Signaling Reduction Core Offload
11/19/2019	16/688756	Multicast and Broadcast Services Over a Mesh Network
11/20/2019	16/689821	Secure Software Update in a Wireless Mesh Radio Network Using Peer-to-Peer File Sharing
11/21/2019	16/691599	SIM Whitelisting and Multi-Operator Core Networks

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EXHIBIT C

Trademarks

Filing Date	App. No.	Reg. No.	Status	Mark
April 11, 2013	85901292	4573333	Registered	PARALLEL WIRELESS
May 6, 2013	85924247	N/A	Abandoned	MESH RAN
July 12, 2013	86008843	N/A	Abandoned	INSTANT-ON BASE STATION
July 12, 2013	86008880	4590063	Registered	LMLTE
July 12, 2013	86008802	N/A	Abandoned	INSTANT-ON
October 10, 2013	86088558	4744465	Registered	BYOC
October 10, 2013	86088593	N/A	Abandoned	BRING YOUR OWN COVERAGE
December 20, 2013	86149653	N/A	Abandoned	CWS
January 15, 2014	86166404	4832579	Registered	P (stylized image)
April 29, 2014	86266038	5022996	Registered	PARALLEL WIRELESS HETNET SERVICES CLOUD
April 30, 2014	86267905	4914400	Registered	UNI-MANAGE EMS
May 13, 2014	86279422	N/A	Abandoned	VPLN
June 5, 2014	86301011	5015420	Registered	PARALLEL WIRELESS (old image)
June 18, 2014	86312796	N/A	Abandoned	LMLTE
June 23, 2014	86317019	N/A	Abandoned	BYOC (goods)
July 1, 2014	86325362	5106713	Registered	CONVERGED WIRELESS SYSTEM
July 1, 2014	86325637	4923518	Registered	UNI-MANAGE
July 30, 2014	86352570	N/A	Abandoned	LTE ACCESS CONTROLLER
July 30, 2014	86352578	N/A	Abandoned	LAC
December 4, 2014	GJZCG1248887BH YW01	N/A	Abandoned	PARALLEL WIRELESS (old image)
December 4, 2014	3047186	TBD	Registered	PARALLEL WIRELESS (old image)
December 4, 2014	1248887	1248887	Registered	PARALLEL WIRELESS (old image)
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December 4, 2014	1248887	1248887	Live	PARALLEL WIRELESS (old image)
February 25, 2015	86545158	N/A	Abandoned	Reimagine the RAN
April 15, 2015	86598249	5083877	Registered	HetNet Services Cloud
April 15, 2015	86598260	5056404	Registered	HetNet Gateway
April 15, 2015	86598265	N/A	Abandoned	HetNet Controller
October 20, 2015	86793102	5277022	Registered	CWS
February 10,	86903595	-	Live	PARALLEL WIRELESS (old image)

2016				
April 20, 2016	1783239	-	Abandoned	CWS
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April 20, 2016	1046816	-	Abandoned	CWS
April 20, 2016	40201611600X	-	Registered	CWS
April 20, 2016	1046816	-	Abandoned	CWS
April 20, 2016	1302609	1302609	Live	CWS
August 10, 2016	1323793	-	Live	PARALLEL WIRELESS (old image)
August 10, 2016	1323793	-	Registered	PARALLEL WIRELESS (old image)
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August 10, 2016	1323793	-	Registered	PARALLEL WIRELESS (old image)
August 10, 2016	1323793	1323793	Live	PARALLEL WIRELESS (old image)
October 11, 2017	87640948	-	Live	BHM
March 13, 2019	88337537	-	Live	ALL G
May 1, 2019	88411438	-	Live	5G Starts Here
July 26, 2019	88539835	-	Live	PARALLEL WIRELESS (new image)
August 14, 2019	88578830	-	Live	Reimagine Your Network (image)

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