

## PATENT ASSIGNMENT COVER SHEET

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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>	6391 SPRINT PARKWAY
<b>Internal Address:</b>	LAW DEPARTMENT
<b>City:</b>	OVERLAND PARK
<b>State/Country:</b>	KANSAS
<b>Postal Code:</b>	66251
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	18180448
<b>CORRESPONDENCE DATA</b>	
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<b>ATTORNEY DOCKET NUMBER:</b>	12633US02
<b>NAME OF SUBMITTER:</b>	MICHAEL J. SETTER
<b>SIGNATURE:</b>	/Michael J. Setter/
<b>DATE SIGNED:</b>	03/08/2023
<b>Total Attachments: 6</b>	
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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;


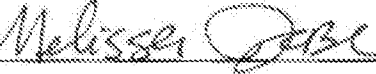
INCLUDING ALL PRIORITY RIGHTS derived from said U.S. and foreign patents and applications therefor by virtue of the International Convention for the Protection of Industrial Property for any and all member countries of the aforesaid International Convention;

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.

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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.

<p>SPRINT COMMUNICATIONS COMPANY L.P.</p> <p>By <u></u></p> <p>Name: Larry Welans</p> <p>Title: Vice President, Tax</p>	<p>T-MOBILE INNOVATIONS LLC</p> <p>By <u></u></p> <p>Name: Melissa Jobe</p> <p>Title: Director, Corporate Intellectual Property</p>
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## SCHEDULE A

### U.S. PATENTS AND APPLICATIONS

<u>Number</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Patent No.</u>	<u>Grant Date</u>	<u>Title</u>
1	09/784,793	2/15/2001	7,797,206	9/14/2010	Consolidated billing system and method for use in telephony networks
2	10/678,876	10/3/2003	7,830,792	11/9/2010	Call center communications system for handling calls to a call center
3	16/805,046	2/28/2020	10,917,301	2/9/2021	Wireless network slice distributed ledger
4	16/814,936	3/10/2020	10,917,766	2/9/2021	System and methods for bring your own device eligibility platform
5	15/796,197	10/27/2017	10,924,230	2/16/2021	Avoiding or correcting inter-cell interference based on an azimuthal modification
6	16/384,872	4/15/2019	10,924,280	2/16/2021	Digital notary use in distributed ledger technology (DLT) for block construction and verification
7	16/588,409	9/30/2019	10,931,829	2/23/2021	Usage data index for wireless communication networks
8	15/897,746	2/15/2019	10,932,098	2/3/2021	Mobility management entity selection by establishment cause
9	16/553,519	8/28/2019	10,932,108	2/23/2021	Wireless communication network exposure function (NEF) that indicates network status
10	16/434,489	6/7/2019	10,932,122	2/23/2021	User equipment beam effectiveness
11	16/716,975	12/17/2019	10,932,176	2/3/2021	Wireless access node fault recovery using integrated access and backhaul
12	16/404,001	5/6/2019	10,965,523	3/30/2021	Virtual network element provisioning
13	16/907,107	6/19/2020	11,057,827	7/6/2021	Provisioning an embedded universal integrated circuit card (eUICC) of a mobile communication device
14	16/411,134	5/13/2019	11,076,296	7/27/2021	Subscriber identity module (SIM) application authentication
15	16/737,595	1/8/2020	11,076,437	7/27/2021	User data usage marking and tracking for a fifth generation new radio (5G NR) access node and a non-5gnr access node
16	16/824,360	3/19/2020	11,115,860	9/7/2021	Secondary access node control in a wireless communication network
17	16/789,948	2/13/2020	11,128,540	9/21/2021	Augmented reality electronic equipment maintenance user interface
18	16/511,568	7/15/2019	11,284,324	3/22/2022	Low-latency wireless data service in a fifth generation new radio (5G NR) network
19	16/512,096	7/15/2019	11,304,066	4/12/2022	Dynamic radio architecture beam pattern control

<u>Number</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Patent No.</u>	<u>Grant Date</u>	<u>Title</u>
20	17/189,934	3/2/2021	11,374,632	6/28/2022	Wireless communications over multiple input multiple output (MIMO) layers based on backhaul link quality
21	17/182,822	2/23/2021	11,388,045	7/12/2022	Virtual network element provisioning
22	16/581,126	9/24/2019	11,416,619	8/16/2022	Trusted boot-loader authentication
23	29/266,021	9/13/2006	D586,690	2/17/2009	Bunting
24	17/195,151	3/8/2021			Hardware-trusted ledger client for distributed ledgers that serve wireless network slices
25	17/306,480	5/3/2021			Data messaging service with distributed ledger control
26	17/307,652	5/4/2021			Simultaneous wireless communication service over fifth generation new radio (5G NR) and long term evolution (LTE)
27	17/337,085	6/2/2021			Wireless communication transmit power control based on hybrid automatic repeat request (HARQ) block error rate (BLER)
28	17/337,131	6/2/2021			Dynamic channel sizing in a wireless communication network
29	17/354,021	6/22/2021			Wireless network access to wireless network slices over a common radio channel
30	17/367,199	7/2/2021			Wireless communication through a physical barrier using beamforming power control
31	17/380,302	7/20/2021			Wireless communication relay service over multiple network transceivers
32	17/395,008	8/5/2021			Distributed ledger directory service for wireless communication networks
33	17/395,209	8/5/2021			Wireless data service control over radio bands in a wireless communication network
34	17/396,280	8/6/2021			Frequency band selection in a wireless access node
35	17/396,327	8/6/2021			File control for data packet routers using consensus and inter-planetary file system (IPFS)
36	17/407,785	8/20/2021			Wireless communication handover responsive to uplink interference at a serving cell
37	17/459,511	8/27/2021			Wireless messaging with high-priority quality-of-service

<u>Number</u>	<u>Application No.</u>	<u>Application Date</u>	<u>Patent No.</u>	<u>Grant Date</u>	<u>Title</u>
38	17/468,030	9/7/2021			Wireless data service based on geographic data network names
39	17/496,166	10/7/2021			Configuration of a wireless network centralized unit (CU) and multiple wireless network distributed units (DUS)
40	17/498,576	10/11/2021			Dynamic wireless network architecture to serve uplink-centric and downlink-centric user applications
41	17/501,156	10/14/2021			Cross-relay interference mitigation in wireless relays that serve wireless user devices
42	17/533,746	11/23/2021			Multiple input multiple output (MIMO) layer control for wireless user equipment
43	17/537,722	11/30/2021			Measurement time period based on location radio metric variance
44	17/538,176	11/30/2021			Uplink beamforming between an airborne transceiver and a terrestrial transceiver
45	17/551,516	12/15/2021			Primary component carrier control in a wireless access node that uses multiple radio frequency bands
46	17/576,414	1/14/2022			Wireless access node uplink power control based on uplink error rate
47	17/579,188	1/19/2022			Wireless network slice selection in wireless user equipment (UE)
48	17/683,573	3/1/2022			Wireless data communication service over multiple uplinks
49	17/713,359	4/5/2022			Wireless communication network handovers of wireless user equipment that execute low-latency applications
50	17/723,264	4/18/2022			Handover control in a wireless user equipment (UE)