

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

WIRELESS ALLIANCE, LLC,

Plaintiff,

v.

T-MOBILE US, INC., AND T-MOBILE USA,
INC.,

Defendants.

Case No. 2:23-cv-00096

JURY TRIAL DEMANDED

**COMPLAINT FOR PATENT INFRINGEMENT
AGAINST T-MOBILE US, INC., AND T-MOBILE USA, INC.**

This is an action for patent infringement arising under the Patent Laws of the United States of America, 35 U.S.C. § 1 *et seq.*, in which Plaintiff Wireless Alliance, LLC (“Plaintiff” or “Wireless Alliance”) makes the following allegations against Defendants T-Mobile US, Inc., and T-Mobile USA, Inc. (“Defendants” or “T-Mobile”):

INTRODUCTION

1. T-Mobile infringes the following United States patents that relate to improvements to cellular networking systems: United States Patent No. 9,144,106 (the “’106 patent”), 9,565,662 (the “’662 patent”) and 10,045,383 (the “’383 patent”) (collectively, the “Asserted Patents”). Wireless Alliance is the exclusive licensee of the ’106 patent and the ’662 patent, and is the owner by assignment of the ’383 patent.

PARTIES

2. Wireless Alliance is a Texas limited liability company with its principal place of business at 825 Watters Creek Blvd., Suite 250, Allen, Texas 75013-3770. Wireless Alliance is

the exclusive licensee of all right, title, and interest in the '106 patent and '662 patent, and the owner by assignment of the '383 patent.

3. On information and belief, T-Mobile US, Inc. is a Delaware corporation with its principal place of business of 12920 SE 38th Street, Bellevue, WA 98006.

4. On information and belief, T-Mobile USA, Inc. is a Delaware corporation with its principal place of business of 12920 SE 38th Street, Bellevue, WA 98006. On information and believe, T-Mobile USA, Inc. is a wholly owned subsidiary of T-Mobile US, Inc.

JURISDICTION AND VENUE

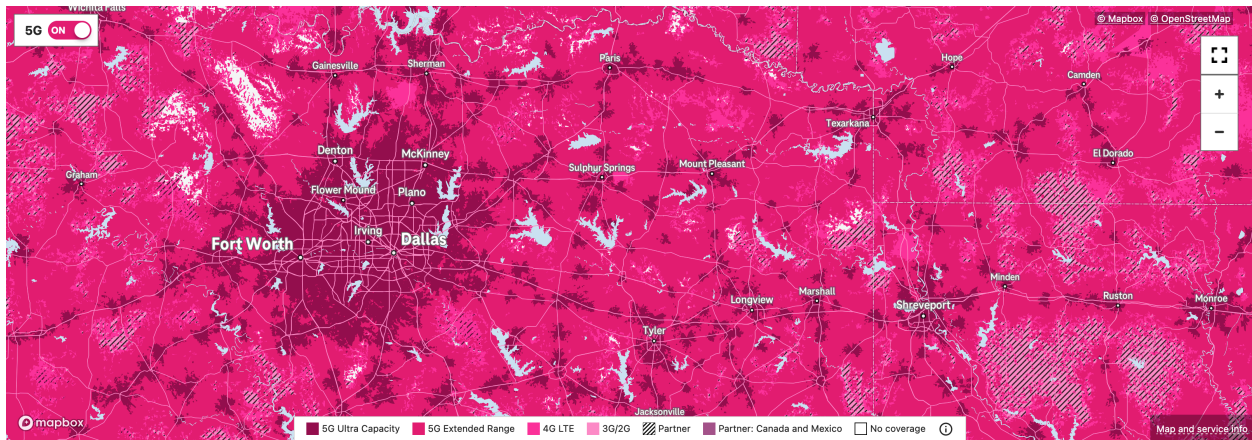
5. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has original subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

6. This Court has personal jurisdiction over Defendants in this action because Defendants have committed acts within this District giving rise to this action and have established minimum contacts with this forum such that the exercise of jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice. Defendants, directly and through subsidiaries or intermediaries, have committed and continue to commit acts of infringement in this District by, among other things, making, using, offering to sell, selling, and importing products and services that infringe the Asserted Patents.

7. Venue is proper in this District under 28 U.S.C. §§ 1391(b)-(c) and 1400(b). Defendants are registered to do business in Texas. Additionally, upon information and belief, Defendants have transacted business in this District and have committed acts of direct and indirect infringement in this District by, among other things, making, using, offering to sell, selling, and importing products and services that infringe the Asserted Patents. Moreover, on information and

belief, Defendants have a regular and established place of business in this District, including a regional headquarters at 7668 Warren Parkway, Frisco, Texas 75034. On information and belief, Defendants also have regular and established places of business in this District, including at 900 E. End Blvd N #100B, Marshall, TX 75670; and 1806 E. End Blvd. Ste. 100, Marshall, TX 75670. See <http://t-mobile.com/store-locator>.

8. According to its website, Defendants offer 4G and 5G data coverage to customers in this District and within the Marshall division. <https://www.t-mobile.com/coverage/coverage-map> (



). Furthermore, according to its website, Verizon also offers and/or provides 4G and 5G home internet services and equipment to customers in this District. See *id.*

9. In other recent actions, T-Mobile has either admitted or not contested that this federal judicial district is a proper venue for patent infringement actions against it. See, e.g., Answer to First Amended Complaint, at 2-3, ¶¶ 7-10, *Fractus, S.A. v. T-Mobile Mobility LLC et al.*, No. 2:18-cv-00135-JRG (E.D. Tex. Dec. 13, 2018); Answer at 2, ¶¶ 4, 5, *Preferential Networks IP, LLC v. T-Mobile US, Inc. et al.*, No. 2:17-cv-00626 (E.D. Tex. Nov. 01, 2017), ECF No. 17; Answer ¶¶ 4, 5, *Traxcell Techs., LLC v. T-Mobile, USA, Inc.*, No. 2:17-cv-00720 (E.D. Tex. Jan. 23, 2018), ECF No. 8; Answer ¶¶ 5, 6, *Keivique Tech., LLC v. T-Mobile USA, Inc.*, No. 2:17-cv-

00095 (E.D. Tex. Apr. 11, 2017), ECF No. 10. Defendant T-Mobile USA, Inc. has also admitted or failed to contest that it has transacted business in this district. *See Preferential Networks* at Answer at 2, ¶ 4; *Traxcell Techs.* at Answer ¶ 2; *Kevique Tech.* at Answer ¶¶ 5, 6. *See also* Answer ¶¶ 19, 20, *Mobile Synergy Sols., LLC v. T-Mobile US, Inc. et al.*, No. 6:16-cv-01223 (E.D. Tex. Feb. 13, 2017), ECF No. 47.

FACTUAL BACKGROUND

10. The '106 patent and the '662 patent (collectively, the “ETRI Patents”) were originally assigned to Electronics and Telecommunications Research Institute (“ETRI”) and the '383 patent was originally assigned to Yonsei University.

11. ETRI is a non-profit, government-funded research institute in Daedeok, Korea. Among other areas of expertise, ETRI is one of the leading research institutes in the area of wireless communications, developing over 2,500 patents worldwide in the subject matter. ETRI has engaged in extensive work helping to develop wireless communications standards, including the 4G and 5G standards at issue here.

12. Among other things, ETRI has been actively involved in the 3rd Generation Partnership Project (“3GPP”). 3GPP is a standards organization that develops protocols for mobile communications, including standards for cellular phones such as the 4G (also known as LTE) and 5G standards. On January 31, 2013, ETRI submitted an IPR Information Statement and Licensing Declaration (“IPR Declaration”) to the European Telecommunications Standards Institute (“ETSI”). Among other patents, ETRI disclosed that the parent to the ETRI Patents, Korean Patent Application No. KR20110080187, is or may become “essential” to the 4G standard being promulgated by 3GPP including 3GPP TS 36.321. TS 36.321 describes, among other things, the deactivation of SCells using the method described in the ETRI Patents. *See* Exhibits 2 and 5. The

SCell functionality covered by Korean Patent Application No. KR20110080187 is also utilized in the 5G standard. *See* Exhibits 3 and 6. Moreover, the ETSI website lists the ETRI Patents as being family members of Korean Patent Application No. KR20110080187. https://ipr.etsi.org/IPRDetails.aspx?IPRD_ID=1491&IPRD_TYPE_ID=2&MODE=2&sessionkey=197a8b# (

Patent Family				
External ID :				
Application Number	Publication Number	Title	Applicant/holder	Country of Registration
Basis Patent				
KR20110080187	KR101614096 B1 KR20120016014 A	A METHOD OF CHANNEL MANAGEMENT FOR MULTIPLE COMPONENT CARRIER IN MOBILE COMMUNICATION SYSTEM	UnknownCompany (KR20110080187)	KR KOREA (REPUBLIC OF)
Other Members				
US201113208471	US8743720 B2 US2012039200 A1	METHOD OF CHANNEL MANAGEMENT FOR MULTIPLE COMPONENT CARRIER IN MOBILE COMMUNICATION SYSTEM	ELECT & TELECOMM RESEARCH INST [KR] LEE KYOUNG SEOK [KR] KIM JAE HEUNG [KR] LEE KOOK JIN [KR]	US UNITED STATES
US201113884216	US9144106 B2 US2013230009 A1	METHOD FOR CARRIER MANAGEMENT IN A CARRIER AGGREGATION ENVIRONMENT OF A MOBILE COMMUNICATION SYSTEM	LEE KYOUNG SEOK [KR] KOREA ELECTRONICS TELECOMM [KR] KIM JAE HEUNG [KR] LEE KOOK JIN [KR]	US UNITED STATES
US201414166317	US9161384 B2 US2014140309 A1	METHOD OF CHANNEL MANAGEMENT FOR MULTIPLE COMPONENT CARRIER IN MOBILE COMMUNICATION SYSTEM	KOREA ELECTRONICS TELECOMM [KR]	US UNITED STATES
US201514831023	US9565662 B2 US2015359037 A1	METHOD FOR CARRIER MANAGEMENT IN A CARRIER AGGREGATION ENVIRONMENT OF A MOBILE COMMUNICATION SYSTEM	ELECTRONICS & TELECOMMUNICATIONS RES INST [KR]	US UNITED STATES
US201514859967	US9622221 B2 US2016014755 A1	METHOD OF CHANNEL MANAGEMENT FOR MULTIPLE COMPONENT CARRIER IN MOBILE COMMUNICATION SYSTEM	ELECTRONICS & TELECOMMUNICATIONS RES INST [KR] ELECTRONICS AND TELECOMMUNICATIONS RES INSTITUTE [KR]	US UNITED STATES
WO2011KR08404	WO2012064052 A3 WO2012064052 A2	METHOD FOR CARRIER MANAGEMENT IN A CARRIER AGGREGATION ENVIRONMENT OF A MOBILE COMMUNICATION SYSTEM	LEE KYOUNG SEOK [KR] KOREA ELECTRONICS TELECOMM [KR] KIM JAE HEUNG [KR] LEE KOOK JIN [KR]	WO Patent Cooperation Treaty

).

13. On information and belief, as an implementer of the 4G and 5G standards promulgated by 3GPP, T-Mobile was aware of ETRI’s IPR Information Statement and Licensing Declaration declaring the ETRI Patents essential to the 4G standard, including the functionality accused in this Complaint. T-Mobile did not, however, seek to license the ETRI Patents.

14. Yonsei University is a leading research university in Korea, and is considered one of the most prestigious universities in Korea.

15. On January 5, 2021, counsel for Wireless Alliance sent correspondence to Ms. Melissa Scanlan of T-Mobile notifying T-Mobile of its infringement of the Asserted Patents. Wireless Alliance’s 2021 letter also included claim charts substantially similar to Exhibits 2-3, 5-

6 and 8. T-Mobile did not agree to take a license despite Wireless Alliance's discussions with both T-Mobile and T-Mobile's suppliers.

16. On February 28, 2023, Wireless Alliance again contacted T-Mobile to renew its licensing offer, offering to license T-Mobile using FRAND-based rates. Though there are no FRAND obligations for the '383 patent, Wireless Alliance offered to license the '383 patent using the same FRAND-based offer. T-Mobile did not accept this renewed license offer and failed to negotiate a license on other terms.

17. Wireless Alliance has complied with the marking and other requirements of 35 U.S.C. § 287 for the Asserted Patents.

COUNT I

INFRINGEMENT OF U.S. PATENT NO. 9,144,106

18. Plaintiff realleges and incorporates by reference paragraphs 1 through 17 as if fully set forth herein.

19. On February 22, 2015, the USPTO duly and legally issued the '106 patent, entitled "Method For Carrier Management In A Carrier Aggregation Environment Of A Mobile Communication System." The named inventors are Kyoung Seok Lee, Jae Heung Kim, and Kook Jin Lee. A true and correct copy of the '106 patent is attached as Exhibit 1.

20. On November 10, 2020, Wireless Alliance was granted an exclusive license to the '106 patent. Under the exclusive license, Wireless Alliance was granted all substantial rights in the '106 patent including, without limitation, the exclusive right to sublicense, sue for infringement, and collect all past, present, and future damages.

21. The '106 patent relates to, among other things, cellular communications generally, and more specifically to the deactivation of a secondary carrier used in 4G and 5G cellular

communications. The claimed invention of the '106 patent sought to solve problems with, and improve upon, secondary carrier deactivation procedure in a multicarrier environment. For example, the specification of the '106 patent teaches the following:

On the other hand, when a secondary carrier is configured and operated in the multicarrier environment, a secondary carrier deactivation procedure and a discontinuous reception (DRX) procedure should be stably controlled, and thus a management state is not consistent between the base station and the terminal. In addition, when the deactivation procedure is performed, a hybrid automatic repeat request (HARQ) retransmission procedure to be performed in the terminal should be managed according to a deactivation state.

See '106 patent at 1:52-60. The specification also teaches the following:

[In] a carrier management method according to the present invention as described above is used, it is possible to prevent an increase in the number of unnecessary retransmissions in a mobile communication system using carrier aggregation. That is, according to the present invention, when a secondary carrier is deactivated in a carrier aggregation environment, a DL retransmission buffer of a terminal is immediately initialized. Accordingly, the terminal stops a reception operation of a carrier, so that an unnecessary retransmission procedure of the terminal may be omitted and operations of the terminal and a base station may be consistent.

Thus, it is possible to reduce an unnecessary retransmission operation and power consumption of the terminal and prevent the waste of radio resources

and the performance degradation of the base station due to unnecessary retransmission.

In addition, it is possible to prevent inconsistency of secondary carrier states that are managed by the base station and the terminal when a secondary carrier is deactivated according to the present invention. It is possible to solve a problem of an unnecessary wakeup operation of a terminal by a DRX procedure related to a deactivated carrier by initializing a DRX-related timer that operates in a secondary carrier. Accordingly, power consumption of the terminal is reduced. In particular, the effect of power consumption reduction is increased because the above-described procedure affects operations of all carriers rather than a secondary carrier.

See '106 patent at 3:47-4:6.

22. The invention claimed in the '106 patent solves various technological problems inherent in a multicarrier environment by, among other things, teaching how to manage the deactivation carrier in a stably-controlled manner. This results in a consistent deactivation state between the base station and the terminal, and reduces unnecessary retransmission operations and power consumption.

23. On information and belief, T-Mobile makes, uses, offers for sale, sells, and/or imports certain products and services ("'106 Accused Products"), such as T-Mobile's 4G and 5G cellular services, that directly infringe, literally and/or under the doctrine of equivalents, at least claim 1 of the '106 patent.

24. T-Mobile also knowingly and intentionally induces infringement of at least claim 1 of the '106 patent in violation of 35 U.S.C. § 271(b). Through at least ETRI's IPR Declaration

and Wireless Alliance's 2021 letter, T-Mobile has had knowledge of the '106 patent and the infringing nature of the '106 Accused Products. Despite this knowledge of the '106 patent, T-Mobile continues to actively encourage and instruct its customers and end users (for example, through online customer-focused materials) to use the '106 Accused Products in ways that directly infringe the '106 patent. T-Mobile does so knowing and intending that its customers and end users will commit these infringing acts. T-Mobile also continues to make, use, offer for sale, sell, and/or import the '106 Accused Products, despite its knowledge of the '106 patent, thereby specifically intending for and inducing its customers to infringe the '106 patent through the customers' normal and customary use of the '106 Accused Products.

25. T-Mobile has also infringed, and continues to infringe, at least claim 1 of the '106 patent by selling, offering for sale, or importing into the United States, the '106 Accused Products, knowing that the '106 Accused Products constitute a material part of the inventions claimed in the '106 patent, are especially made or adapted to infringe the '106 patent, and are not staple articles or commodities of commerce suitable for non-infringing use. T-Mobile has been, and currently is, contributorily infringing the '106 patent in violation of 35 U.S.C. §§ 271(c) and (f).

26. The '106 Accused Products satisfy all claim limitations of one or more claims of the '106 patent. Claim charts comparing independent claim 1 of the '106 patent to representative Accused Products are attached as Exhibits 2 and 3, which are hereby incorporated by reference in their entirety.

27. By making, using, offering for sale, selling and/or importing into the United States the '106 Accused Products, T-Mobile has injured Plaintiff and is liable for infringement of the '106 patent pursuant to 35 U.S.C. § 271.

28. As a result of T-Mobile's infringement of the '106 patent, Plaintiff is entitled to monetary damages in an amount adequate to compensate for T-Mobile's infringement, but in no event less than a reasonable royalty for the use made of the invention by T-Mobile, together with interest and costs as fixed by the Court.

29. T-Mobile has and continues to infringe the '106 patent, acting with an objectively high likelihood that its actions constitute infringement of the '106 patent. T-Mobile has known or should have known of this risk since at least January 2021 and likely prior to that as described above. Accordingly, T-Mobile's infringement of the '106 patent has been and continues to be willful.

30. T-Mobile's infringing activities have injured and will continue to injure Plaintiff, unless and until this Court enters an injunction prohibiting further infringement of the '106 patent, and, specifically, enjoining further manufacture, use, sale, importation, and/or offers for sale that come within the scope of the patent claims.

COUNT II

INFRINGEMENT OF U.S. PATENT NO. 9,565,662

31. Plaintiff realleges and incorporates by reference paragraphs 1 through 17 as if fully set forth herein.

32. On February 7, 2017, the USPTO duly and legally issued the '662 patent, entitled "Method For Carrier Management In A Carrier Aggregation Environment Of A Mobile Communication System." The named inventors are Kyoung Seok Lee, Jae Heung Kim, and Kook Jin Lee. A true and correct copy of the '662 patent is attached as Exhibit 4.

33. On November 10, 2020, Wireless Alliance was granted an exclusive license to the '662 patent. Under the exclusive license, Wireless Alliance was granted all substantial rights

in the '662 patent including, without limitation, the exclusive right to sublicense, sue for infringement, and collect all past, present, and future damages.

34. The '662 patent relates to, among other things, cellular communications generally, and more specifically to the deactivation of a secondary carrier used in 4G and 5G cellular communications. The claimed invention of the '662 patent sought to solve problems with, and improve upon, secondary carrier deactivation procedure in a multicarrier environment. For example, the specification of the '662 patent teaches the following:

On the other hand, when a secondary carrier is configured and operated in the multicarrier environment, a secondary carrier deactivation procedure and a discontinuous reception (DRX) procedure should be stably controlled, and thus a management state is not consistent between the base station and the terminal. In addition, when the deactivation procedure is performed, a hybrid automatic repeat request (HARQ) retransmission procedure to be performed in the terminal should be managed according to a deactivation state.

See '662 patent at 1:61-2:3. The specification also teaches the following:

[In] a carrier management method according to the present invention as described above is used, it is possible to prevent an increase in the number of unnecessary retransmissions in a mobile communication system using carrier aggregation. That is, according to the present invention, when a secondary carrier is deactivated in a carrier aggregation environment, a DL retransmission buffer of a terminal is immediately initialized. Accordingly, the terminal stops a reception operation of a carrier, so that an unnecessary

retransmission procedure of the terminal may be omitted and operations of the terminal and a base station may be consistent.

Thus, it is possible to reduce an unnecessary retransmission operation and power consumption of the terminal and prevent the waste of radio resources and the performance degradation of the base station due to unnecessary retransmission.

In addition, it is possible to prevent inconsistency of secondary carrier states that are managed by the base station and the terminal when a secondary carrier is deactivated according to the present invention. It is possible to solve a problem of an unnecessary wakeup operation of a terminal by a DRX procedure related to a deactivated carrier by initializing a DRX-related timer that operates in a secondary carrier. Accordingly, power consumption of the terminal is reduced. In particular, the effect of power consumption reduction is increased because the above-described procedure affects operations of all carriers rather than a secondary carrier.

See '662 patent at 3:59-4:19.

35. The invention claimed in the '662 patent solves various technological problems inherent in a multicarrier environment by, among other things, teaching how to manage the deactivation carrier in a stably-controlled manner. This results in a consistent deactivation state between the base station and the terminal, and reduces unnecessary retransmission operations and power consumption.

36. On information and belief, T-Mobile makes, uses, offers for sale, sells, and/or imports certain products and services ("'662 Accused Products"), such as T-Mobile's 4G and 5G

cellular services, that directly infringe, literally and/or under the doctrine of equivalents, at least claim 1 of the '662 patent.

37. T-Mobile also knowingly and intentionally induces infringement of at least claim 1 of the '662 patent in violation of 35 U.S.C. § 271(b). Through at least ETRI's IPR Declaration and Wireless Alliance's 2021 letter, T-Mobile has had knowledge of the '662 patent and the infringing nature of the '662 Accused Products. Despite this knowledge of the '662 patent, T-Mobile continues to actively encourage and instruct its customers and end users (for example, through online customer-focused materials) to use the '662 Accused Products in ways that directly infringe the '662 patent. T-Mobile does so knowing and intending that its customers and end users will commit these infringing acts. T-Mobile also continues to make, use, offer for sale, sell, and/or import the '662 Accused Products, despite its knowledge of the '662 patent, thereby specifically intending for and inducing its customers to infringe the '662 patent through the customers' normal and customary use of the '662 Accused Products.

38. T-Mobile has also infringed, and continues to infringe, at least claim 1 of the '662 patent by selling, offering for sale, or importing into the United States, the '662 Accused Products, knowing that the '662 Accused Products constitute a material part of the inventions claimed in the '662 patent, are especially made or adapted to infringe the '662 patent, and are not staple articles or commodities of commerce suitable for non-infringing use. T-Mobile has been, and currently is, contributorily infringing the '662 patent in violation of 35 U.S.C. §§ 271(c) and (f).

39. The '662 Accused Products satisfy all claim limitations of one or more claims of the '662 patent. Claim charts comparing independent claim 1 of the '662 patent to representative Accused Products are attached as Exhibits 5 and 6, which are hereby incorporated by reference in their entirety.

40. By making, using, offering for sale, selling and/or importing into the United States the '662 Accused Products, T-Mobile has injured Plaintiff and is liable for infringement of the '662 patent pursuant to 35 U.S.C. § 271.

41. As a result of T-Mobile's infringement of the '662 patent, Plaintiff is entitled to monetary damages in an amount adequate to compensate for T-Mobile's infringement, but in no event less than a reasonable royalty for the use made of the invention by T-Mobile, together with interest and costs as fixed by the Court.

42. T-Mobile has and continues to infringe the '662 patent, acting with an objectively high likelihood that its actions constitute infringement of the '662 patent. T-Mobile has known or should have known of this risk since at least January 2021 and likely prior to that as described above. Accordingly, T-Mobile's infringement of the '662 patent has been and continues to be willful.

43. T-Mobile's infringing activities have injured and will continue to injure Plaintiff, unless and until this Court enters an injunction prohibiting further infringement of the '662 patent, and, specifically, enjoining further manufacture, use, sale, importation, and/or offers for sale that come within the scope of the patent claims.

COUNT III

INFRINGEMENT OF U.S. PATENT NO. 10,045,383

44. Plaintiff realleges and incorporates by reference paragraphs 1 through 17 as if fully set forth herein.

45. On August 7, 2018, the USPTO duly and legally issued the '383 patent, entitled "Method And Apparatus For Separated Connections Of Uplink And Downlink." The named

inventors are Hyung Yeol Lee, and Kwang Soon Kim. A true and correct copy of the '383 patent is attached as Exhibit 7.

46. On November 10, 2020, Wireless Alliance purchased the '383 patent. Under the purchase agreement, Wireless Alliance was granted all substantial rights in the '383 patent including, without limitation, the exclusive right to license, sue for infringement, and collect all past, present, and future damages.

47. The '383 patent relates to, among other things, cellular communications generally, and more specifically to the technology of using a downlink and uplink to different base stations in 5G cellular communications. The claimed invention of the '383 patent sought to solve problems with cell association with a single base station. For example, the specification of the '383 patent teaches the following:

When a terminal performs a cell association with a single base station, the terminal may generally perform the cell association with the base station based on the downlink signal. Accordingly, the terminal may not perform a cell association with an optimal base station in terms of the uplink and thus, the loss in the SINR may occur and the issue of unfairness between an SINR of the downlink and an SINR of the uplink may arise.

Moreover, a protocol for the cell association based on the uplink may not be found in conventional standards and technologies. Therefore, a method and a protocol for determining a separate cell association in relation to the uplink may be needed.

See '383 patent at 1:55-67. The specification also teaches the following improvement to cell association:

A protocol in which an uplink connection and a downlink connection are separately performed will be provided hereinafter. For the separate connections, the terminal may prepare a list of base stations available for the uplink connection using a strength of a received signal transmitted from each base station through the downlink. The terminal may transmit an uplink reference signal to each base station on the list. Each base station receiving the uplink reference signal may send information on a measured strength of the uplink received signal to a downlink base station of the terminal. Here, the downlink base station may refer to a base station with which a downlink is established with the terminal. A conventional method may be used to establish the downlink. The downlink base station may obtain and collect information transmitted from each base station and may transmit the collected information to the terminal. Thus, the terminal may receive feedback on the strength of the uplink received signal from each base station. The terminal may use the received feedback for the uplink association. Also, each base station receiving the uplink reference signal may transmit a strength of a biased received signal which is the strength of the uplink received signal to which a bias factor.

See '383 patent at 4:25-47.

48. The invention claimed in the '383 patent solves various technological problems associated with cell association with a single base station by, among other things, teaching how to perform separate connections with respect to a downlink and an uplink. The claimed invention

resolves a number of problems with single base station association, including differences in coverage between different cell associations and in signal to interface noise ratio (SINR).

49. On information and belief, T-Mobile makes, uses, offers for sale, sells, and/or imports certain products and services (“’383 Accused Products”), such as T-Mobile’s 5G cellular services, that directly infringe, literally and/or under the doctrine of equivalents, at least claim 1 of the ’383 patent.

50. T-Mobile also knowingly and intentionally induces infringement of at least claim 1 of the ’383 patent in violation of 35 U.S.C. § 271(b). Through at least Wireless Alliance’s 2021 letter, T-Mobile has had knowledge of the ’383 patent and the infringing nature of the ’383 Accused Products. Despite this knowledge of the ’383 patent, T-Mobile continues to actively encourage and instruct its customers and end users (for example, through online customer-focused materials) to use the ’383 Accused Products in ways that directly infringe the ’383 patent. T-Mobile does so knowing and intending that its customers and end users will commit these infringing acts. T-Mobile also continues to make, use, offer for sale, sell, and/or import the ’383 Accused Products, despite its knowledge of the ’383 patent, thereby specifically intending for and inducing its customers to infringe the ’383 patent through the customers’ normal and customary use of the ’383 Accused Products.

51. T-Mobile has also infringed, and continues to infringe, at least claim 1 of the ’383 patent by selling, offering for sale, or importing into the United States, the ’383 Accused Products, knowing that the ’383 Accused Products constitute a material part of the inventions claimed in the ’383 patent, are especially made or adapted to infringe the ’383 patent, and are not staple articles or commodities of commerce suitable for non-infringing use. T-Mobile has been, and currently is, contributorily infringing the ’383 patent in violation of 35 U.S.C. §§ 271(c) and (f).

52. The '383 Accused Products satisfy all claim limitations of one or more claims of the '383 patent. A claim chart comparing independent claim 1 of the '383 patent to a representative Accused Product is attached as Exhibit 8, which is hereby incorporated by reference in its entirety.

53. By making, using, offering for sale, selling and/or importing into the United States the '383 Accused Products, T-Mobile has injured Plaintiff and is liable for infringement of the '383 patent pursuant to 35 U.S.C. § 271.

54. As a result of T-Mobile's infringement of the '383 patent, Plaintiff is entitled to monetary damages in an amount adequate to compensate for T-Mobile's infringement, but in no event less than a reasonable royalty for the use made of the invention by T-Mobile, together with interest and costs as fixed by the Court.

55. T-Mobile has and continues to infringe the '383 patent, acting with an objectively high likelihood that its actions constitute infringement of the '383 patent. T-Mobile has known or should have known of this risk since at least January 2021. Accordingly, T-Mobile's infringement of the '383 patent has been and continues to be willful.

56. T-Mobile's infringing activities have injured and will continue to injure Plaintiff, unless and until this Court enters an injunction prohibiting further infringement of the '383 patent, and, specifically, enjoining further manufacture, use, sale, importation, and/or offers for sale that come within the scope of the patent claims.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that this Court enter:

- a. A judgment in favor of Plaintiff that T-Mobile has infringed, either literally and/or under the doctrine of equivalents, the Asserted Patents;
- b. A judgment and order requiring T-Mobile to pay Plaintiff its damages, costs,

expenses, and pre-judgment and post-judgment interest for T-Mobile's infringement of the Asserted Patents;

c. A judgment and order requiring T-Mobile to provide an accounting and to pay supplemental damages to Plaintiff, including without limitation, pre-judgment and post-judgment interest;

d. A judgment that T-Mobile's infringement of the Asserted Patents has been willful and deliberate;

e. A judgment and order requiring T-Mobile to pay Plaintiff treble damages and pre-judgment interest under 35 U.S.C. § 284 as a result of, *inter alia*, T-Mobile's willful and deliberate infringement of the Asserted Patents;

f. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to Plaintiff its reasonable attorneys' fees against T-Mobile; and

g. Any and all other relief as the Court may deem appropriate and just under the circumstances.

DEMAND FOR JURY TRIAL

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

Dated: March 7, 2023

Respectfully submitted,

/s/ Benjamin T. Wang

Benjamin T. Wang

Benjamin T. Wang

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