UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF FLORIDA

ORLANDO COMMUNICATIONS LLC, Plaintiff, v. SPRINT SPECTRUM L.P., and SPRINT CORPORATION, Defendant.	Civil Action No. 6:14-cv-01022-Orl-22KRS

SECOND AMENDED AND SUPPLEMENTAL COMPLAINT FOR PATENT INFRINGEMENT AND DEMAND FOR JURY TRIAL – INJUNCTION SOUGHT

Plaintiff, Orlando Communications LLC ("Orlando"), complains against Defendant, Sprint Spectrum L.P. and Sprint Corporation ("the Carrier").

PARTIES

1. Orlando is a Florida limited liability company with principal place of business at 2400 Dallas Parkway, Suite 200, Plano, TX 75093.

2. Sprint Spectrum, L.P. is a Delaware limited partnership and Sprint Corporation is a Delaware corporation, both with their principal place of business at 6200 Sprint Parkway, Overland Park, KS 66251.

3. The Carrier provides to its subscribers mobile voice and data services ("the Carrier Services") on its 3G and 4G wireless network ("the Carrier Network"). The Carrier Services include the Unlimited talk and text plan, Sprint Prepaid, and Family Share Pack.

4. The Carrier furnishes to its subscribers Carrier Handsets that it uses to provide the Carrier Services. Carrier Handsets include certain Kyocera manufactured tablets, smartphones,

and other 3G or 4G voice/data mobile units that the Carrier has certified, after testing, as meeting the Carrier's requirements to be activated on the Carrier Network.

5. The Carrier Handsets include the Kyocera DuraCore, Kyocera DuraPlus, Kyocera DuraXT, Kyocera Echo, Kyocera Hydro Edge, Kyocera Kona, Kyocera Milano, Kyocera Rise, Kyocera Torque, and Kyocera Verve devices, and possibly others.

JURISDICTION

6. This action arises under the patent laws of the United States, Title 35 of the United States Code, 35 U.S.C. §§ 101, et seq. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331, 1332(a), and 1338(a).

7. Personal jurisdiction exists over Defendants because they have responsibility for using, making available, and marketing products in this district, the use of which in this district infringes each of Orlando's patents, as described below.

8. Venue is proper in this judicial district under 28 U.S.C. §§ 1391(b)-(c) and 1400(b).

COUNT I

Infringement of U.S. Patent No. 6,009,553

9. This Count incorporates by reference paragraphs 1-8, above.

10. Orlando owns United States patent number 6,009,553, entitled "Adaptive Error Correction for a Communication Link," ("the '553 patent"), which issued to inventors Dennis Martinez, Thomas Hengeveld, and Michael Axford on December 28, 1999. Ex. A.

11. The Carrier has infringed at least method claims 1, 2, 5, 8, and 9 of the '533 patent by performing each step of those claims.

THE CARRIER NETWORK

12. The Carrier has built and maintains the Carrier Network, which extends across the United States. Sprint advertises that its network offers fewer dropped calls, stronger indoor signals, and quicker access to email. It advertises that its network is 4G LTE compatible in more than 470 markets. Sprint boasts that the Sprint Spark allows one to stream videos, listen to music, and enjoy lag-free mobile gaming.

13. To maintain the level of performance that it advertises and to compete effectively, the Carrier incorporates in its network considerable technology, and take steps to assure that all components of its Carrier Network meet required standards.

14. In constructing its Carrier Network, the Carrier distributes Carrier Handsets to its subscribers (end users). Before allowing a model of handset to be distributed as a Carrier Handset, certified to be activated and used as part of the Carrier Network, the Carrier specifies requirements that those handset must meet, and subjects samples to testing to confirm those handsets have the required capability.

15. The Carrier provides base stations as part of the Carrier Network, registers its Carrier Handsets in the Carrier Network, and operates both the base stations and the Carrier Handsets, to cause data to be sent from the base stations to its Carrier Handsets.

16. In the Carrier Network, Carrier Handsets communicate wirelessly with a base station, which the Carrier operates. For the Carrier Network to operate effectively, and to meet diverse requirements of security, network speed, network reliability, and spectrum efficiency, among many others, the Carrier must assure that the Carrier Handsets include software compatible with software on the base station, and that the software on the Carrier Handsets enables the Carrier to itself operate and control certain essential functions of the Carrier

Handsets, by sending signaling messages to the Carrier Handsets to perform those functions. Without the ability to itself operate and control the Carrier Handsets to perform those essential functions, the Carrier would not be able to maintain its Carrier Network.

17. The Carrier has some control over the programming of the software on the Carrier Handsets, as it requires its subscribers, as a condition of using its Carrier Network, to allow the Carrier to "push software updates to [consumer's] device to improve device features, security, and performance." Ex. B.

18. The Carrier provides for its Carrier Handsets Subscriber Identity Module (SIM) cards it has uniquely configured for use in the Carrier Network. The Carrier configures its Carrier Handsets to work within and become part of its Carrier Network, when within range of a cell of its Carrier Network.

19. The Carrier has designed its Carrier Network so that the Carrier, and only the Carrier, maintains complete control over many functions that the Carrier Handsets perform. *See* Exhibit C ("Each eNB is a base station that *controls* the mobile in one or more cells.…The eNB *controls* the low-level operation of all its mobiles, by sending them signalling messages….") (Emphasis added.)

INFRINGEMENT

20. The Carrier infringes by performing some steps on the Carrier's own base station, and performing the other steps by using its base station to send signaling messages to operate and control the functions of its Carrier Handsets that perform those steps ("the handset steps").

21. The Carrier, and only the Carrier, controls the performance of the handset steps. The end user of the handset does not control that performance. The end user will not even be aware of the claimed steps, or the performance of those steps. Even if the end-user were made

aware that the handset steps are performed, the end user would be powerless to prevent that performance in using of the handset. The end user cannot program or reprogram these functions of the handset, nor can the end user, when using the handset, prevent the program on the handset from performing those functions.

22. The Carrier thus infringes because it performs all steps of the claimed methods, including through its exclusive control of the performance of the handset steps. No other entity, including the end user, has any control over the performance of any of the steps.

23. The Carrier does not itself design or build the handset, although it does require this functionality. Rather, the Carrier's performance of the handset steps arises from the Carrier's sending of signaling messages to the handset, which messages cause that performance.

24. The Carrier also infringes when its employees or other agents use the Carrier Handsets to perform services on the Carrier's behalf.

25. The Carrier also infringes when it performs some steps on its base stations and provides to its subscribers Carrier Handsets programmed to automatically perform the handset steps.

INFRINGING METHOD OF OPERATION

26. Each Carrier Handset has a chipset that implements standard functionality, in the form of hardware, firmware, and software on the chipset. Kyocera either produces the chipset itself, or obtains it from a vendor.

27. The standard functionality complies with LTE and EVDO standards, among other things, causing a downlink (base station to Carrier Handset) transfer of data.

28. The Carrier Handsets use LTE when operating in a 4G mode in the Carrier Network, and when the base station is sending data to the Carrier Handset in the downlink

direction. In doing so, the Carrier's base station controls certain functions of its Carrier Handsets, without any control by, or even involvement of, the subscriber, and causes the Carrier Handsets to perform those functions.

29. The Carrier Handsets use EVDO when operating in a 3G mode in the Carrier Network, and when the base station is sending data to the Carrier Handset in the downlink direction. In doing so, the Carrier's base station controls certain functions of its Carrier Handsets, without control by, or even involvement of, the subscriber, and causes the Carrier Handsets to perform those functions.

30. In the 4G mode, in a downlink data transmission from the base station to the Carrier Handsets, per the LTE standard, the Carrier's base stations transmit pilot signals and the Carrier Handsets measure those signals. In the 4G mode, an error correction encoder is determined as a function of the measured signal – by changing the code rate. With LTE, the encoder is a convolutional encoder. Per the LTE standard, each code block is individually turbo encoded.

31. In 3G mode, per the EVDO standard, which occurs in the 3G mode, the Carrier's base stations transmit pilot signals and the Carrier Handsets measure those signals. The Carrier Handsets then communicate back to the base station over a reverse traffic channel. An error correction encoder is determined as a function of the measured signal – by changing the code rate. With EVDO, the Carrier encodes the packets with the code rates.

32. The Carrier Handsets measure signal-to-noise ratio (SNR) or its equivalent to determine CQI. They also measure absolute signal power, or its equivalent.

33. The above is one, but not the only, example of the infringing method of operation.

34. The Carrier thus has liability for infringement of the '553 patent under 35 U.S.C. §271(a).

35. The Carrier's infringement, set forth above, has damaged Orlando.

36. The Carrier is liable in an amount that adequately compensates Orlando for the infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. §284.

37. The Carrier's infringement and consequent damage will continue unless that Defendant is enjoined.

COUNT II

Infringement of U.S. Patent No. 5,687,196

38. This Count incorporates by reference paragraphs 1-8 and 12-25, above.

39. Orlando owns United States patent number 5,687,196, entitled "Range and Bearing Tracking System with Multipath Rejection" ("the '196 patent"), which issued to inventors James Arthur Proctor, Jr. and James Carl Otto on November 11, 1997. Ex. D.

40. The Carrier, when providing the Carrier Services, infringed at least method claims 12, 13, 14, and 16 of the '196 patent.

41. This infringement involved the Carrier's performing each step by the Carrier's base station's operating and controlling a Carrier Handset to perform some or all of the claimed functions.

42. Per the Carrier and others, in submissions to the FCC, under Phase II of the E911 rules, and consistent with the AFLT standard, the Carrier's 3G and 4G networks included location services capabilities, each involving handset-based fallback technology involving AFLT.

43. This technology involved a determination of distance.

44. The standard contemplated that a multipath signal would be received. With AFLT, the handset measured the signal time from different surrounding base stations.

45. On information and belief, per Section 6.2.2.1 of IS-95B, the handset in the Carrier Network used a rake receiver, which correlated the multipath signal into plural path signals and measured the times of arrivals of those plural path signals. With the rake receiver, a searcher scans the time domain and measures the times of arrivals of multipath pilot signals.

46. The AFLT specification referred to correlation and arrival time measurement (at the mobile unit) of plural multipath components. The determination of distance was based on a determination of the path signal having the earliest time of arrival.

47. Location software, provided in a Qualcomm gpsOne chip and including an API for interfacing with the software, was provided on at least some of the Carrier Handsets. The location software, when executed, carried out the AFLT functionality described above. The location software was executed by the Carrier when it provided location information in response to 911 calls placed on its network.

48. The Carrier did not itself design or build the handset, although it did require this functionality. Rather, the Carrier's performance of the handset steps arose from the Carrier's sending of signaling messages to the handset, which messages caused that performance.

49. The Carrier also infringed when its employees or other agents used the Carrier Handsets to perform services on the Carrier's behalf.

50. The Carrier also infringed when it performed some steps on its base stations and provided to its subscribers Carrier Handsets that Kyocera designed and built and that Kyocera or a vendor programmed to automatically perform the handset steps.

51. The Carrier thus has liability for infringement of the '196 patent under 35 U.S.C. §271 (a).

52. The Carrier's infringement, as set forth above, has damaged Orlando.

53. The Carrier is liable in an amount that adequately compensates Orlando for the infringement, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35U.S.C. §284.

DEMAND FOR JURY TRIAL

Orlando requests a trial by jury.

PRAYER FOR RELIEF

For the above reasons, Orlando respectfully requests that this Court enter judgment:

A. That the Carrier has infringed the '553 and '196 patents;

B. Enjoining the Carrier, its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert or privity with it from infringement of the '553 patent, under 35 U.S.C. §283;

C. That the Carrier pay Orlando damages with interest and costs, under 35 U.S.C. §284;

D. Declaring this case exceptional under 35 U.S.C. §285 and awarding attorneys' fees; and

E. Granting any further relief that the Court may decide appropriate.

Date: March 30, 2015

ORLANDO COMMUNICATIONS LLC

/s/ James J. Foster

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CERTIFICATE OF SERVICE

I certify that on March 30, 2015, all counsel of record were served with a copy of the foregoing document via electronic service through the Court's CM/ECF filing system.

/s/ James J. Foster