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

GENERAL ACCESS SOLUTIONS, LTD., Plaintiff, v. SPRINT SPECTRUM L.P., SPRINTCOM, INC. and ASSURANCE WIRELESS USA, L.P., Defendants.	Case No. 2:20-cv-00007-RWS JURY TRIAL DEMANDED

AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff General Access Solutions, LTD ("General Access" or "Plaintiff"), for its Amended Complaint against Defendants Sprint Spectrum L.P. ("Sprint Spectrum,"), SprintCom, Inc. ("SprintCom") and Assurance Wireless USA, L.P. ("Assurance") (collectively, "Sprint" or "Defendants"), alleges the following:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq*.

THE PARTIES

2. Plaintiff General Access is a domestic limited partnership organized under the laws of the State of Texas with a place of business in Dallas, TX 75219. General Access (formerly known as "Access Solutions, Ltd.") was previously associated with and acquired certain assets of Raze Technologies, Inc. (see below), which had an office at 2540 Plano Pkwy Suite 188 Plano TX 75074. Further, General Access maintained and maintains storage facilities for documents and equipment at 2560 Kathryn Lane Plano TX, 75025.

3. Upon information and belief, Sprint Spectrum is a Delaware limited partnership with

its principal place of business at 6200 Sprint Parkway, Overland Park, KS 66251. Sprint can be served with process through its registered agent, Corporation Service Company, 2900 SW Wanamaker Drive, Suite 204, Topeka, Kansas 66614.

4. Upon information and belief, Assurance Wireless USA, L.P. is a Delaware limited partnership with its principal place of business at 6200 Sprint Parkway, Overland Park, KS 66251. Assurance was previously known as Virgin Mobile USA, L.P. Assurance can be served with process through its registered agent, Corporation Service Company, 2900 SW Wanamaker Drive, Suite 204, Topeka, Kansas 66614.

5. Upon information and belief, SprintCom Inc. is a Kansas corporation with its principal place of business at 6200 Sprint Parkway, Overland Park, KS 66251. SprintCom is the successor-in-interest to Boost Mobile, LLC. SprintCom can be served with process through its registered agent, Corporation Service Company, 2900 SW Wanamaker Drive, Suite 204, Topeka, Kansas 66614.

6. Upon information and belief, each Defendant sells and offers to sell products and services throughout the United States, including in this judicial district, and introduces products and services into the stream of commerce that incorporate infringing technology knowing that they would be sold in this judicial district and elsewhere in the United States.

7. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

8. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

9. Venue is proper in this judicial district under 28 U.S.C. §§ 1391(b), (c), (d) and/or 1400(b). On information and belief, each Defendant conducts business in this district, the claims alleged in this Complaint arise in this District, and acts of infringement have taken place and are continuing to take place in this District.

10. On information and belief, each Defendant is subject to this Court's general and specific personal jurisdiction because each Defendant has sufficient minimum contacts within the State of Texas and this District (including via sales of each Defendant's services to investors), pursuant to due process and/or the Texas Long Arm Statute, because each Defendant purposefully availed itself of the privileges of conducting business in the State of Texas and in this District, because each Defendant regularly conducts and solicits business within the State of Texas and within this District, and because General Access's causes of action arise directly from each Defendant's business contacts and other activities in the State of Texas and this District.

BACKGROUND

11. Around the year 2000, several major wireless carriers, including Sprint, implemented "3G" (third-generation wireless technology) wireless networks that were primarily designed around voice services. Around that time, anticipating the future increasing demand for wireless data services (e.g., email, internet browsing, application downloads, and video services) in the wireless industry, WestEnd Broadband worked in earnest on research and development of next generation wireless communications networks.

12. In 2000-2001, WestEnd Broadband, Inc., a Texas corporation, changed its name to Raze Technologies, Inc. In or around December 2001, Access Solutions, Ltd. assisted with the restructuring of the business of Raze Technologies, Inc. into a Delaware entity of the same name. Access Solutions, Ltd. subsequently underwent a name change in 2011 to General Access Solutions, Ltd. ("General Access").

13. Continuing the work of WestEnd Broadband, Inc., the Texas and Delaware Raze entities (collectively "RAZE") continued to pioneer the development of wireless telecommunications equipment, sometimes referred to as "4G" networks, which would accommodate voice and broadband data services as well as provide heightened reliability and Quality

of Service (QOS). In the years 2000-2002, RAZE successfully designed, developed, built, and tested 4G wireless networks in Texas.

14. As part of that effort, on September 5, 2001, a patent application was filed on behalf of Paul Struhsaker. That application led to U.S. Patent No. 7,230,931.

15. On information and belief, 4G networks provide increased bandwidth and throughput and are noticeably faster with respect to data services than 3G networks. At the time RAZE was developing its 4G technology, however, the available spectrum necessary to implement 4G networks was limited and owned by entities that were not positioned to invest and deploy this technology. For instance, Sprint and Clearwire Corporation owned licenses for spectrums in the 2500-2700 MHz range, which is suitable for 4G networking. Clearwire was ultimately acquired by Sprint in 2013. (*See* http://newsroom.sprint.com/news-releases/sprint-completes-acquisition-of-clearwire.htm.)

16. On information and belief, at the time RAZE was developing its 4G technology, Sprint and Clearwire were heavily invested in 3G technologies, and therefore did not utilize (or substantially utilize) their spectrum for 4G wireless networking. Similarly, the other major wireless carriers were reluctant to invest in 4G technology before realizing a return on their investments in 3G technology and infrastructure. Transitioning to 4G technology required significant infrastructure improvements relative to earlier technologies. Additionally, the public's demand for both data and voice services was not evident to the major wireless carriers because "smartphones," such as the immensely popular iPhone and later Android phones, which have both high-speed data and voice functionality, had yet to be introduced to the public.

17. During 2001-2002, Sprint and Clearwire each engaged RAZE about conducting a "field trial" of RAZE's 4G technology for a six-month period. In addition to executing Confidentiality Agreements with Sprint and Clearwire, RAZE produced data sheets and other

confidential information relating to its technology to Sprint and Clearwire. Because of the severe downturn in the telecom sector following the events of 9-11, the field tests were never conducted. Further, on information and belief, Sprint had knowledge of the '931 patent and/or the applications leading to that patent, the technologies of which were implemented in portions of the IEEE 802.16 specification (commonly referred to as "WiMAX" (see below)).

THE INFRINGING INSTRUMENTALITIES

18. On information and belief, Defendants' products and services currently operate and/or have operated utilizing "WiMAX" (Worldwide Interoperability for Microwave Access) and/or "LTE" (Long-Term Evolution) networks, both of which are 4G technologies. In addition, Defendants are introducing products and services which utilize 5G technologies. All of these wireless technologies are built to support Internet Protocol (IP) communications and are capable of high speed data transmission.

19. On information and belief, WiMAX is a wireless industry trade name for the IEEE 802.16 standards for broadband wireless access (BWA) networks. According to the WiMAX Forum (a wireless industry coalition supporting the advancement of WiMAX technologies), the group's aim is to promote and certify compatibility and interoperability of devices based on a standard (the "802.16 specification," or "WiMAX Standards"), and to develop such devices, or support their development, for the marketplace.

20. On information and belief, Sprint participated in meetings held by the working group during the development of the WiMAX Standards. Sprint was a "WiMAX Forum member." The WiMAX Forum's goal is to accelerate the adoption, deployment and expansion of WiMAX technologies across the globe while facilitating roaming agreements, sharing best practices within the forum and certifying products. (See e.g. http://wimaxforum.org/Page/About.)

21. On information and belief, as a member of the WiMAX Forum, Sprint would have

been involved in the development of the WiMAX Standards in some capacity. For instance, some of the benefits of being a WiMAX Forum member include "[i]nfluenc[ing] the development of WiMAX™ technology through involvement in Working Groups." (See e.g. http://wimaxforum.org/Page/Membership/Membership-Benefits.) As noted above, Sprint and Clearwire had knowledge that RAZE had filed one or more patent applications leading to the '931 patent by virtue of their communications with RAZE during 2001-2002.

22. On information and belief, LTE technology is managed by an organization of interested parties called the 3rd Generation Partnership Project (3GPP). 3GPP was originally developed to support the Global System for Mobile Communications (GSM) standard. (See e.g. White Paper, WiMAX versus Long Term Evolution (LTE) Wireless Air Interface Standards, available at https://www.yumpu.com/en/document/read/39296623/wimax-vs-long-term-evolution-lte-utc-canada.) The specifications of these efforts are formally known as the "evolved UMTS terrestrial radio access" (E-UTRA) and "evolved UMTS terrestrial radio access network" (E-UTRAN), ("LTE Standards").

23. On information and belief, the LTE Standards were significantly influenced by the WiMAX Standards. Unlike the organization governing the development and adoption of the WiMAX Standards, the governing body related to the LTE Standards was relatively exclusive. In particular, it was effectively limited to a small number of major carriers and equipment makers. High participation fees and other barriers limited the ability of smaller entities like RAZE to participate.

24. With the exception of some minor variations, the LTE Standards adopted the core framework of the WiMAX Standards. This occurred in part because a number of the major carriers and equipment makers, including Sprint, participated in or observed meetings related to the development of the WiMAX Standards. As a result, the two sets of standards include much of the same core technology. For instance, the LTE Standards define a physical layer radio access

technology based on Orthogonal Frequency Division Multiple Access (OFDMA) for the downlink, similar in concept to the PHY layer of Mobile WiMAX.

25. Beginning in the mid to late 2000s, the cellular industry changed dramatically with the rising popularity of smartphones, which combine the features of a mobile cell phone with a personal computer operating system capable of wirelessly transmitting data over the carrier's network. The great demand for smartphones with high-speed data functionality prompted the major wireless cellular carriers to invest heavily in 4G networks, such as WiMAX and LTE, and to use their existing licenses, acquire licenses from other owners, or purchase licenses from the FCC for increased bandwidth capacity in the 700 MHz, 1700-2100 MHz, 1900MHz and 2500- 2700 MHz spectrums. (*See e.g.* http://www.tmonews.com/2014/12/fcc-speeds-up-aws-3-auction-as-bids-reach-41-billion.) Consequently, most of the wireless carriers began to transition from 3G networks to 4G (WiMAX and LTE) networks.

26. Beginning no later than May 2019, Sprint rolled out a 5G network in major cities, including Dallas and Fort Worth. On information and belief, Sprint has continued to expand its rollout of 5G technology in the United States, including technology capable of transmitting in both 4G and 5G modes. 5G technology builds on 4G technologies and continues to make use of the inventions of the '931 patent.

27. On information and belief, each Defendants' systems, equipment, and software used to deliver cellular voice and/or data services to users, as well as the processes and methods for delivering such services (collectively the "Accused Instrumentalities"), currently operate or have operated in compliance with the WiMAX and/or LTE 4G technical standards or the newer 5G standards. Specifically, Sprint's wireless products and services implemented the WiMAX Standards at least from 2008 to the present day. In October of 2011, Sprint announced its intention to transition from 4G WiMAX to 4G LTE beginning in November 2015. (*See e.g.*

http://gizmodo.com/5847643/its-official-sprint-is-going-lt.) And in May 2019, Sprint began to rollout 5G networks in major cities and surrounding areas (*See, e.g.*, https://newsroom.sprint.com/sprint-lights-up-true-mobile-5g-in-dallas-fort-worth.htm.) Accordingly, on information and belief, during periods relevant to this Complaint, Sprint's Accused Instrumentalities operated in compliance with either the WiMAX or LTE 4G Standards, or both, and are now also being operated in compliance with 5G standards.

28. Assurance, which was previously known as Virgin Mobile, is a "pre-paid" wireless service owned by Sprint which operates on Sprint Spectrum's WiMAX and LTE 4G networks. On information and belief, Assurance will also operate on Sprint Spectrum's 5G Network.

29. SprintCom and its predecessor Boost Mobile LLC is a "pre-paid" wireless service owned by Sprint and operating on Sprint's WiMAX and KTE 4G networks." On information and belief, SprintCom will also operate on Sprint Spectrum's 5G Network.

30. The Defendants practice claims 2-9, 11-18 and 20-29 of the '931 patent as alleged in General Access's April 10, 2020 P.R. 3-1 and 3-2 initial infringement contentions, which are hereby incorporated by reference.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 7,230,931

31. The allegations set forth in the foregoing paragraphs 1 through 29 are incorporated into this First Claim for Relief.

32. On February 6, 2007, U.S. Patent No. 7,230,931 ("the '931 patent"), entitled "Wireless Access System Using Selectively Adaptable Beam Forming In TDD Frames and Method of Operation," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '931 patent is attached as Exhibit 1.

33. The inventions of the '931 patent resolve technical problems related to the use of wireless communications technology. For example, the inventions allow parties to provide an

improved air interface system for use in a fixed wireless access network that maximizes usage of the available bandwidth in a cell site while utilizing a beamforming configuration to transmit data between mobile user devices and a series of base stations. Specifically, the system uses, for example, multiple modulation groups and a beamforming configuration in the air interface to transmit data to, and to receive data from, a subscriber access device in a cell site and/or a sector within a cell site.

34. The claims of the '931 patent recite one or more inventive concepts that are rooted in utilizing a beamforming configuration in a wireless communications network, and overcome problems specifically arising in the realm of wireless communications technology.

35. The claims of the '931 patent recite an invention that is not merely the routine or conventional use of beamforming in wireless access communications technology. Instead, to improve transmission quality for voice and data services, channel conditions between the user equipment (e.g., mobile cell phone and/or computer laptop) and the network base station are dynamically monitored to reduce interference and transmission errors. The '931 patent claims thus specify how the data link between the base station and the user equipment is monitored and configured, for example through beamforming to yield an improved communications link.

36. General Access is the assignee and owner of the right, title and interest in and to the '931 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

37. Upon information and belief, each Defendant has and continues to directly infringe one or more claims of the '931 patent by making, using, selling, importing and/or providing and causing to be used a wireless network implementing the WiMAX and LTE 4G Standards and the 5G standard.

38. On information and belief, the infringing networks are marketed, provided to, and/or used by or for each Defendant's partners, clients, customers and end users across the

country and in this District.

39. Each Defendant was made aware of the '931 patent and its infringement thereof no later than the filing of this Complaint.

40. Upon information and belief, since at least the time each Defendant received notice, each Defendant has induced and continues to induce others to infringe at least one claim of the '931 patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to each Defendant's partners, clients, customers, and end users, whose use of the Accused Instrumentalities constitutes direct infringement of at least one claim of the '931 patent.

41. In particular, each Defendant's actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the Accused Instrumentalities and providing instruction materials, training, and services regarding the Accused Instrumentalities. On information and belief, each Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because each Defendant has had actual knowledge of the '931 patent and knowledge that its acts were inducing infringement of the '931 patent since at least the date each Defendant received notice that such activities infringed the '931 patent.

42. Upon information and belief, each Defendant is liable as a contributory infringer of the '931 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States computerized trading platforms to be especially made or adapted for use in an infringement of the '931 patent. The Accused Instrumentalities are a material component for use in practicing the '931 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

43. Defendants' infringement has been willful because they infringed despite knowing

about the '931 patent and the fact that their networks infringe. As discussed above, Sprint and Clearwire had knowledge of the '931 patent or the invention/application relating thereto as early as 2001. Furthermore, Defendants have continued to infringe despite knowing of their infringement by virtue of the filing of the original complaint against them in May 2016.

44. General Access has been harmed by each Defendant's infringing activities.

JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, General Access demands a trial by jury on all issues triable as such.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff General Access demands judgment for itself and against each Defendant as follows:

A. A finding and judgment that each Defendant has infringed and continues to infringe the '931 patent, either literally or under the doctrine of equivalents;

B. An award of damages to be paid by each Defendant adequate to compensate General Access for each Defendant's past infringement of the '931 patent, and any continuing or future infringement, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A finding and judgment that Defendants' infringement has been willful, and awarding General Access enhanced damages for willful infringement as provided by 35 U.S.C. § 284;

D. An order and judgment requiring Defendants to pay General Access pre-judgment and post-judgment interest on the damages awarded;

E. A finding and judgment that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff's reasonable attorneys' fees; and

F. An award to General Access of such further relief at law or in equity as the Court

deems just and proper.

Dated: July 6, 2020

Respectfully submitted,

BARTLIT BECK LLP

/s/ Glen E. Summers

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing document was filed electronically on July 6, 2020 using the Court's CM/ECF system, which will send notice of such filing to all counsel of record.

/s/ Glen E. Summers
Glen E. Summers