UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION

TRAXCELL TECHNOLOGIES, LLC, Plaintiff,	)	
	)	**Civil Action No. 6:22-cv-00992**
v.	)	
T-MOBILE USA, INC., SPRINT COMMUNICATIONS COMPANY, LP, SPRINT CORPORATION, SPRINT SPECTRUM, LP AND SPRINT SOLUTIONS, INC. ERICSSON, INC., NOKIA OF AMERICA CORP., NOKIA SOLUTIONS AND NETWORKS OY, and SAMSUNG ELECTRONICS AMERICA, INC. Defendants.	)	**JURY TRIAL DEMANDED**

PLAINTIFF'S FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Traxcell Technologies, LLC ("Traxcell") files this First Amended Complaint,[1] and demand for jury trial seeking relief from patent infringement by T-Mobile USA, Inc. ("T-Mobile"); Sprint Spectrum LLC and Sprint Solutions, Inc. (collectively "Sprint");[2] Ericsson, Inc. ("Ericsson"); Nokia of America Corp. ("Nokia Corp."); Nokia Solutions and Networks Oy ("Nokia Finland"); and, Samsung Electronics America, Inc. ("Samsung") (collectively referred to as "Defendants"), alleging infringement of the claims of U.S. Pat. No. 11,445,328 ("the '328 patent"); U.S. Pat. No. 10,701,517 ("the '517 patent"); U.S. Pat. No. 10,743,135 ("the '135 patent"); and, U.S. Pat. No. 10,820,147 ("the '147 patent") (collectively referred to as "Patents-in-Suit"), as follows:[3]

I. THE PARTIES

[1] The '328 patent, the '517 patent, the '135 patent and the '147 patent have prosecution history disclaimers for at least the claim terms *location* and *computer*.
[2] Sprint and T-Mobile merged beginning on April 29, 2018 and was approved April 1, 2020.
[3] This First Amended Complaint is being filed before any defendant answers.

1. Plaintiff Traxcell is a Texas Limited Liability Company, with its principal place of business located at Traxcell Technologies LLC, 617 North 4th Street, Suite "S," Waco, TX 76701.

2. T-Mobile Wireless is Delaware corporation with its principal place of business at One T-Mobile Way, Basking Ridge, New Jersey and a registered agent for service of process at CT Corp System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136. On information and belief, T-Mobile Wireless Personal Communications, LP sells and offers to sell products and services throughout Texas, including in this judicial district, and introduces products and services that perform infringing processes into the stream of commerce knowing that they would be sold in Texas and this judicial district, including at 2448 W Loop 340 Suite 24a, Waco, TX 76711.

3. Ericsson is a corporation, with its principal place of business located at 6300 Legacy Drive, Plano, Texas 75024 and may be served with process at its registered agent Capitol Corporate Services, Inc. 206 E. 9th Street, Suite 1300, Austin, Texas 78701. On information and belief, Ericsson sells and offers to sell products and services throughout Texas, including in this judicial district, and introduces products and services that perform infringing processes into the stream of commerce knowing that they would be sold in Texas and this judicial district.

4. (Intentionally left blank)

5. (Intentionally left blank)

6. Sprint Spectrum LLC is a Delaware Limited Liability Corporation with its principal place of business at 6200 Sprint Parkway, Overland Park, Kansas 66251 and a registered agent for service at Corporation System, 211 E. 7th Street, Suite 620, Austin, Texas 78701-3218. On information and belief, Sprint Spectrum, LP sells and offers to sell products and services throughout Texas, including in this judicial district, and introduces products and services that

perform infringing processes into the stream of commerce knowing that they would be sold in Texas and this judicial district, including at 2448 W Loop 340 Suite 24a, Waco, TX 76711.

7. Sprint Solutions, Inc. is a Delaware Corporation with its principal place of business at 6200 Sprint Parkway, Overland Park, Kansas 66251 and a registered agent for service at Corporation System, 211 E. 7th Street, Suite 620, Austin, Texas 78701-3218. On information and belief, Sprint Solutions, Inc. sells and offers to sell products and services throughout Texas, including in this judicial district, and introduces products and services that perform infringing processes into the stream of commerce knowing that they would be sold in Texas and this judicial district, including at 2448 W Loop 340 Suite 24a, Waco, TX 76711.

8. Nokia Corp is a corporation organized and existing under the laws of Delaware, with a principal places of business located at (1) 6000 Connection Drive, MD E4-400, Irving, TX 75039; (2) 601 Data Dr., Plano, TX 75075; and, (3) 2400 Dallas Pkwy., Plano, TX 75093, and a registered agent for service of process at National Registered Agents, Inc, 16055 Space Center, Suite 235, Houston, TX 77062. On information and belief, Nokia Corp. sells and offers to sell products and services throughout Texas, including in this judicial district, and introduces products and services that perform infringing processes into the stream of commerce knowing that they would be sold in Texas and this judicial district, including at 10431 Morado Cir building 5 suite 200, Austin, TX 78759.

9. Nokia Finland is a is a corporation organized and existing under the laws of Finland, with a principal place of business 6000 Connection Drive, MD E4-400, Irving, TX 75039 and a registered agent for service of process at National Registered Agents, Inc, 16055 Space Center, Suite 235, Houston, TX 77062. On information and belief, Nokia sells and offers to sell products and services throughout Texas, including in this judicial district, and introduces products and

services that perform infringing processes into the stream of commerce knowing that they would be sold in Texas and this judicial district, including at 10431 Morado Cir building 5 suite 200, Austin, TX 78759. (Nokia Corp. and Nokia Finland are collectively referred to as "Nokia.")

10. Samsung is a corporation organized and existing under the laws of the state of New York, maintains its principal place of business at 85 Challenger Road, Ridgefield Park, NJ 07660, and has a registered agent for service of process at CT Corporation System, located at 1999 Bryan Street. Suite 900, Dallas, TX 75201. On information and belief, Samsung America sells and offers to sell products and services throughout Texas, including in this judicial district, and introduces products and services that perform infringing processes into the stream of commerce knowing that they would be sold in Texas and this judicial district, including at 3900 N Capital of Texas Hwy, Austin, TX 78746.

II. JURISDICTION AND VENUE

11. This is an action for patent infringement arising under the patent laws of the U.S., 35 U.S.C. §§ 1 et. seq. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

12. This Court has personal jurisdiction over T-Mobile because: T-Mobile is present within or has minimum contacts within the State of Texas and this judicial district; T-Mobile has purposefully availed itself of the privileges of conducting business in the State of Texas and in this judicial district; T-Mobile regularly conducts business within the State of Texas and within this judicial district; and Plaintiff's cause of action arises directly from T-Mobile's business contacts and other activities in the State of Texas and in this judicial district.

13. Venue is proper in this district under 28 U.S.C. § 1400(b). T-Mobile has committed acts of infringement and has a regular and established place of business in this District.

14. This Court has personal jurisdiction over Ericsson because: Ericsson is present within or has minimum contacts within the State of Texas and this judicial district; Ericsson has purposefully availed itself of the privileges of conducting business in the State of Texas and in this judicial district; Ericsson regularly conducts business within the State of Texas and within this judicial district; and Plaintiff's cause of action arises directly from Ericsson's business contacts and other activities in the State of Texas and in this judicial district.

15. Venue is proper in this district under 28 U.S.C. § 1400(b). Ericsson has committed acts of infringement and has a regular and established place of business in this District, including at least 1703 W 5th St, Austin, TX 78703.

16. This Court has personal jurisdiction over Sprint because: Sprint is present within or has minimum contacts within the State of Texas and this judicial district; Sprint has purposefully availed itself of the privileges of conducting business in the State of Texas and in this judicial district; Sprint regularly conducts business within the State of Texas and within this judicial district; and Plaintiff's cause of action arises directly from Sprint's business contacts and other activities in the State of Texas and in this judicial district.

17. Venue is proper in this district under 28 U.S.C. § 1400(b). Sprint has committed acts of infringement and has a regular and established place of business in this District.

18. This Court has personal jurisdiction over Nokia Corp. because: Nokia Corp. is present within or has minimum contacts within the State of Texas and this judicial district; Nokia Corp. has purposefully availed itself of the privileges of conducting business in the State of Texas and in this judicial district; Nokia Corp. regularly conducts business within the State of Texas and within this judicial district; and Plaintiff's cause of action arises directly from Nokia Corp.'s business contacts and other activities in the State of Texas and in this judicial district.

19. Venue is proper in this district under 28 U.S.C. § 1400(b) because Nokia Corp. has committed acts of infringement and has a regular and established place of business in this District.

20. This Court has personal jurisdiction over Nokia Finland because: Nokia Finland is present within or has minimum contacts within the State of Texas and this judicial district; Nokia Finland has purposefully availed itself of the privileges of conducting business in the State of Texas and in this judicial district; Nokia Finland regularly conducts business within the State of Texas and within this judicial district; and Plaintiff's cause of action arises directly from Nokia Finland's business contacts and other activities in the State of Texas and in this judicial district.

21. Venue is proper in this district under 28 U.S.C. § 1400(b) because Nokia Finland has committed acts of infringement and has a regular and established place of business in this District, including at least 1703 W 5th St, Austin, TX 78703.

22. This Court has personal jurisdiction over Samsung because: Samsung is present within or has minimum contacts within the State of Texas and this judicial district; Samsung has purposefully availed itself of the privileges of conducting business in the State of Texas and in this judicial district; Samsung regularly conducts business within the State of Texas and within this judicial district; and Plaintiff's cause of action arises directly from Samsung's business contacts and other activities in the State of Texas and in this judicial district.

23. Venue is proper in this district under 28 U.S.C. § 1400(b) because Samsung has committed acts of infringement and has a regular and established place of business in this District.

V. INFRINGEMENT ('328 Patent (Attached as exhibit A))

24. On September 13, 2022, U.S. Patent No. 11,445,328 ("the '328 patent") entitled "Wireless network and method for suggesting corrective action and restricting communications in

response to detecting communications errors" was duly and legally issued by the U.S. Patent and Trademark Office. Traxcell owns the '328 patent by assignment.

25. The '328 Patent's Abstract states, "A mobile wireless network and a method of operation provide analysis of mobile wireless device communications and suggested corrective initiated upon detecting communications performance issues."

A. T-Mobile and Sprint

26. The preliminary exemplary chart attached as Exhibits B and C provides notice of Traxcell's allegations of infringement against T-Mobile and Sprint.[4] For purposes of this complaint, a wireless network comprises at least: (1) Radio Access Network comprising at least one base station controller, at least one transceiver, and at least one antenna; (2) a system of computers, the system of computers comprising computers associated with the at least one base station controller(s); computers functioning for network optimization, including at least computers implementing D-SON and C-SON;[5] and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[6]

27. T-Mobile and Sprint make, use, offer to sell, and/or sell within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions such that T-Mobile and Sprint infringe claims 1–24 of the '328 patent, literally or under the doctrine of equivalents.

28. More specifically, T-Mobile and Sprint make, use, offers to sell, and/or sell within or imports into the U.S. wireless networks, wireless-network components, and related

[4] Sprint network architecture is different than T-Mobile network architecture.
[5] It is understood that at least a portion of Sprint's C-SON is licensed from Cisco, but C-SON not provided by Cisco would not be licensed.
[6] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

services that use performance measurements to suggest corrective actions for monitoring trends such that T-Mobile and Sprint infringe claims 1–24 of the '328 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it. T-Mobile and Sprint's equipment providers include Ericsson, Nokia and Samsung.

29. Again more specifically, T-Mobile and Sprint put its wireless network into use, and or causes T-Mobile and Sprint subsidiaries or family of companies, vendors, partners to put components of the wireless network in use, and controls it by using the wireless network to perform or have performed on it the claimed functions, as charted in Exhibits B and C. For example, a component of the system of computers that is used in providing access to an indication of location of a wireless device may be controlled by one or more T-Mobile and Sprint subsidiaries or family of companies, vendors, or partners. In addition to Exhibits B and C and the facts alleged herein, additional relevant facts are recited in Traxcell's Infringement Contentions.

30. Again more specifically, T-Mobile and Sprint receive the benefits of the claims from the patent's teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network. Benefits of practicing the claims of the '328 include the ability to tune a wireless network in order to improve quality of service ("QoS") from a wireless user's point of view. This includes better voice quality, fewer dropouts, and improved handoff procedures if QoS deteriorates near the edge of a cell. Practicing the claims of the '328 patent also provides for an increase in the number of users who can simultaneously use a network. Furthermore,

the claims of the ’328 patent enable network operators to allocate resources in a very efficient way and reduce costs.

31. Again more specifically, T-Mobile And Sprint receive the benefits of the claims of the ’328 providing:

    a. Increased automation for higher network performance with lower cost;

    b. Network Quality Optimization: the user experience;

    c. Reduction in Power/Energy Consumption (reduced OPEX);

    d. Reduction in Carbon Dioxide Emissions;

    e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

    f. Reduction in the need for Over-Dimensioning;

    g. Reduction or deferment of CAPEX;

    h. Access to location information of a wireless device; and,

    i. the like.

32. T-Mobile and Sprint put the inventions claimed by the ‘328 Patent into service (i.e., used them); but for T-Mobile and Sprint’s actions, the claimed-inventions embodiments involving T-Mobile and Sprint’s products and services would never have been put into service. T-Mobile’s acts complained of herein caused those claimed-invention embodiments as a whole to perform, and T-Mobile and Sprint obtaining monetary and commercial benefit from it.

33. Defendant has and continues to induce infringement from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile and Sprint on October 31, 2017. T-Mobile has actively encouraged or instructed

others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that use performance measurements to suggest corrective actions and controlling access to location information) such to cause infringement claims 1-24 of the '328 patent, literally or under the doctrine of equivalents. Moreover, T-Mobile and Sprint have known and should have known of the '328 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to T-Mobile by the U.S. Patent and Trademark Office during prosecution of one of T-Mobile and Sprint's patent applications. Further, Sprint, with which T-Mobile merged, received a letter from Traxcell in 2007 enclosing a copy of the application that issued as the '284 patent. More specifically, T-Mobile and Sprint have known or should have known of the '328 patent since being sued previously by Traxcell on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Sprint's lawyers that he had other family related patents.

34. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile and Sprint on October 31, 2017. T-Mobile and Sprint have actively encouraged or instructed others (e.g., its customers, and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–24 of the '328 patent, literally or

under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, T-Mobile and Sprint have known and should have known of the '328 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to T-Mobile and Sprint by the U.S. Patent and Trademark Office during prosecution of one of T-Mobile/Sprint's patent applications. More specifically, T-Mobile and Sprint have known or should have known of the '328 patent since it was brought into defend a lawsuit brough by Traxcell against T-Mobile and Sprint on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Sprint's lawyers in the other litigation that he had other family related patents.

35. T-Mobile and Sprint have caused and will continue to cause Traxcell damage by infringing the '328 patent.

C. Nokia

36. The preliminary exemplary chart attached as Exhibit B provides notice of Traxcell's allegations of infringement against Nokia. For purposes of this complaint, a wireless network comprises at least: (1) Radio Access Network comprising at least one base station controller, at least one transceiver, and at least one antenna; (2) a system of computers, the system of computers comprising computers associated with the at least one base station controller(s); computers functioning for network optimization, including at least computers

implementing D-SON and C-SON; and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[7]

37. Nokia makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Nokia infringes claims 1–24 of the '328 patent, literally or under the doctrine of equivalents.

38. More specifically, Nokia makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Nokia infringes claims 1–24 of the '328 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it.

39. Again more specifically, Nokia receives the benefits of the claims from the patent's teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network. Benefits of practicing the claims of the '328 include the ability to tune a wireless network in order to improve quality of service ("QoS") from a wireless user's point of view. This includes better voice quality, fewer dropouts, and improved handoff procedures if QoS deteriorates near the edge of a cell. Practicing the claims of the '328 patent also provides for an increase in the number of users who can simultaneously use a network. Furthermore,

[7] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

the claims of the ’328 patent enable network operators to allocate resources in a very efficient way and reduce costs.

40. Again more specifically, Nokia receives the benefits of the claims of the ’328 providing:

    a. Increased automation for higher network performance with lower cost;

    b. Network Quality Optimization: the user experience;

    c. Reduction in Power/Energy Consumption (reduced OPEX);

    d. Reduction in Carbon Dioxide Emissions;

    e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

    f. Reduction in the need for Over-Dimensioning;

    g. Reduction or deferment of CAPEX;

    h. Access to location information of a wireless device; and,

    i. the like.

41. Nokia put the inventions claimed by the ‘328 Patent into service (i.e., used them); but for Nokia’s actions, the claimed-inventions embodiments involving Nokia’s products and services would never have been put into service. Nokia’s acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Nokia obtaining monetary and commercial benefit from it.

42. Nokia has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[8] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S.

[8] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

wireless networks, wireless-network components (including Nokia network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–24 of the '328 patent, literally or under the doctrine of equivalents. Moreover, Nokia has known and should have known of the '328 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Nokia by the U.S. Patent and Trademark Office during prosecution of one of Nokia's patent applications. More specifically, Nokia has known or should have known of the '328 patent since it was previously sued by Traxcell on other family related patents. As well, a letter dated December 5, 2007 was sent to Nokia to discuss the patent applications sent to Nokia in August of 2007, attached as Exhibit D. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Nokia's lawyers in the other litigation that he had other family related patents and a reasonable company would monitor the family of patents.

43. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit. Nokia has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[9] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–24 of the '328

[9] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by or merged with T-Mobile USA, Inc.

patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, Nokia has known and should have known of the '328 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Nokia by the U.S. Patent and Trademark Office during prosecution of one of Nokia's patent applications. More specifically, Nokia has known or should have known of the '328 patent since it was sued in a lawsuit brought by Traxcell against Nokia on other family related patents. As well, a letter dated December 5, 2007 was sent to Nokia to discuss the patent applications sent to Nokia in August of 2007, attached as Exhibit D. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Nokia's lawyers in the other litigation that he had other family related patents and a reasonable company would monitor the family of patents. Nokia was assisting T-Mobile in its defense.

44. Nokia has caused and will continue to cause Traxcell damage by infringing the '328 patent.

D. Samsung

45. The preliminary exemplary chart attached as Exhibit C[10] provides notice of Traxcell's allegations of infringement against Samsung. For purposes of this complaint, a wireless network comprises at least: (1) Radio Access Network comprising at least one base station controller, at least one transceiver, and at least one antenna; (2) a system of computers, the system of computers comprising computers associated with the at least one base station controller(s); computers functioning for network optimization, including at least computers

[10] Chart contains Sprint network infrastructure and components by Samsung.

implementing D-SON and C-SON; and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[11]

46. Samsung makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Samsung infringes claims 1–24 of the '328 patent, literally or under the doctrine of equivalents.

47. More specifically, Samsung makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Samsung infringes claims 1–24 of the '328 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it.

48. Again more specifically, Samsung receives the benefits of the claims from the patent's teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network. Benefits of practicing the claims of the '328 include the ability to tune a wireless network in order to improve quality of service ("QoS") from a wireless user's point of view. This includes better voice quality, fewer dropouts, and improved handoff procedures if QoS deteriorates near the edge of a cell. Practicing the claims of the '328 patent also provides for an increase in the number of users who can simultaneously use a network. Furthermore,

[11] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

the claims of the ’328 patent enable network operators to allocate resources in a very efficient way and reduce costs.

49. Again more specifically, Samsung receives the benefits of the claims of the ’328 providing:

    a. Increased automation for higher network performance with lower cost;

    b. Network Quality Optimization: the user experience;

    c. Reduction in Power/Energy Consumption (reduced OPEX);

    d. Reduction in Carbon Dioxide Emissions;

    e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

    f. Reduction in the need for Over-Dimensioning;

    g. Reduction or deferment of CAPEX;

    h. Access to location information of a wireless device; and,

    i. the like.

50. Samsung put the inventions claimed by the ‘328 Patent into service (i.e., used them); but for Samsung’s actions, the claimed-inventions embodiments involving Samsung’s products and services would never have been put into service. Samsung’s acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Samsung obtaining monetary and commercial benefit from it.

51. Samsung has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[12] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S.

[12] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

wireless networks, wireless-network components (including Samsung network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–24 of the '328 patent, literally or under the doctrine of equivalents. Moreover, Samsung has known and should have known of the '328 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Samsung by the U.S. Patent and Trademark Office during prosecution of one of Samsung's patent applications. More specifically, Samsung has known or should have known of the '328 patent since it was previously sued by Traxcell on other family related patents and a reasonable company would monitor the family of patents. As well, in 2007, Samsung was contacted by letter concerning Traxcell's patent applications. No response was received.

52. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit. Samsung has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[13] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–24 of the '328 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, Samsung has known

[13] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

and should have known of the '328 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent.

53. patent, which followed the date that the patent's underlying application was cited to Samsung by the U.S. Patent and Trademark Office during prosecution of one of Samsung's patent applications. More specifically, Samsung has known or should have known of the '328 patent since it was sued in a lawsuit brought by Traxcell against Samsung on other family related patents and a reasonable company would monitor the family of patents. As well, in 2007, Samsung was contacted by letter concerning Traxcell's patent applications. No response was received.

54. Samsung has caused and will continue to cause Traxcell damage by infringing the '328 patent.

VII. INFRINGEMENT '517 Patent (Attached as exhibit E))

55. On June 30, 2020, U.S. Patent No. 10,701,517 ("the '517 patent"), attached as Exhibit C, entitled "Wireless network and method for suggesting corrective action based on performance and controlling access to location information" was duly and legally issued by the U.S. Patent and Trademark Office. Traxcell owns the '517 patent by assignment.

56. The '517 Patent's Abstract states, "A mobile device, wireless network and their method of operation provide suggestion of corrective actions of the network based on performance evaluation of communications between a connected mobile device and the communications network. The communications network tracks location of mobile devices and stores performance data of connections between the mobile devices and the network. The performance data is referenced to expected performance data to determine whether a fault exists and a corrective action is suggested when the fault exists. Access to the location

information by another computer is controlled by a preference flag set in response to a communication from the mobile device."

A. T-Mobile and Sprint

57. The preliminary exemplary chart attached as Exhibits G and H provide notice of Traxcell's allegations of infringement against T-Mobile and Sprint. For purposes of this complaint, a wireless network comprises at least: (1) Radio Access Network comprising at least one base station controller, at least one transceiver, and at least one antenna; (2) a system of computers, the system of computers comprising computers associated with the at least one base station controller(s); computers functioning for network optimization, including at least computers implementing D-SON and C-SON; and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[14]

58. T-Mobile and Sprint make, use, offer to sell, and/or sell within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions such that T-Mobile and Sprint infringe claims 1–29 of the '517 patent, literally or under the doctrine of equivalents.

59. More specifically, T-Mobile and Sprint make, use, offer to sell, and/or sell within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions for monitoring trends such that T-Mobile and Sprint infringe claims 1–29 of the '517 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it. Sprint and T-Mobile's equipment providers include Ericsson, Nokia and Samsung.

[14] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

60. Again more specifically, T-Mobile and Sprint put its wireless network into use, and or causes T-Mobile and Sprint subsidiaries or family of companies, vendors, partners to put components of the wireless network in use, and controls it by using the wireless network to perform or have performed on it the claimed functions, as charted in Exhibits G and H. For example, a component of the system of computers that is used in providing access to an indication of location of a wireless device may be controlled by one or more T-Mobile and Sprint subsidiaries or family of companies, vendors, or partners. In addition to Exhibits G and H and the facts alleged herein, additional relevant facts are recited in Traxcell's Infringement Contentions.

61. Again more specifically, T-Mobile and Sprint receive the benefits of the claims from the patent's teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network. Benefits of practicing the claims of the '517 include the ability to tune a wireless network in order to improve quality of service ("QoS") from a wireless user's point of view, including through at least tracking a wireless device and assessing its performance. This includes better voice quality, fewer dropouts, and improved handoff procedures if QoS deteriorates near the edge of a cell. Practicing the claims of the '517 patent also provides for an increase in the number of users who can simultaneously use a network. Furthermore, the claims of the '517 patent enable network operators to allocate resources in a very efficient way and reduce costs.

62. Again more specifically, T-Mobile and Sprint receive the benefits of the claims of the '517 providing:

    a. Increased automation for higher network performance with lower cost;

b. Network Quality Optimization: the user experience;

c. Reduction in Power/Energy Consumption (reduced OPEX);

d. Reduction in Carbon Dioxide Emissions;

e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

f. Reduction in the need for Over-Dimensioning;

g. Reduction or deferment of CAPEX;

h. Access to location information of a wireless device

i. Tracking of one or more wireless devices; and,

j. the like.

63. T-Mobile and Sprint put the inventions claimed by the '517 Patent into service (i.e., used them); but for T-Mobile and Sprint's actions, the claimed-inventions embodiments involving T-Mobile and Sprint's products and services would never have been put into service. T-Mobile and Sprint's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and T-Mobile and Sprint obtaining monetary and commercial benefit from it.

64. Defendant has and continues to induce infringement from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile and Sprint on October 31, 2017. T-Mobile and Sprint has actively encouraged or instructed others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that use performance measurements to suggest corrective actions and controlling access to location information) such to cause infringement claims 1-29 of the '517 patent, literally or under

the doctrine of equivalents. Moreover, T-Mobile and Sprint have known and should have known of the '517 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to T-Mobile and Sprint by the U.S. Patent and Trademark Office during prosecution of one of T-Mobile and Sprint's patent applications. More specifically, T-Mobile and Sprint have known or should have known of the '517 patent since being sued previously by Traxcell on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Sprint's lawyers that he had other family related patents.

65. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile and Sprint on October 31, 2017. T-Mobile and Sprint have actively encouraged or instructed others (e.g., its customers, and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–29 of the '517 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, T-Mobile and Sprint have known and should have known of the '517 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to T-Mobile and Sprint by the U.S. Patent and Trademark Office during prosecution of one of T-Mobile and Sprint's patent applications. More specifically,

T-Mobile and Sprint have known or should have known of the '517 patent since it was brought into defend a lawsuit brough by Traxcell against T-Mobile and Sprint on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Sprint's lawyers in the other litigation that he had other family related patents.

66. T-Mobile and Sprint have caused and will continue to cause Traxcell damage by infringing the '517 patent.

B. Ericsson

67. The preliminary exemplary chart attached as Exhibit I provides notice of Traxcell's allegations of infringement against Ericsson for its network equipment supplied to T-Mobile and Sprint. (https://www.ericsson.com/en/press-releases/2018/9/t-mobile-and-ericsson-sign-major-$3.5-billion-5g-agreement) For purposes of this complaint, a wireless network comprises at least: (1) Radio Access Network comprising at least one base station controller, at least one transceiver, and at least one antenna; (2) a system of computers, the system of computers comprising computers associated with the at least one base station controller(s); computers functioning for network optimization, including at least computers implementing D-SON and C-SON; and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[15]

68. Ericsson makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information

[15] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

such that Ericsson infringes claims 1–29 of the ‘517 patent, literally or under the doctrine of equivalents.

69. More specifically, Ericsson makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Ericsson infringes claims 1–29 of the ‘517 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it.

70. Again more specifically, Ericsson receives the benefits of the claims from the patent’s teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network, including through at least tracking a wireless device and assessing its performance. Benefits of practicing the claims of the ‘517 include the ability to tune a wireless network in order to improve quality of service (“QoS”) from a wireless user’s point of view. This includes better voice quality, fewer dropouts, and improved handoff procedures if QoS deteriorates near the edge of a cell. Practicing the claims of the ‘517 patent also provides for an increase in the number of users who can simultaneously use a network. Furthermore, the claims of the ‘517 patent enable network operators to allocate resources in a very efficient way and reduce costs.

71. Again more specifically, Ericsson receives the benefits of the claims of the ‘517 providing:

    a. Increased automation for higher network performance with lower cost;

    b. Network Quality Optimization: the user experience;

    c. Reduction in Power/Energy Consumption (reduced OPEX);

d. Reduction in Carbon Dioxide Emissions;

e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

f. Reduction in the need for Over-Dimensioning;

g. Reduction or deferment of CAPEX;

h. Access to location information of a wireless device;

i. Tracking a wireless devices; and,

j. the like.

72. Ericsson put the inventions claimed by the '517 Patent into service (i.e., used them); but for Ericsson's actions, the claimed-inventions embodiments involving Ericsson's products and services would never have been put into service. Ericsson's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Ericsson obtaining monetary and commercial benefit from it.

73. Defendant has and continues to induce infringement from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile on October 31, 2017, where Ericsson assisted in the defense as discussed herein. Ericsson has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[16] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including Ericsson network components) that use performance measurements to suggest corrective actions and

[16] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

controlling access to location information) such as to cause infringement of one or more of claims 1–29 of the '517 patent, literally or under the doctrine of equivalents. Moreover, Ericsson has known and should have known of the '517 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Ericsson by the U.S. Patent and Trademark Office during prosecution of one of Ericsson's patent applications. More specifically, Ericsson has known or should have known of the '517 patent since it was brought into defend a lawsuit brough by Traxcell against T-Mobile on other family related patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by T-Mobile's lawyers in the other litigation that he had other family related patents and a reasonable company would monitor the family of patents and a reasonable company would monitor the family of patents. Further, Ericsson was put on Notice of Traxcell's family of patents by the letter attached as Exhibit F.

74. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile on October 31, 2017, where Ericsson assisted in the defense as discussed herein. Ericsson has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[17]Cellco Partnershiop and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including Ericsson network components) that use performance measurements to suggest corrective actions and

[17] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

controlling access to location information) such as to cause infringement of one or more of claims 1–29 of the '517 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, Ericsson has known and should have known of the '517 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Ericsson by the U.S. Patent and Trademark Office during prosecution of one of Ericsson's patent applications. More specifically, Ericsson has known or should have known of the '517 patent since it was brought into defend a lawsuit brough by Traxcell against T-Mobile on other family related patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by T-Mobile's lawyers in the other litigation that he had other family related patents and a reasonable company would monitor the family of patents and a reasonable company would monitor the family of patents. Further, Ericsson was put on Notice of Traxcell's family of patents by the letter attached as Exhibit F.

75. Ericsson has caused and will continue to cause Traxcell damage by infringing the '517 patent.

C. Nokia

76. The preliminary exemplary chart attached as Exhibit G provides notice of Traxcell's allegations of infringement against Nokia. For purposes of this complaint, a wireless network comprises at least: (1) Radio Access Network comprising at least one base station controller, at least one transceiver, and at least one antenna; (2) a system of computers, the system of computers comprising computers associated with the at least one base station

controller(s); computers functioning for network optimization, including at least computers implementing D-SON and C-SON; and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[18]

77. Nokia makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Nokia infringes claims 1–29 of the '517 patent, literally or under the doctrine of equivalents.

78. More specifically, Nokia makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Nokia infringes claims 1–29 of the '517 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it.

79. Again more specifically, Nokia receives the benefits of the claims from the patent's teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network, including through at least tracking a wireless device and assessing its performance. Benefits of practicing the claims of the '517 include the ability to tune a wireless network in order to improve quality of service ("QoS") from a wireless user's point of view. This includes better voice quality, fewer dropouts, and improved handoff procedures if QoS deteriorates near the edge of a cell. Practicing the claims of the '517 patent also provides

[18] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

for an increase in the number of users who can simultaneously use a network. Furthermore, the claims of the '517 patent enable network operators to allocate resources in a very efficient way and reduce costs.

80. Again more specifically, Nokia receives the benefits of the claims of the '517 providing:

    a. Increased automation for higher network performance with lower cost;

    b. Network Quality Optimization: the user experience;

    c. Reduction in Power/Energy Consumption (reduced OPEX);

    d. Reduction in Carbon Dioxide Emissions;

    e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

    f. Reduction in the need for Over-Dimensioning;

    g. Reduction or deferment of CAPEX;

    h. Access to location information of a wireless device;

    i. Tracking a wireless device; and,

    j. the like.

81. Nokia put the inventions claimed by the '517 Patent into service (i.e., used them); but for Nokia's actions, the claimed-inventions embodiments involving Nokia's products and services would never have been put into service. Nokia's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Nokia obtaining monetary and commercial benefit from it.

82. Nokia has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[19] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–29 of the '517 patent, literally or under the doctrine of equivalents. Moreover, Nokia has known and should have known of the '517 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Nokia by the U.S. Patent and Trademark Office during prosecution of one of Nokia's patent applications. More specifically, Nokia has known or should have known of the '517 patent since it was previously sued by Traxcell on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Nokia's lawyers in the other litigation that he had other family related patents and a reasonable company would monitor the family of patents. Further, Nokia was put on Notice of Traxcell's family of patents by the letter attached as Exhibit D.

83. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit. Nokia has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[20] Cellco Partnership and/or the customers of their related

[19] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

[20] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–29 of the '517 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, Nokia has known and should have known of the '517 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Nokia by the U.S. Patent and Trademark Office during prosecution of one of Nokia's patent applications. More specifically, Nokia has known or should have known of the '517 patent since it was sued in a lawsuit brought by Traxcell against Nokia on other family related patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Nokia's lawyers in the other litigation that he had other family related patents and a reasonable company would monitor the family of patents and a reasonable company would monitor the family of patents. Nokia was assisting T-Mobile in its defense. Further, Nokia was put on Notice of Traxcell's family of patents by the letter attached as Exhibit D.

84. Nokia has caused and will continue to cause Traxcell damage by infringing the '517 patent.

D. Samsung

85. The preliminary exemplary chart attached as Exhibit H provides notice of Traxcell's allegations of infringement against Samsung. For purposes of this complaint, a wireless network comprises at least: (1) Radio Access Network comprising at least one base station

controller, at least one transceiver, and at least one antenna; (2) a system of computers, the system of computers comprising computers associated with the at least one base station controller(s); computers functioning for network optimization, including at least computers implementing D-SON and C-SON; and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[21]

86. Samsung makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Samsung infringes claims 1–29 of the '517 patent, literally or under the doctrine of equivalents.

87. More specifically, Samsung makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Samsung infringes claims 1–29 of the '517 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it.

88. Again more specifically, Samsung receives the benefits of the claims from the patent's teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network, including through at least tracking a wireless device and assessing its performance. Benefits of practicing the claims of the '517 include the ability to tune a wireless network in order to improve quality of service ("QoS") from a wireless user's point of view. This

[21] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

includes better voice quality, fewer dropouts, and improved handoff procedures if QoS deteriorates near the edge of a cell. Practicing the claims of the '517 patent also provides for an increase in the number of users who can simultaneously use a network. Furthermore, the claims of the '517 patent enable network operators to allocate resources in a very efficient way and reduce costs.

89. Again more specifically, Samsung receives the benefits of the claims of the '517 providing:

    a. Increased automation for higher network performance with lower cost;

    b. Network Quality Optimization: the user experience;

    c. Reduction in Power/Energy Consumption (reduced OPEX);

    d. Reduction in Carbon Dioxide Emissions;

    e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

    f. Reduction in the need for Over-Dimensioning;

    g. Reduction or deferment of CAPEX;

    h. Access to location information of a wireless device;

    i. Tracking a wireless device; and,

    j. the like.

90. Samsung put the inventions claimed by the '517 Patent into service (i.e., used them); but for Samsung's actions, the claimed-inventions embodiments involving Samsung's products and services would never have been put into service. Samsung's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Samsung obtaining monetary and commercial benefit from it.

91. Samsung has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[22] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including Samsung network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–29 of the '517 patent, literally or under the doctrine of equivalents. Moreover, Samsung has known and should have known of the '517 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Samsung by the U.S. Patent and Trademark Office during prosecution of one of Samsung's patent applications. More specifically, Samsung has known or should have known of the '517 patent since it was previously sued by Traxcell on other family related patents and a reasonable company would monitor the family of patents.

92. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit. Samsung has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[23] Cellco Parttnmership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to

[22] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

[23] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLCd; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

location information) such as to cause infringement of one or more of claims 1–29 of the '517 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, Samsung has known and should have known of the '517 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Samsung by the U.S. Patent and Trademark Office during prosecution of one of Samsung's patent applications. More specifically, Samsung has known or should have known of the '517 patent since it was sued in a lawsuit brought by Traxcell against Samsung on other family related patents and a reasonable company would monitor the family of patents.

93. Samsung has caused and will continue to cause Traxcell damage by infringing the '517 patent.

VIII. INFRINGEMENT '135 Patent (Attached as exhibit M))

94. On August 11, 21020, U.S. Patent No. 10,743,135 ("the '135 patent"), attached as Exhibit M, entitled "Wireless network and method for suggesting corrective action in response to detecting communications errors" was duly and legally issued by the U.S. Patent and Trademark Office. Traxcell owns the '135 patent by assignment.

95. The '135 Patent's Abstract states, "A mobile wireless network and a method of operation provide analysis of mobile wireless device communications and suggested corrective initiated upon detecting communications performance issues. In some embodiments, the operations include blocking access to location information pertaining to a mobile wireless

device based on the state of access flag that is maintained in the network for the mobile wireless device."

A. T-Mobile and Sprint

96. The preliminary exemplary chart attached as Exhibits N and O provide notice of Traxcell's allegations of infringement against T-Mobile and Sprint. For purposes of this complaint, a wireless network comprises at least: (1) Radio Access Network comprising at least one base station controller, at least one transceiver, and at least one antenna; (2) a system of computers, the system of computers comprising computers associated with the at least one base station controller(s); computers functioning for network optimization, including at least computers implementing D-SON and C-SON; and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[24]

97. T-Mobile and Sprint make, use, offer to sell, and/or sell within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions such that T-Mobile and Sprint infringe claims 1–30 of the '135 patent, literally or under the doctrine of equivalents.

98. More specifically, T-Mobile and Sprint make, use, offer to sell, and/or sell within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions for monitoring trends such that T-Mobile and Sprint infringe claims 1–30 of the '135 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it. Sprint and T-Mobile's equipment providers include Ericsson, Nokia and Samsung.

[24] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

99. Again more specifically, T-Mobile and Sprint put its wireless network into use, and or causes T-Mobile and Sprint subsidiaries or family of companies, vendors, partners to put components of the wireless network in use, and controls it by using the wireless network to perform or have performed on it the claimed functions, as charted in Exhibits N and O. For example, a component of the system of computers that is used in providing access to an indication of location of a wireless device may be controlled by one or more T-Mobile and Sprint subsidiaries or family of companies, vendors, or partners. In addition to Exhibits N and O and the facts alleged herein, additional relevant facts are recited in Traxcell's Infringement Contentions.

100. Again more specifically, T-Mobile and Sprint receive the benefits of the claims from the patent's teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network. Benefits of practicing the claims of the '135 include the ability to tune a wireless network in order to improve quality of service ("QoS") from a wireless user's point of view, including through at least tracking a wireless device and assessing its performance. This includes better voice quality, fewer dropouts, and improved handoff procedures if QoS deteriorates near the edge of a cell. Practicing the claims of the '135 patent also provides for an increase in the number of users who can simultaneously use a network. Furthermore, the claims of the '135 patent enable network operators to allocate resources in a very efficient way and reduce costs.

101. Again more specifically, T-Mobile and Sprint receive the benefits of the claims of the '135 providing:

a. Increased automation for higher network performance with lower cost;

b. Network Quality Optimization: the user experience;

c. Reduction in Power/Energy Consumption (reduced OPEX);

d. Reduction in Carbon Dioxide Emissions;

e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

f. Reduction in the need for Over-Dimensioning;

g. Reduction or deferment of CAPEX;

h. Access to location information of a wireless device

i. Tracking of one or more wireless devices; and,

j. the like.

102. T-Mobile and Sprint put the inventions claimed by the '135 Patent into service (i.e., used them); but for T-Mobile and Sprint's actions, the claimed-inventions embodiments involving T-Mobile and Sprint's products and services would never have been put into service. T-Mobile and Sprint's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and T-Mobile and Sprint obtaining monetary and commercial benefit from it.

103. Defendant has and continues to induce infringement from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile and Sprint on October 31, 2017. T-Mobile and Sprint has actively encouraged or instructed others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that use performance measurements to suggest corrective actions and controlling access to location information) such to cause infringement claims 1-30 of the '135 patent, literally or under

the doctrine of equivalents. Moreover, T-Mobile and Sprint have known and should have known of the '135 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to T-Mobile and Sprint by the U.S. Patent and Trademark Office during prosecution of one of T-Mobile and Sprint's patent applications. More specifically, T-Mobile and Sprint have known or should have known of the '135 patent since being sued previously by Traxcell on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Sprint's lawyers that he had other family related patents.

104. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile and Sprint on October 31, 2017. T-Mobile and Sprint have actively encouraged or instructed others (e.g., its customers, and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–30 of the '135 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, T-Mobile and Sprint have known and should have known of the '135 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to T-Mobile and Sprint by the U.S. Patent and Trademark Office during prosecution of one of T-Mobile and Sprint's patent applications. More specifically,

T-Mobile and Sprint have known or should have known of the '135 patent since it was brought into defend a lawsuit brough by Traxcell against T-Mobile and Sprint on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Sprint's lawyers in the other litigation that he had other family related patents.

105. T-Mobile and Sprint have caused and will continue to cause Traxcell damage by infringing the '135 patent.

B. Ericsson

106. The preliminary exemplary chart attached as Exhibit P provides notice of Traxcell's allegations of infringement against Ericsson for its network equipment supplied to T-Mobile and Sprint. (https://www.ericsson.com/en/press-releases/2018/9/t-mobile-and-ericsson-sign-major-$3.5-billion-5g-agreement) For purposes of this complaint, a wireless network comprises at least: (1) Radio Access Network comprising at least one base station controller, at least one transceiver, and at least one antenna; (2) a system of computers, the system of computers comprising computers associated with the at least one base station controller(s); computers functioning for network optimization, including at least computers implementing D-SON and C-SON; and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[25]

107. Ericsson makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location

[25] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

information such that Ericsson infringes claims 1–30 of the '135 patent, literally or under the doctrine of equivalents.

108. More specifically, Ericsson makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Ericsson infringes claims 1–30 of the '135 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it.

109. Again more specifically, Ericsson receives the benefits of the claims from the patent's teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network, including through at least tracking a wireless device and assessing its performance. Benefits of practicing the claims of the '135 include the ability to tune a wireless network in order to improve quality of service ("QoS") from a wireless user's point of view. This includes better voice quality, fewer dropouts, and improved handoff procedures if QoS deteriorates near the edge of a cell. Practicing the claims of the '135 patent also provides for an increase in the number of users who can simultaneously use a network. Furthermore, the claims of the '135 patent enable network operators to allocate resources in a very efficient way and reduce costs.

110. Again more specifically, Ericsson receives the benefits of the claims of the '135 providing:

a. Increased automation for higher network performance with lower cost;

b. Network Quality Optimization: the user experience;

c. Reduction in Power/Energy Consumption (reduced OPEX);

d. Reduction in Carbon Dioxide Emissions;

e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

f. Reduction in the need for Over-Dimensioning;

g. Reduction or deferment of CAPEX;

h. Access to location information of a wireless device;

i. Tracking a wireless devices; and,

j. the like.

111. Ericsson put the inventions claimed by the '135 Patent into service (i.e., used them); but for Ericsson's actions, the claimed-inventions embodiments involving Ericsson's products and services would never have been put into service. Ericsson's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Ericsson obtaining monetary and commercial benefit from it.

112. Defendant has and continues to induce infringement from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile on October 31, 2017, where Ericsson assisted in the defense as discussed herein. Ericsson has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[26] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including Ericsson network

[26] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–30 of the '135 patent, literally or under the doctrine of equivalents. Moreover, Ericsson has known and should have known of the '135 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Ericsson by the U.S. Patent and Trademark Office during prosecution of one of Ericsson's patent applications. More specifically, Ericsson has known or should have known of the '135 patent since it was brought into defend a lawsuit brough by Traxcell against T-Mobile on other family related patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by T-Mobile's lawyers in the other litigation that he had other family related patents and a reasonable company would monitor the family of patents and a reasonable company would monitor the family of patents. Further, Ericsson was put on Notice of Traxcell's family of patents by the letter attached as Exhibit F.

113. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile on October 31, 2017, where Ericsson assisted in the defense as discussed herein. Ericsson has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[27]Cellco Partnershiop and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including Ericsson network

[27] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–30 of the '135 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, Ericsson has known and should have known of the '135 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Ericsson by the U.S. Patent and Trademark Office during prosecution of one of Ericsson's patent applications. More specifically, Ericsson has known or should have known of the '135 patent since it was brought into defend a lawsuit brough by Traxcell against T-Mobile on other family related patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by T-Mobile's lawyers in the other litigation that he had other family related patents and a reasonable company would monitor the family of patents and a reasonable company would monitor the family of patents. Further, Ericsson was put on Notice of Traxcell's family of patents by the letter attached as Exhibit F.

114. Ericsson has caused and will continue to cause Traxcell damage by infringing the '135 patent.

C. Nokia

115. The preliminary exemplary chart attached as Exhibit N provides notice of Traxcell's allegations of infringement against Nokia. For purposes of this complaint, a wireless network comprises at least: (1) Radio Access Network comprising at least one base station controller, at least one transceiver, and at least one antenna; (2) a system of

computers, the system of computers comprising computers associated with the at least one base station controller(s); computers functioning for network optimization, including at least computers implementing D-SON and C-SON; and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[28]

116. Nokia makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Nokia infringes claims 1–30 of the '135 patent, literally or under the doctrine of equivalents.

117. More specifically, Nokia makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Nokia infringes claims 1–30 of the '135 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it.

118. Again more specifically, Nokia receives the benefits of the claims from the patent's teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network, including through at least tracking a wireless device and assessing its performance. Benefits of practicing the claims of the '135 include the ability to tune a wireless network in order to improve quality of service ("QoS") from a wireless user's point of view. This includes better voice quality, fewer dropouts, and improved handoff procedures if QoS

[28] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

deteriorates near the edge of a cell. Practicing the claims of the '135 patent also provides for an increase in the number of users who can simultaneously use a network. Furthermore, the claims of the '135 patent enable network operators to allocate resources in a very efficient way and reduce costs.

119. Again more specifically, Nokia receives the benefits of the claims of the '135 providing:

a. Increased automation for higher network performance with lower cost;

b. Network Quality Optimization: the user experience;

c. Reduction in Power/Energy Consumption (reduced OPEX);

d. Reduction in Carbon Dioxide Emissions;

e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

f. Reduction in the need for Over-Dimensioning;

g. Reduction or deferment of CAPEX;

h. Access to location information of a wireless device;

i. Tracking a wireless device; and,

j. the like.

120. Nokia put the inventions claimed by the '135 Patent into service (i.e., used them); but for Nokia's actions, the claimed-inventions embodiments involving Nokia's products and services would never have been put into service. Nokia's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Nokia obtaining monetary and commercial benefit from it.

121. Nokia has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[29] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–30 of the '135 patent, literally or under the doctrine of equivalents. Moreover, Nokia has known and should have known of the '135 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Nokia by the U.S. Patent and Trademark Office during prosecution of one of Nokia's patent applications. More specifically, Nokia has known or should have known of the '135 patent since it was previously sued by Traxcell on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Nokia's lawyers in the other litigation that he had other family related patents and a reasonable company would monitor the family of patents. Further, Nokia was put on Notice of Traxcell's family of patents by the letter attached as Exhibit D.

122. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit. Nokia has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[30] Cellco Partnership and/or the customers of their

[29] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

[30] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–30 of the '135 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, Nokia has known and should have known of the '135 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Nokia by the U.S. Patent and Trademark Office during prosecution of one of Nokia's patent applications. More specifically, Nokia has known or should have known of the '135 patent since it was sued in a lawsuit brought by Traxcell against Nokia on other family related patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Nokia's lawyers in the other litigation that he had other family related patents and a reasonable company would monitor the family of patents and a reasonable company would monitor the family of patents. Nokia was assisting T-Mobile in its defense. Further, Nokia was put on Notice of Traxcell's family of patents by the letter attached as Exhibit D.

123. Nokia has caused and will continue to cause Traxcell damage by infringing the '135 patent.

D. Samsung

124. The preliminary exemplary chart attached as Exhibit O provides notice of Traxcell's allegations of infringement against Samsung. For purposes of this complaint, a

wireless network comprises at least: (1) Radio Access Network comprising at least one base station controller, at least one transceiver, and at least one antenna; (2) a system of computers, the system of computers comprising computers associated with the at least one base station controller(s); computers functioning for network optimization, including at least computers implementing D-SON and C-SON; and, computers functioning for locating wireless devices; and, (3) one or more wireless devices.[31]

125. Samsung makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Samsung infringes claims 1–30 of the '135 patent, literally or under the doctrine of equivalents.

126. More specifically, Samsung makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use performance measurements to suggest corrective actions and controlling access to location information such that Samsung infringes claims 1–30 of the '135 patent, literally or under the doctrine of equivalents by putting the entire claimed invention into use, controlling it, and obtaining benefit from it.

127. Again more specifically, Samsung receives the benefits of the claims from the patent's teaching systems and methods that wireless networks utilize to collect, store, and process information relating to the location of users in order to optimize a wireless network, including through at least tracking a wireless device and assessing its performance. Benefits of practicing the claims of the '135 include the ability to tune a wireless network

[31] A wireless device is considered within the wireless network when in RF communication. However, a processor of such wireless device may also be considered outside or inside the network.

in order to improve quality of service ("QoS") from a wireless user's point of view. This includes better voice quality, fewer dropouts, and improved handoff procedures if QoS deteriorates near the edge of a cell. Practicing the claims of the '135 patent also provides for an increase in the number of users who can simultaneously use a network. Furthermore, the claims of the '135 patent enable network operators to allocate resources in a very efficient way and reduce costs.

128. Again more specifically, Samsung receives the benefits of the claims of the '135 providing:

a. Increased automation for higher network performance with lower cost;

b. Network Quality Optimization: the user experience;

c. Reduction in Power/Energy Consumption (reduced OPEX);

d. Reduction in Carbon Dioxide Emissions;

e. Reduction in Operational Costs: field management, coverage optimization, capacity optimization, operational efficiency (including personnel costs);

f. Reduction in the need for Over-Dimensioning;

g. Reduction or deferment of CAPEX;

h. Access to location information of a wireless device;

i. Tracking a wireless device; and,

j. the like.

129. Samsung put the inventions claimed by the '135 Patent into service (i.e., used them); but for Samsung's actions, the claimed-inventions embodiments involving Samsung's products and services would never have been put into service. Samsung's acts

complained of herein caused those claimed-invention embodiments as a whole to perform, and Samsung obtaining monetary and commercial benefit from it.

130. Samsung has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[32] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including Samsung network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–30 of the '135 patent, literally or under the doctrine of equivalents. Moreover, Samsung has known and should have known of the '135 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Samsung by the U.S. Patent and Trademark Office during prosecution of one of Samsung's patent applications. More specifically, Samsung has known or should have known of the '135 patent since it was previously sued by Traxcell on other family related patents and a reasonable company would monitor the family of patents.

131. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit. Samsung has actively encouraged or instructed others (e.g., its customers, such as T-Mobile, the Sprint Companies,[33] Cellco Partnership and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g.,

[32] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

[33] Sprint Companies include Sprint Communications Company, L.P.; Sprint Spectrum LLC; Sprint Solutions, Inc.; and all other entities owned or controlled by Sprint Corporation, at any time. The Sprint Companies are believed to have been acquired by T-Mobile USA, Inc.

U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–30 of the '135 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, Samsung has known and should have known of the '135 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Samsung by the U.S. Patent and Trademark Office during prosecution of one of Samsung's patent applications. More specifically, Samsung has known or should have known of the '135 patent since it was sued in a lawsuit brought by Traxcell against Samsung on other family related patents and a reasonable company would monitor the family of patents.

132. Samsung has caused and will continue to cause Traxcell damage by infringing the '135 patent.

IX. INFRINGEMENT '147 Patent (Attached as exhibit J))

133. On October 27, 2020, U.S. Patent No. 10,820,147 ("the '147 patent"), attached as Exhibit J, entitled "Mobile wireless device providing off-line and on-line geographic navigation information" was duly and legally issued by the U.S. Patent and Trademark Office. Traxcell owns the '147 patent by assignment.

134. The '147 Patent's Abstract states, "A mobile device, wireless network and their method of operation provide both on-line (connected) navigation operation, as well as off-line navigation from a local database within the mobile device. Routing according to the

navigation system can be controlled by traffic congestion measurements made by the wireless network that allow the navigation system to select the optimum route based on expected trip duration."

1. Sprint

135. The preliminary exemplary chart attached as Exhibit K notice of Traxcell's allegations of infringement against Sprint for its use of Google Maps. Traxcell provides further notice that it accuses Sprint's Safe and Sound product (now known as T-Mobile's Safe & Sound product)(https://safeandfound.sprint.com/) and further accuse Sprint's Family Locator product https://www.sprint.com/en/support/solutions/device/learn-if-family-members-know-when-you-locate-them-using-sprint-f.html. The infringement charts for Google Maps provide adequate notice of the infringement theory for both Safe & Sound and Family Locator.

136. Sprint makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use identified locations of wireless devices to provide directional assistance such that Sprint infringes claims 1–24 of the '147 patent, literally or under the doctrine of equivalents.

137. Sprint put the inventions claimed by the '147 Patent into service (i.e., used them); but for Sprint's actions, the claimed-inventions embodiments involving Sprint's products and services would never have been put into service. Sprint's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Sprint obtaining monetary and commercial benefit from it.

138. More specifically, it is necessary for Sprint to have access to the location data of a wireless device. Stated another way, Sprint would not experience the benefit of obtaining

location data of a wireless device without the system and/or method comprising each claim element, as charted, literally or under the doctrine of equivalents.

139. Sprint's Accused wireless communications systems put those features into use. Sprint obtains a benefit from each in that, for example, it may use those features to provide navigation information to the wireless mobile device and indicate the location of the wireless mobile device in response to preference flags. No other entity makes use of those features in that way when Sprint's Accused wireless communications systems put them into use. In addition, operational and financial benefits are provided by those elements and functionalities to Sprint as explained below.

140. Sprint receives the benefit of acquiring wireless device location data from the claimed systems and methods. Sprint is able to use this acquired location data to benefit Sprint's services (by navigation, tracking, locating, directing, and/or the like), by improving Sprint services or to benefit them and its other services, such as purchases from stores selling Sprint products, targeted marketing, and support of other Sprint devices to drive up the purchase of the other devices; pay transactions by Sprint's systems; and also to drive sales of Sprint wireless devices including smart phones, Sprint watches and other third party devices pre-loaded with GPS, WiFi, wireless network elements, and third party LBS applications. Sprint also charges a consumer/purchaser a fee per device for the installation of the LBS service.").

141. Sprint put the inventions claimed by the '147 Patent into service (i.e., used them); but for Sprint's actions, the claimed-inventions embodiments involving Sprint's products and services would never have been put into service. Sprint's acts complained of herein

caused those claimed-invention embodiments as a whole to perform, and Sprint obtaining monetary and commercial benefit from it.

142. Defendant has and continues to induce infringement from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued Sprint on October 31, 2017. Sprint has actively encouraged or instructed others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that use performance measurements to suggest corrective actions and controlling access to location information) such to cause infringement claims 1-24 of the '147 patent, literally or under the doctrine of equivalents. Moreover, Sprint has known and should have known of the '147 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Sprint by the U.S. Patent and Trademark Office during prosecution of one of Sprint's patent applications. More specifically, Sprint has known or should have known of the '147 patent since being sued previously by Traxcell on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Sprint's lawyers that he had other family related patents.

143. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued Sprint on October 31, 2017. Sprint has actively encouraged or instructed others (e.g., its customers, and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to

suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–24 of the '147 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, Sprint has known and should have known of the '147 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Sprint by the U.S. Patent and Trademark Office during prosecution of one of Sprint's patent applications. More specifically, Sprint has known or should have known of the '147 patent since it was brought into defend a lawsuit brough by Traxcell against Sprint on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by Sprint's lawyers in the other litigation that he had other family related patents.

2. T-Mobile

144. The preliminary exemplary chart attached as Exhibit L provides notice of Traxcell's allegations of infringement against T-Mobile for its use of Google Maps. Traxcell provides further notice that it accuses T-Mobile's Safe and Sound product (now known as T-Mobile's Safe & Sound product)(https://safeandfound.sprint.com/) and further accuse T-Mobile's Family WhereApp product https://www.t-mobile.com/support/plans-features/t-mobile-familywhere-app The infringement charts for Google Maps provide adequate notice of the infringement theory for both Safe & Sound and WhereApp. Further, the chart attached as Exhibit M provides adequate notice of Traxcell's infringement theory of T-Mobile's e911 product.

145. T-Mobile makes, uses, offers to sell, and/or sells within or imports into the U.S. wireless networks, wireless-network components, and related services that use identified locations of wireless devices to provide directional assistance such that Sprint infringes claims 1–24 of the '147 patent, literally or under the doctrine of equivalents.

146. T-Mobile put the inventions claimed by the '147 Patent into service (i.e., used them); but for T-Mobile's actions, the claimed-inventions embodiments involving T-Mobile's products and services would never have been put into service. T-Mobile's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and Sprint obtaining monetary and commercial benefit from it.

147. More specifically, it is necessary for Sprint to have access to the location data of a wireless device. Stated another way, Sprint would not experience the benefit of obtaining location data of a wireless device without the system and/or method comprising each claim element, as charted, literally or under the doctrine of equivalents.

148. T-Mobile's Accused wireless communications systems put those features into use. T-Mobile obtains a benefit from each in that, for example, it may use those features to provide navigation information to the wireless mobile device and indicate the location of the wireless mobile device in response to preference flags. No other entity makes use of those features in that way when T-Mobile's Accused wireless communications systems put them into use. In addition, operational and financial benefits are provided by those elements and functionalities to Sprint as explained below.

149. T-Mobile receives the benefit of acquiring wireless device location data from the claimed systems and methods. T-Mobile is able to use this acquired location data to benefit T-Mobile 's services (by navigation, tracking, locating, directing, and/or the like),

by improving T-Mobile services or to benefit them and its other services, such as purchases from stores selling T-Mobile products, targeted marketing, and support of other T-Mobile devices to drive up the purchase of the other devices; pay transactions by T-Mobile 's systems; and also to drive sales of T-Mobile wireless devices including smart phones, T-Mobile watches and other third party devices pre-loaded with GPS, WiFi, wireless network elements, and third party LBS applications. T-Mobile also charges a consumer/purchaser a fee per device for the installation of the LBS service.").

150. T-Mobile put the inventions claimed by the '147 Patent into service (i.e., used them); but for T-Mobile 's actions, the claimed-inventions embodiments involving T-Mobile 's products and services would never have been put into service. T-Mobile 's acts complained of herein caused those claimed-invention embodiments as a whole to perform, and T-Mobile obtaining monetary and commercial benefit from it.

151. Defendant has and continues to induce infringement from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile on October 31, 2017. T-Mobile has actively encouraged or instructed others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that use performance measurements to suggest corrective actions and controlling access to location information) such to cause infringement claims 1-24 of the '147 patent, literally or under the doctrine of equivalents. Moreover, T-Mobile has known and should have known of the '147 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to T-Mobile by the U.S. Patent and Trademark Office during prosecution of one of T-Mobile 's patent applications. More

specifically, T-Mobile has known or should have known of the '147 patent since being sued previously by Traxcell on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by T-Mobile 's lawyers that he had other family related patents.

152. Defendant has and continues to contributorily infringe from at least the filing date of the lawsuit but reasonably from the issuance of the patent as it issued after Traxcell sued T-Mobile on October 31, 2017. T-Mobile has actively encouraged or instructed others (e.g., its customers, and/or the customers of their related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components (including network components) that use performance measurements to suggest corrective actions and controlling access to location information) such as to cause infringement of one or more of claims 1–24 of the '147 patent, literally or under the doctrine of equivalents. Further, there are no substantial noninfringing uses for Defendant's products and services. Moreover, T-Mobile has known and should have known of the '147 patent, by at least by the date of the patent's issuance, or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to T-Mobile by the U.S. Patent and Trademark Office during prosecution of one of T-Mobile 's patent applications. More specifically, T-Mobile has known or should have known of the '147 patent since it was brought into defend a lawsuit brough by Traxcell against T-Mobile on other family related patents and a reasonable company would monitor the family of patents. Further, specifically, Mark Jefferson Reed testified in a deposition taken by T-Mobile 's lawyers in the other litigation that he had other family related patents.

VIII. PRAYER FOR RELIEF

WHEREFORE, Traxcell respectfully requests that this Court:

i. enter judgment that Defendants have infringed the Patents-in-Suit;

ii. award Traxcell damages in an amount sufficient to compensate it for Defendants' infringement of the Patents-in-Suit, in an amount no less than a reasonable royalty, together with prejudgment and post-judgment interest and costs under 35 U.S.C. § 284;

iii. award Traxcell an accounting for acts of infringement not presented at trial and an award by the Court of additional damage for any such acts of infringement by Defendants;

iv. declare this case to be "exceptional" under 35 U.S.C. § 285 and award Traxcell its attorneys' fees, expenses, and costs incurred in this action against each Defendant;

v. declare this case to be "exceptional" under 35 U.S.C. § 285 and award Traxcell its attorneys' fees, expenses, and costs incurred in this action against each Defendant;

vi. a decree addressing future infringement that either (i) awards a permanent injunction enjoining Defendants' and its agents, servants, employees, affiliates, divisions, and subsidiaries, and those in association with Defendants, from infringing the claims of the Patents-in-Suit or (ii) award damages for future infringement in lieu of an injunction, in an amount consistent with the fact that for future infringement the Defendants will be adjudicated infringers of a valid patent, and trebles that amount in view of the fact that the future infringement will be willful as a matter of law;

vii. award Traxcell such other and further relief as this Court deems just and proper.

JURY DEMAND

Traxcell hereby requests a trial by jury on issues so triable by right.

Respectfully submitted,

Ramey LLP

By: /s/ William P. Ramey, III

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Attorneys for Traxcell Technologies, LLC

CERTIFICATE OF SERVICE

Pursuant to the Federal Rules of Civil Procedure, I hereby certify that all counsel of record who have appeared in this case are being served today with a copy of the foregoing via the Court's CM/ECF system.

/s/ William P. Ramey, III
William P. Ramey, III