UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION

TRAXCELL TECHNOLOGIES, LLC., **Plaintiff,**	)	
	)	**Civil Action No. 6:20-cv-01175-ADA**
v.	)	
VERIZON WIRELESS PERSONAL COMMUNICATIONS	)	**JURY TRIAL DEMANDED**
Defendant.	)	

PLAINTIFF'S FOURTH AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Traxcell Technologies, LLC. ("Traxcell") files this Fourth Amended Complaint, and demand for jury trial seeking relief from patent infringement by Cellco Partnership d/b/a Verizon Wireless ("Verizon") and Ericsson, Inc. ("Ericsson") (collectively referred to as "Defendants"), alleging infringement of the claims of U.S. Pat. No. 10,701,517; U.S. Pat. No. 10,743,135; and, U.S. Pat. No. 10,820,147 (collectively referred to as "Patents-in-Suit"), as follows:[1]

I. THE PARTIES

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. Verizon Wireless is Delaware corporation with its principal place of business at One Verizon 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, Verizon 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

[1] This Amended Complaint is filed to address issues noted by the Court in its Order of Doc. No. 62.

perform infringing processes into the stream of commerce knowing that they would be sold in Texas and this judicial district.

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.

II. JURISDICTION AND VENUE

4. 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).

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

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

7. 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.

8. 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.

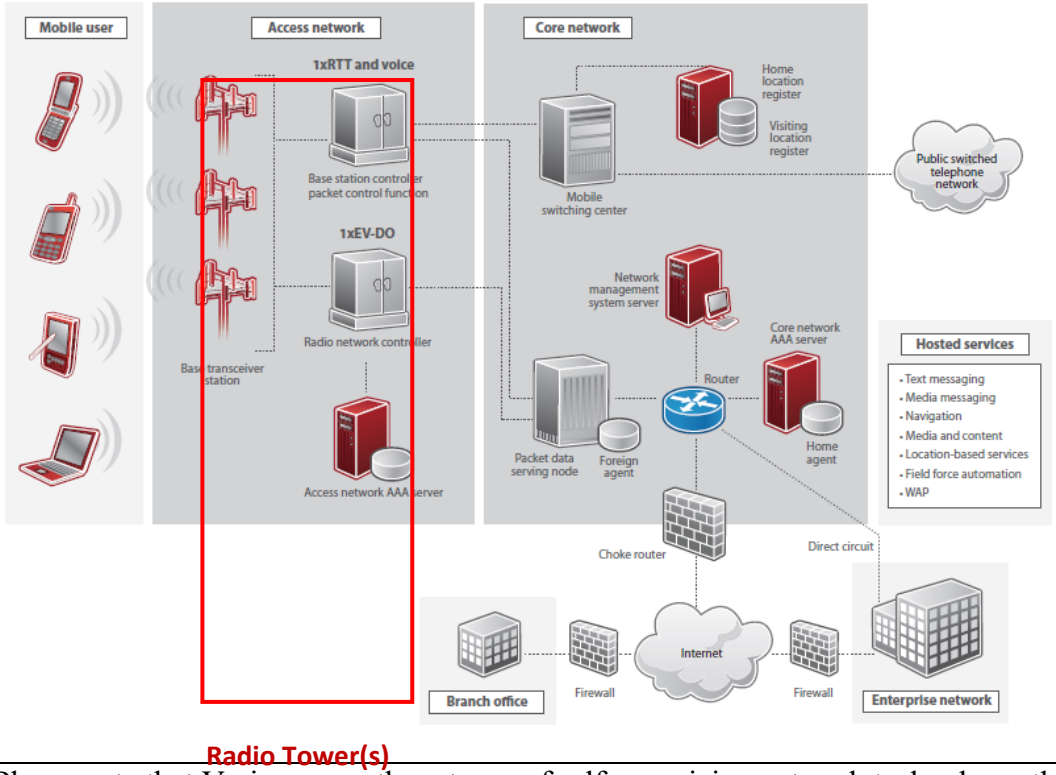
V. INFRINGEMENT ('517 Patent (Attached as exhibit A))

9. 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.

10. 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."

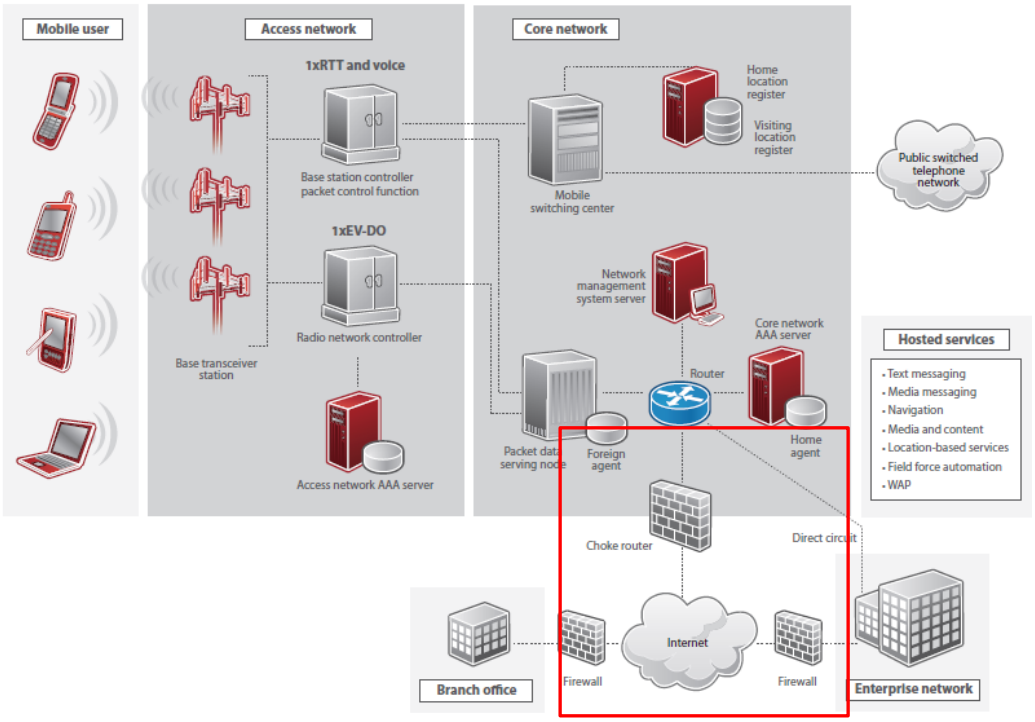
A. Verizon

11. The following preliminary exemplary chart provides notice of Traxcell's allegations of infringement against Verizon:

Representative Claim	Corresponding Structure in Accused Systems
A wireless network including:	
a radio tower adapted to receive radio frequency signals from, and transmit radio frequency signals to, at least one wireless device;	Plaintiff contends the Verizon wireless network has base stations adapted to transmits and receive radio frequency signals from one or more wireless devices.  Radio Tower(s)
a system of computers programmed to perform steps of referencing performance of the at least one wireless device with wireless network known parameters and routinely storing performance data	Please note that Verizon uses three types of self-organizing network technology, that is, C-SON, D-SON and V-SON and uses network equipment or solutions supplied from vendors, for example, from Ericsson, etc. In addition to RAN vendor and third-party supplied SON features, Verizon has also developed its own proprietary SON implementation, known as V-SON. Plaintiff contends that a system of computers including Operations Support System (OSS or OSS-RC) of Verizon Wireless' wireless telecommunications network, Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in the wireless

Representative Claim	Corresponding Structure in Accused Systems
for the at least one wireless device,	telecommunications network, constituting the "system of computers," corresponds to this claim limitation. Further, Ericsson's SON solution includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. and the system of computers supporting the Ericsson's SON solution include Verizon Wireless' wireless telecommunications network's Operations Support System (OSS or OSS-RC), Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server. (Please note that Ericsson SON Optimization Manager together with Ericsson Network Manager and Network IQ delivers the full suite.) Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} is programmed to reference performance of the wireless device(s) with wireless network known parameters and to routinely store performance data for the wireless device(s). That is, the system of computers executing or loaded with Ericsson's SON solution receives or collects UE-referenced network and device performance measurements from the MDT (Minimization of Drive Tests) reports, UE Measurement Reports, etc. and compares the collected (or received) performance data against the corresponding pre-defined standards or thresholds. The Ericsson's SON solution has software code specifically designed for use by one or more computers. The system of computers is linked or connected to the wireless network consisting of the various network elements including the radio-tower(s) or base-station(s). Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution; and operating, implementing and supporting SON solution in the wireless telecommunications network, corresponds to this claim limitation, as the system of computers executing or loaded with Ericsson's SON solution references performance of the wireless device(s) with wireless network known parameters and routinely stores performance data for the wireless device(s). The Ericsson's SON software codes are programmed to routinely store the performance data for a wireless device in a memory or cache associated with the system of computers because the software codes are programmed to collect performance measurements pertaining to qualitative and quantitative aspects of the

Representative Claim	Corresponding Structure in Accused Systems
	operation of wireless network. That is, the system of computers installed or compatible with Ericsson's SON solution routinely references performance measurements pertaining to qualitative and quantitative aspects of the wireless device(s) (for example, expressed in terms of Key Performance Indices or KPIs, Performance Metrics, Performance Data, etc.) with wireless network known parameters and stores the performance data for one or more wireless devices.
wherein the system of computers further receives the performance data and suggests at least one corrective action in conformity with a comparison of the performance data and the wireless network known parameters; and	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} receives the performance data and suggests one or more corrective actions in conformity with a comparison of the performance data and the wireless network known parameters.
another one or more computers other than the system of computers, wherein at least one of the another one or more computers is coupled in communication with the system of computers,	Plaintiff contends that the wireless network can include another computer(s) (for example, third-parties, LBS providers, subsidiaries, etc.) other than the system of computers and another computer(s) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. }. The following exemplifies this limitation's existence in Accused Systems:

Representative Claim	Corresponding Structure in Accused Systems
	
wherein the system of computers is programmed to provide an indication of location of the at least one wireless device to the another one or more computer,	Plaintiff contends that another computer(s) (for example, third-parties, LBS providers, subsidiaries, etc.) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.}. The system of computers can provide access to an indication of location to another computer(s).
and wherein the another one or more computers, responsive to a communication from the at least one wireless device, set a no access flag within	Plaintiff contends that another computer(s) (for example, PDE, Positioning Engine, Location server, third-parties, LBS providers, subsidiaries, etc.) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.}. The Another computer(s) being in communication with the system of computers and responsive to a communication from the wireless devices.

Representative Claim	Corresponding Structure in Accused Systems
a memory of at least one of the another one or more computers,	
and wherein the another one or more computers provides access to an indication of location of the at least one wireless device from the another one or more computers if the no access flag is reset and denies access to the indication of location of the at least one wireless device from the another one or more computers if the no access flag is set.	Plaintiff contends that another computer(s) (for example, PDE, Positioning Engine, Location server, third-parties, LBS providers, subsidiaries, etc.) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.}. The Another computer(s) being in communication with the system of computers and responsive to a communication from the wireless devices are capable of configuring or setting a no access flag within the memory of another computer(s). Therefore, the Another computer(s) provides access to an indication of location from another computer(s) if the no access flag is reset and denies access to the indication of location from another computer(s) if the no access flag is set.

12. Verizon 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 Verizon infringes claims 1–29 of the '517 patent, literally or under the doctrine of equivalents.

13. More specifically, Verizon 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 Verizon 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.

14. Again more specifically, for the "another one or more computers other than the system of computers" element, Verizon puts that element into use and controls it by using the element to perform or have performed on it the claimed function, as per the chart above. For example, "[t]he system of computers can provide access to an indication of location to another computer(s)." This is done by Verizon using the claimed system of computers to perform the providing access function to the claimed another computers, which are used to receive that indication. In addition to the chart above and the facts alleged below, additional relevant facts are recited in Traxcell's Final Infringement Contentions.

15. Again more specifically, the LBS providers may include Google, Inc. and its applications Google Maps and Waze and Apple Inc. and its application Apple Maps. Verizon receives the benefits of the claims from the patent of providing indications of location to the LBS provider and the LBS provider providing or denying access to the indication of location. Those functions further benefit Verizon by improving the optimization of the operation of its wireless network and by improving customer experiences, thereby increasing customer selection of Verizon wireless services and devices.

16. Again more specifically, Verizon 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 '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.

17. Again more specifically, Verizon 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; and,

    i. the like.

18. Verizon put the inventions claimed by the '517 Patent into service (i.e., used them); but for Verizon's actions, the claimed-inventions embodiments involving Verizon's products and services would never have been put into service. Verizon's acts complained of herein

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

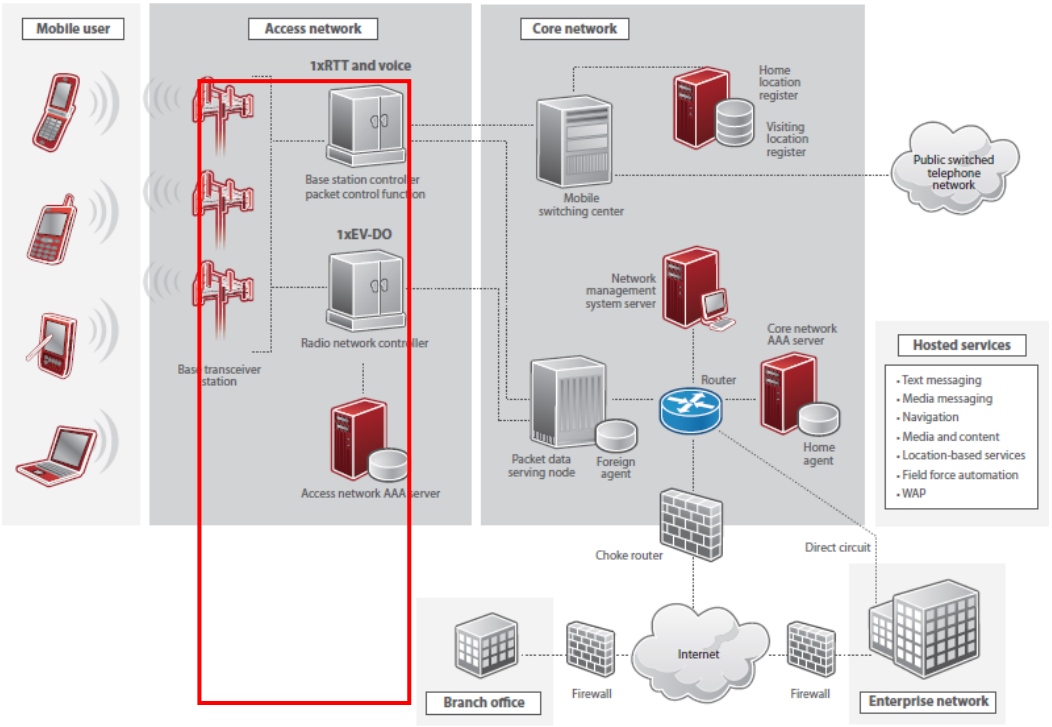
19. Verizon has actively encouraged or instructed others (e.g., its customers), and continues to do so, on how to use its products and services (e.g., U.S. wireless networks, wireless-network components that use performance measurements to suggest corrective actions and controlling access to location information) such to cause infringement claims 1–29 of the '517 patent, literally or under the doctrine of equivalents. Moreover, Verizon 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 Verizon by the U.S. Patent and Trademark Office during prosecution of one of Verizon's patent applications.

20. Verizon has actively encouraged or instructed others (e.g., its customers and/or the customers of its related companies), 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 as to cause infringement of one or more of claims 1–29 of the '517 patent, literally or under the doctrine of equivalents. Moreover, Verizon has known of the '517 patent and the technology underlying it from at least the date of issuance of the patent or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Verizon by the U.S. Patent and Trademark Office during prosecution of one of Verizon's patent applications.

21. Verizon have caused and will continue to cause Traxcell damage by infringing the '517 patent.

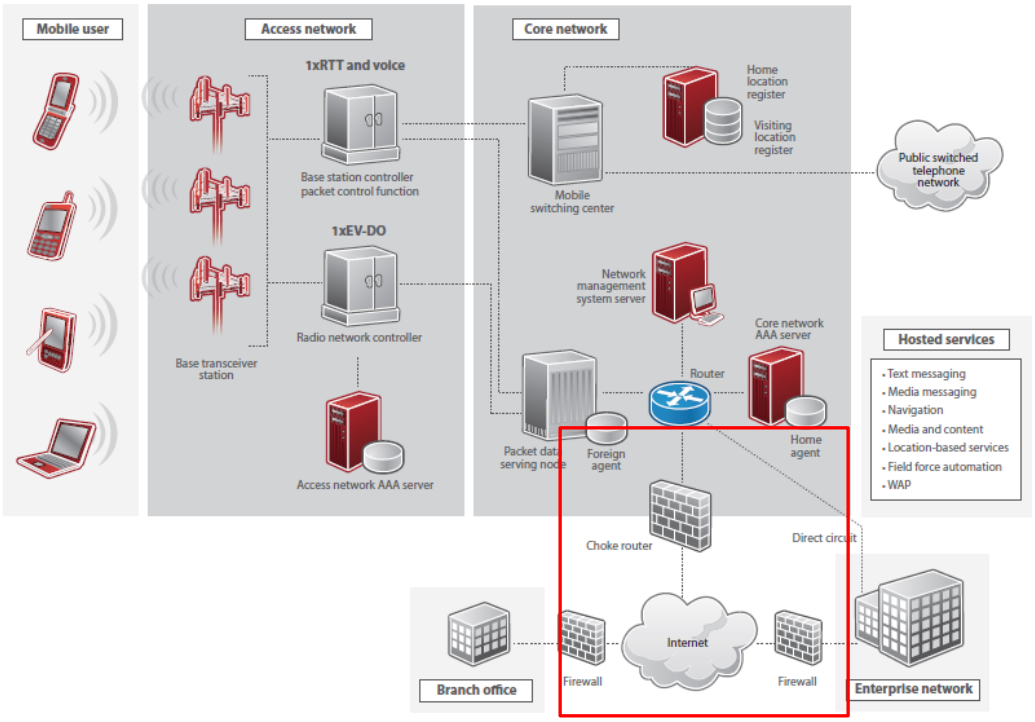
B. Ericsson

22. The following preliminary exemplary chart provides notice of Traxcell's allegations of infringement against Ericsson:

Representative Claim	Corresponding Structure in Accused Systems
A wireless network including:	
a radio tower adapted to receive radio frequency signals from, and transmit radio frequency signals to, at least one wireless device;	Plaintiff contends the Verizon wireless network has Ericsson base stations (and others) adapted to transmits and receive radio frequency signals from one or more wireless devices, including Ericsson devices.  Radio Tower(s)
a system of computers programmed to perform steps of referencing performance of the at least one wireless device	Please note that Verizon uses three types of self-organizing network technology, that is, C-SON, D-SON and V-SON and uses network equipment or solutions supplied from vendors, for example, from Ericsson, etc. In addition to RAN vendor and third-party supplied SON features, Verizon has also developed its own proprietary SON implementation, known as V-SON. Plaintiff contends that a system of computers including Operations Support System (OSS or OSS-RC) of Verizon Wireless' wireless telecommunications network,

Representative Claim	Corresponding Structure in Accused Systems
with wireless network known parameters and routinely storing performance data for the at least one wireless device,	Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in the wireless telecommunications network, constituting the "system of computers," corresponds to this claim limitation. Further, Ericsson's SON solution includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. and the system of computers supporting the Ericsson's SON solution include Verizon Wireless' wireless telecommunications network's Operations Support System (OSS or OSS-RC), Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server. (Please note that Ericsson SON Optimization Manager together with Ericsson Network Manager and Network IQ delivers the full suite.) Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} is programmed to reference performance of the wireless device(s) with wireless network known parameters and to routinely store performance data for the wireless device(s). That is, the system of computers executing or loaded with Ericsson's SON solution receives or collects UE-referenced network and device performance measurements from the MDT (Minimization of Drive Tests) reports, UE Measurement Reports, etc. and compares the collected (or received) performance data against the corresponding pre-defined standards or thresholds. The Ericsson's SON solution has software code specifically designed for use by one or more computers. The system of computers is linked or connected to the wireless network consisting of the various network elements including the radio-tower(s) or base-station(s). Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution; and operating, implementing and supporting SON solution in the wireless telecommunications network, corresponds to this claim limitation, as the system of computers executing or loaded with Ericsson's SON solution references

Representative Claim	Corresponding Structure in Accused Systems
	performance of the wireless device(s) with wireless network known parameters and routinely stores performance data for the wireless device(s). The Ericsson's SON software codes are programmed to routinely store the performance data for a wireless device in a memory or cache associated with the system of computers because the software codes are programmed to collect performance measurements pertaining to qualitative and quantitative aspects of the operation of wireless network. That is, the system of computers installed or compatible with Ericsson's SON solution routinely references performance measurements pertaining to qualitative and quantitative aspects of the wireless device(s) (for example, expressed in terms of Key Performance Indices or KPIs, Performance Metrics, Performance Data, etc.) with wireless network known parameters and stores the performance data for one or more wireless devices.
wherein the system of computers further receives the performance data and suggests at least one corrective action in conformity with a comparison of the performance data and the wireless network known parameters; and	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} receives the performance data and suggests one or more corrective actions in conformity with a comparison of the performance data and the wireless network known parameters.
another one or more computers other than the system of computers, wherein at least one of the another one or more computers is coupled in communication	Plaintiff contends that the wireless network can include another computer(s) (for example, third-parties, LBS providers, subsidiaries, etc.) other than the system of computers and another computer(s) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. }. The following exemplifies this limitation's existence in Accused Systems:

Representative Claim	Corresponding Structure in Accused Systems
with the system of computers,	
wherein the system of computers is programmed to provide an indication of location of the at least one wireless device to the another one or more computer,	Plaintiff contends that another computer(s) (for example, third-parties, LBS providers, subsidiaries, etc.) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.}. The system of computers can provide access to an indication of location to another computer(s).
and wherein the another one or more computers, responsive to a communication from the at least one wireless device, set a no access flag within	Plaintiff contends that another computer(s) (for example, PDE, Positioning Engine, Location server, third-parties, LBS providers, subsidiaries, etc.) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.}. The Another computer(s) being in communication with the system of computers and responsive to a communication from the wireless devices.

Representative Claim	Corresponding Structure in Accused Systems
a memory of at least one of the another one or more computers,	
and wherein the another one or more computers provides access to an indication of location of the at least one wireless device from the another one or more computers if the no access flag is reset and denies access to the indication of location of the at least one wireless device from the another one or more computers if the no access flag is set.	Plaintiff contends that another computer(s) (for example, PDE, Positioning Engine, Location server, third-parties, LBS providers, subsidiaries, etc.) is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.}. The Another computer(s) being in communication with the system of computers and responsive to a communication from the wireless devices are capable of configuring or setting a no access flag within the memory of another computer(s). Therefore, the Another computer(s) provides access to an indication of location from another computer(s) if the no access flag is reset and denies access to the indication of location from another computer(s) if the no access flag is set.

23. 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.

24. 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.

25. Again more specifically, for the "another one or more computers other than the system of computers" element, Ericsson puts that element into use and controls it by using the element to perform or have performed on it the claimed function, as per the chart above. For example, "[t]he system of computers can provide access to an indication of location to another computer(s)." This is done by Ericsson using the claimed system of computers to perform the providing access function to the claimed another computers, which are used to receive that indication. In addition to the chart above and the facts alleged below, additional relevant facts are recited in Traxcell's Final Infringement Contentions.

26. Again more specifically, the LBS providers may include Google, Inc. and its applications Google Maps and Waze and Apple Inc. and its application Apple Maps. Ericsson receives the benefits of the claims from the patent of providing indications of location to the LBS provider and the LBS provider providing or denying access to the indication of location. Those functions further benefit Ericsson by improving the optimization of the operation of its wireless network and by improving customer experiences, thereby increasing customer selection of Ericsson wireless services and devices.

27. 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. 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.

28. 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; and,

    i. the like.

29. 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.

30. Ericsson have actively encouraged or instructed others (e.g., its customers, such as Verizon), 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 controlling access to location information) such to cause infringement 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.

31. Ericsson has actively encouraged or instructed others (e.g., its customers, such as Verizon, and/or the customers of its 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 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 of the '517 patent and the technology underlying it from at least the date of issuance of the patent 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.

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

VI. INFRINGEMENT ('135 Patent (Attached as exhibit B))

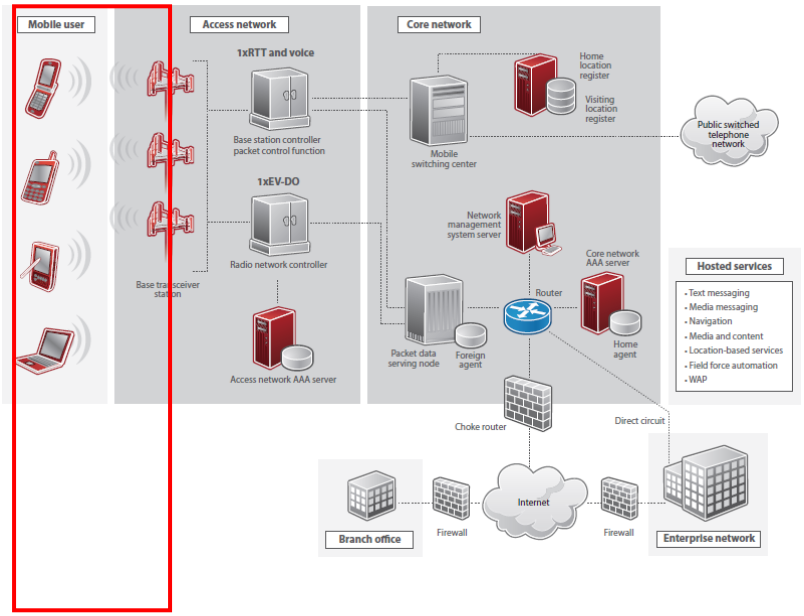
32. On August 11, 21020, U.S. Patent No. 10,743,135 ("the '135 patent"), attached as Exhibit D, entitled "Wireless network and method for suggesting corrective action in response to detecting communications errors" was duly and legally issued by the U.S. Patent and Trademark Office. Traxcell owns the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

33. 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. Verizon

34. The following preliminary exemplary chart provides Traxcell's allegations of infringement.

Representative Claim	Corresponding Structure in Accused Systems
A wireless network, comprising:	
at least two wireless devices each communicating via radio frequency signals;	The following exemplifies this limitation's existence in Accused Systems:

Representative Claim	Corresponding Structure in Accused Systems
	
a system of computers programmed to perform steps of referencing performance of at least one of the at least two wireless devices with wireless network known parameters and routinely storing performance data for the at least one of the at least two wireless devices;	Please note that Verizon uses three types of self-organizing network technology, that is, C-SON, D-SON and V-SON and uses network equipment or solutions supplied from vendors, for example, from Ericsson, etc. In addition to RAN vendor and third-party supplied SON features, Verizon has also developed its own proprietary SON implementation, known as V-SON. Plaintiff contends that a system of computers including Operations Support System (OSS or OSS-RC) of Verizon Wireless' wireless telecommunications network, Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in the wireless telecommunications network, constituting the "system of computers", corresponds to this claim limitation, as the system receives MDT (Minimization of Drive Tests) reports, UE Measurement Reports, CTR (Cell Traffic Recordings), UETR (UE Traffic Recording), etc., received or collected in the form of PM and Trace data. Further, Ericsson's SON solution includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. and the system of computers supporting the Ericsson's SON solution include Verizon Wireless' wireless telecommunications

Representative Claim	Corresponding Structure in Accused Systems
	network's Operations Support System (OSS or OSS-RC), Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server. (Please note that Ericsson SON Optimization Manager together with Ericsson Network Manager and Network IQ delivers the full suite.) Plaintiff contends that a system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. } is programmed to reference performance of the wireless device(s) with wireless network known parameters and to routinely store performance data for the wireless device(s). That is, the system of computers receives or collects UE-referenced network and device performance measurements from the MDT (Minimization of Drive Tests) reports, UE Measurement Reports, etc. and compares the collected (or received) performance data against the corresponding pre-defined standards or thresholds. The system of computers is linked or connected to the wireless network consisting of the various network elements including the radio-tower(s) or base-station(s). Further, plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} and operating, implementing and supporting SON solution in the wireless telecommunications network, corresponds to this claim limitation, as the system of computers references performance of the wireless device(s) with wireless network known parameters and routinely stores performance data for the wireless device(s).
a radio tower adapted to receive the radio frequency signals from, and transmit the radio frequency signals to, the at least one of the at least two wireless devices,	Plaintiff contends the Verizon wireless network has radio towers adapted to receive RF signals from and transmit the RF signals to the wireless communications devices (specifically one or more of the mobile wireless communications devices).
wherein the system of computers further receives the	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} is further programmed to receive the performance

Representative Claim	Corresponding Structure in Accused Systems
performance data and suggests at least one corrective action obtained from a list of possible causes for the radio tower based upon the performance data for the at least one of the at least two wireless devices,	data and suggests one or more corrective actions for the radio tower or base-station based upon the performance data for one or more wireless devices. The following exemplifies this limitation's existence in Accused Systems:
wherein the radio tower generates an error code based upon operation of the at least one of the at least two wireless devices, and wherein the system of computers is further programmed to receive the error code from the radio tower,	Plaintiff contends that the radio tower or base-station generates an error code (for example, in the form of alerts, alarms, notifications, etc.) based upon operation of one or more wireless devices. The following exemplifies this limitation's existence in Accused Systems:
wherein the system of computers further suggests at least one corrective action in conformity with a comparison of the performance data and the wireless	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} corresponds to this claim limitation. The system of computers performs management functions such as Fault Management (FM), etc. and is capable of receiving network errors or faults from the radio tower(s) in the form of alerts or alarms or notifications.

Representative Claim	Corresponding Structure in Accused Systems
network known parameters, and	
wherein the wireless network further comprises another one or more computers other than the system of computers, wherein at least one of the another one or more computers is coupled in communication with the system of computers,	Plaintiff contends that based upon the error-code, the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc., is programmed to suggest the one or more corrective actions as an adjustment of RF signals of another radio-tower(s) or base-station(s) for direct processing of signals from one or more of the wireless devices based upon the error-code. The system of computers can perform SON related functions that require alarm monitoring from the network elements (for example, radio-towers, etc.) which implies that more than one radio-towers or base stations are present in the network. The system of computers optimizes the network by adjusting and fine-tuning network parameters such as antenna tilt, transmission power, etc. of the concerned radio-tower(s) or base-station(s) based on RF information. These actions are suggested or performed by the system for automatically adjusting the parameters of the radio-tower(s) or base-station(s) in order to direct process signals from one or more of the wireless devices.
wherein the system of computers is programmed to provide an indication of location of the at least one of the at least two wireless devices to the another one or more computers,	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.} suggests one or more corrective actions of the RF signals of the one or more radio-towers or base-stations in order to improve communication with one or more wireless devices based on the error code. As already mentioned above, the system of computers can perform SON related functions. The system of computers optimizes the network by adjusting and fine-tuning network parameters such as antenna tilt, transmission power, etc. of the concerned radio-tower(s) or base-station(s) based on the RF information. These actions are suggested or performed by the system for automatically adjusting the parameters of the radio-tower(s) or base-station(s) for improving communication with one or more wireless devices based on the error code.
wherein the another one or more computers,	Plaintiff contends that based on a communication from one or more wireless devices {for example, using options or settings such as turning-off the location, opting-out of the location related services or location-sharing, denying access to the location, not

Representative Claim	Corresponding Structure in Accused Systems
responsive to a communication from the at least one of the at least two wireless devices, set a no access flag within a memory of at least one of the another one or more computers, and wherein the another one or more computers provides access to the indication of location of the at least one of the at least two wireless devices if the no access flag is reset and denies access to the indication of location of the at least one of the at least two wireless device if the no access flag is set.	providing consent for the location determination or location-sharing, etc. by the user(s) of the wireless device(s)}, the another one or more computers then set a 'no access flag' within a memory of at least one of the another one or more computers, that is, storing information within the memory of the one or more computers that access to the wireless device's location is prohibited or denied. Plaintiff contends that the another one or more computers (refer Exhibit-D) allow or deny access to the location of the wireless device(s) depending upon the settings of the 'no access flag' (e.g., settings related to the wireless device's location access) stored in the another one or more computer, for example, as: a) <u>If the 'no access flag' is reset</u> – that is, enabling or using one or more options or settings such as turning-on the location, opting-in for the location related services or location-sharing, allowing access to the location, providing consent for the location determination or location-sharing, etc. by the user(s) of the wireless device(s) – in such scenario, the another one or more computers provide access to the indication of location of the wireless device. b) <u>If the 'no access flag' is set</u> – that is, enabling or using one or more options or settings such as turning-off the location, opting-out of the location related services or location-sharing, denying access to the location, not providing consent for the location determination or location-sharing, etc. by the user(s) of the wireless device(s) – in such scenario, the another one or more computers deny access to the indication of location of the wireless device.

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

36. More specifically, Verizon 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 Verizon infringes claims 1–29 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.

37. Again more specifically, for the "another one or more computers other than the system of computers" element, Verizon puts that element into use and controls it by using the element to perform or have performed on it the claimed function, as per the chart above. For example, "[t]he system of computers can provide access to an indication of location to another computer(s)." This is done by Verizon using the claimed system of computers to perform the providing access function to the claimed another computers, which are used to receive that indication. In addition to the chart above and the facts alleged below, additional relevant facts are recited in Traxcell's Final Infringement Contentions.

38. Again more specifically, the LBS providers may include Google, Inc. and its applications Google Maps and Waze and Apple Inc. and its application Apple Maps. Verizon receives the benefits of the claims from the patent of providing indications of location to the LBS provider and the LBS provider providing or denying access to the indication of location. Those functions further benefit Verizon by improving the optimization of the operation of its wireless network and by improving customer experiences, thereby increasing customer selection of Verizon wireless services and devices.

39. Again more specifically, Verizon 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 '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.

40. Again more specifically, Verizon 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; and,

    i. the like.

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

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

42. Verizon have 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) such to cause infringement claims 1–30 of the '135 patent, literally or under the doctrine of equivalents. Moreover, Verizon 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 Verizon by the U.S. Patent and Trademark Office during prosecution of one of Verizon's patent applications.

43. Verizon has actively encouraged or instructed others (e.g., its customers and/or the customers of its related companies), 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) 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, Verizon has known of the '135 patent and the technology underlying it from at least the date of issuance of the patent or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Verizon by the U.S. Patent and Trademark Office during prosecution of one of Verizon's patent applications.

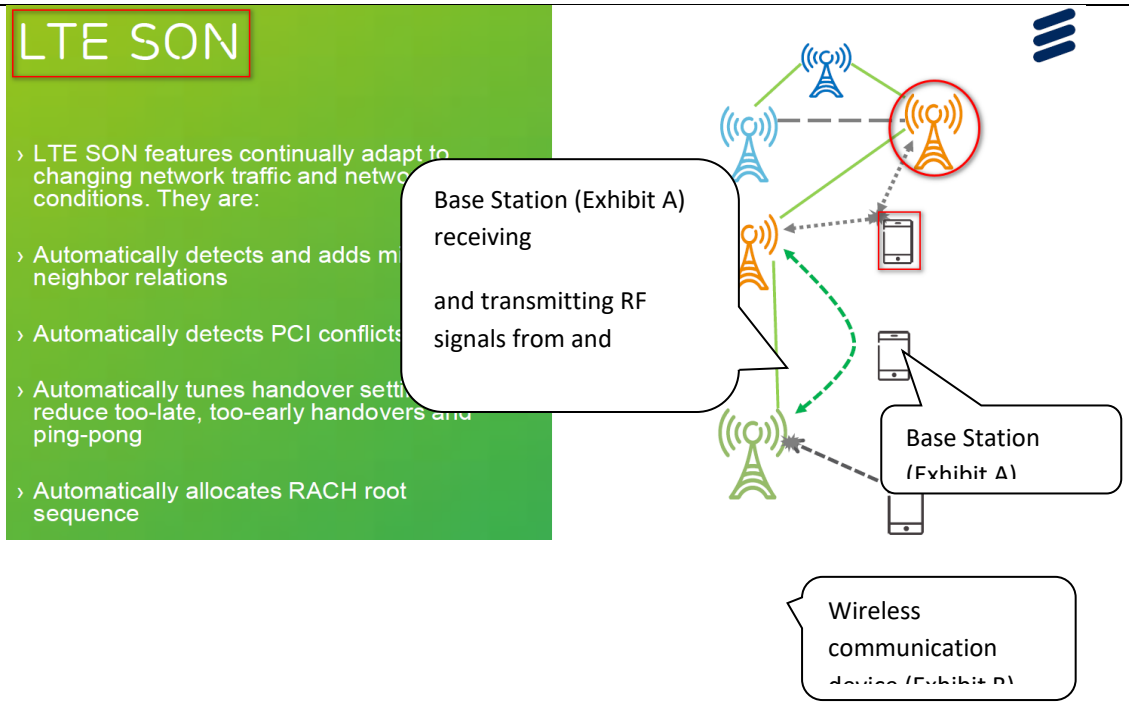
44. Verizon have caused and will continue to cause Traxcell damage by infringing the '135 patent.

B. Ericsson

45. The following preliminary exemplary chart provides Traxcell's allegations of infringement.

Exemplary Claim	Corresponding Structure in Accused Systems
1. A wireless network, comprising:	
at least two wireless devices each communicating via radio frequency signals;	Plaintiff contends that this is an Ericsson wireless device or other communicating via RF signals.
a system of computers programmed to perform steps of referencing performance of at least one of the at least two wireless devices with wireless network known parameters and routinely storing performance data for the at least one of the at least two wireless devices; and	Plaintiff contends that a system of computers including Operations Support System (OSS or OSS-RC) of wireless telecommunications network, Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in the wireless telecommunications network, constituting the "system of computers", as the system receives MDT (Minimization of Drive Tests) reports, UE Measurement Reports, CTR (Cell Traffic Recordings), UETR (UE Traffic Recording), etc., received or collected in the form of PM and Trace data. Further, Ericsson's SON solution includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. and the system of computers supporting the Ericsson's SON solution include wireless telecommunications network's Operations Support System (OSS or OSS-RC), Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server. (Please note that Ericsson SON Optimization Manager together with Ericsson Network Manager and Network IQ delivers the full suite.) Plaintiff contends that a system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc., i.e., Refer Exhibit-C} is programmed to reference performance

	of the wireless device(s) with wireless network known parameters and to routinely store performance data for the wireless device(s). That is, the system of computers receives or collects UE-referenced network and device performance measurements from the MDT (Minimization of Drive Tests) reports, UE Measurement Reports, etc. and compares the collected (or received) performance data against the corresponding pre-defined standards or thresholds. The system of computers is linked or connected to the wireless network consisting of the various network elements including the radio-tower(s) or base-station(s). Further, plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc., i.e., Refer Exhibit-C}; and operating, implementing and supporting SON solution in the wireless telecommunications network, corresponds to this claim limitation, as the system of computers references performance of the wireless device(s) with wireless network known parameters and routinely stores performance data for the wireless device(s).
a radio tower adapted to receive the radio frequency signals from, and transmit the radio frequency signals to, the at least one of the at least two wireless devices,	Plaintiff contends that this is an Ericsson radio tower adapted to receive the RF signals from the one or more wireless devices (identified on Exhibit B) or to transmit the RF signals to the one or more wireless devices (identified on Exhibit B). The following exemplifies this limitation's existence in Accused Systems:

	
wherein the system of computers further receives the performance data and suggests at least one corrective action obtained from a list of possible causes for the radio tower based upon the performance data for the at least one of the at least two wireless devices,	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc., is further programmed to receive the performance data and suggests one or more corrective actions for the radio tower(s) or base-station(s) based upon the performance data for one or more wireless devices.
wherein the radio tower generates an error code based upon operation of the at least one of the at least two wireless devices, and wherein the	Plaintiff contends that the radio tower or base-station generates an error code (for example, in the form of alerts, alarms, notifications, etc.) based upon operation of one or more wireless devices. Further, Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. } corresponds to this claim limitation. The system of computers performs management functions such as Fault Management (FM), etc. and is capable of receiving network errors or faults from the radio

system of computers is further programmed to receive the error code from the radio tower,	tower(s) or base-station(s) in the form of alerts or alarms or notifications. The following exemplifies this limitation's existence in Accused Systems:
wherein the system of computers further suggests at least one corrective action in conformity with a comparison of the performance data and the wireless network known parameters, and	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. } suggests one or more corrective actions in conformity with a comparison of the performance data and the wireless network known parameters.
wherein the wireless network further comprises another one or more computers other than the system of computers, wherein at least one of the another one or more computers is coupled in communication with the system of computers,	Plaintiff contends that another one or more computers {i.e., one or more computers, servers, computing devices, computing systems, etc. within or outside the Ericsson's Network or Ericsson's facility such as one or more computers, servers, computing devices, computing systems, etc. of third-parties, location based service (LBS) providers, Ericsson's subsidiaries or family of companies, vendors, partners, etc. is coupled in communication with the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc.
wherein the system of computers is programmed to provide an indication of	Plaintiff contends that the system of computers executing or loaded with Ericsson's SON solution {which includes SON Optimization Manager (SON OM), SON Policy Manager, SON Visualization, etc. } provides indication of location(s) of one or more wireless devices to the another one or more computers.

location of the at least one of the at least two wireless devices to the another one or more computers,	
wherein the another one or more computers, responsive to a communication from the at least one of the at least two wireless devices, set a no access flag within a memory of at least one of the another one or more computers, and	Plaintiff contends that based on a communication from one or more wireless devices {for example, using options or settings such as turning-off the location, opting-out of the location related services or location-sharing, denying access to the location, not providing consent for the location determination or location-sharing, etc. by the user(s) of the wireless device(s)}, the another one or more computers then set a 'no access flag' within a memory of at least one of the another one or more computers, that is, storing information within the memory of the one or more computers that access to the wireless device's location is prohibited or denied.
wherein the another one or more computers provides access to the indication of location of the at least one of the at least two wireless devices if the no access flag is reset and denies access to the indication of location of the at least one of the at least two wireless device if the no access flag is set.	Plaintiff contends that the another one or more computers (refer Exhibit-D) allow or deny access to the location of the wireless device(s) depending upon the settings of the 'no access flag' (e.g., settings related to the wireless device's location access) stored in the another one or more computer, for example, as: a) <u>If the 'no access flag' is reset</u> – that is, enabling or using one or more options or settings such as turning-on the location, opting-in for the location related services or location-sharing, allowing access to the location, providing consent for the location determination or location-sharing, etc. by the user(s) of the wireless device(s) – in such scenario, the another one or more computers provide access to the indication of location of the wireless device. b) <u>If the 'no access flag' is set</u> – that is, enabling or using one or more options or settings such as turning-off the location, opting-out of the location related services or location-sharing, denying access to the location, not providing consent for the location determination or location-sharing, etc. by the user(s) of the wireless device(s) – in such scenario, the another one or more computers deny access to the indication of location of the wireless device.

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

47. 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 '135 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, for the "another one or more computers other than the system of computers" element, Ericsson puts that element into use and controls it by using the element to perform or have performed on it the claimed function, as per the chart above. For example, "[t]he system of computers can provide access to an indication of location to another computer(s)." This is done by Ericsson using the claimed system of computers to perform the providing access function to the claimed another computers, which are used to receive that indication. In addition to the chart above and the facts alleged below, additional relevant facts are recited in Traxcell's Final Infringement Contentions.

49. Again more specifically, the LBS providers may include Google, Inc. and its applications Google Maps and Waze and Apple Inc. and its application Apple Maps. Ericsson receives the benefits of the claims from the patent of providing indications of location to the LBS provider and the LBS provider providing or denying access to the indication of location.

Those functions further benefit Ericsson by improving the optimization of the operation of its wireless network and by improving customer experiences, thereby increasing customer selection of Ericsson wireless services and devices.

50. 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. 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.

51. 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; and,

i. the like.

52. 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.

53. Ericsson have actively encouraged or instructed others (e.g., its customers, such as Verizon), 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) such to cause infringement 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.

54. Ericsson has actively encouraged or instructed others (e.g., its customers, such as Verizon, and/or the customers of its related companies), 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) 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 of the ‘135 patent and the technology underlying it from at least the date of issuance of the patent 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.

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

VII. INFRINGEMENT '147 Patent (Attached as exhibit C))

56. On October 27, 2020, U.S. Patent No. 10,820,147 ("the '147 patent"), attached as Exhibit E, 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.

57. 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."

A. Verizon

58. The following preliminary exemplary chart provides Traxcell's allegations of infringement.

Exemplary Claim	Corresponding Structure in Accused Systems
A wireless communications system including:	

Exemplary Claim	Corresponding Structure in Accused Systems
a first radio-frequency transceiver within a wireless mobile communications device and an associated first antenna to which the first radio-frequency transceiver is coupled,	Plaintiff contends that the Verizon wireless network has base stations that include a radio frequency transceiver. Wireless mobile communication device— including but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X, Apple iPhone SE etc. (refer Exhibit B for complete list)—include radio-frequency transceivers and an associated antenna. When wireless communication device's transceivers and antennas are in communication, they are coupled.
wherein the first radio-frequency transceiver is configured for radio-frequency communication with a wireless communications network;	Plaintiff contends that the wireless communication device on the Verizon wireless network includes a radio frequency transceiver. Wireless mobile communication device— including but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X, Apple iPhone SE etc. (refer Exhibit B for complete list)—include radio-frequency transceivers and an associated antenna. When wireless communication device's transceivers and antennas are in communication, they are coupled.
a first processor within the wireless mobile communications device coupled to the at least one first radio-frequency transceiver programmed to receive information indicative of a	Plaintiff contends that each Verizon wireless device includes a processor. Wireless mobile communication device- including but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X, Apple iPhone SE etc. has a processor. When wireless communication device's transceivers and processor are in communication, they are coupled. Further, the Verizon Navigator application or other application such as Google Maps, on the Exhibit-B utilizes the processor coupled to the transceiver to estimate/receive the location on mobile wireless communications devices (specifically one or more of the mobile wireless

Exemplary Claim	Corresponding Structure in Accused Systems
location of the wireless mobile communications device and generate an indication of a location of the wireless mobile communications device with respect to geographic features according to mapping information stored within the wireless mobile communications device,	communications devices identified on Exhibit B) by utilizing Exhibit C (wireless communication network or first computer). Icon (for example, "My GPS Location") on the Verizon Navigator application maps indicates the location of the wireless communication device (specifically one or more of the mobile wireless communications devices identified on Exhibit B), with respect to the various geographical features such as streets, cities, or any point of interest. Furthermore, the Verizon Navigator application mapping information comes through the Verizon wireless network i.e. by using data plan or Wi-Fi network and is stored within the memory of the wireless communication device
and wherein the first processor determines user navigation information and displays the user navigation information according to the location of the wireless mobile communications device with respect to the geographic features and a destination specified at the wireless mobile	Plaintiff contends that the processor processes location-service information, including displaying user navigation information according to the device's location with regards to geographic features and a user-specified destination. For example, using Google Maps, Verizon VZ Navigator or other such application, the user device locates the device's current location on Google Maps app or Verizon VZ Navigator app and then provides details for destination on the options, provided in Google Maps, Verizon VZ Navigator or other such application. The user can then navigate (i.e., the processor processes display information) in real time from current location to destination. The processor displays navigation information on Google Maps, Verizon VZ Navigator or other such application to display turn-by-turn directions. Using Google Maps, Verizon VZ Navigator or other such application, the processor will show the directions and use real-time traffic information to find the best route to the specified destination. The wireless communication device having Verizon VZ Navigator application or Google maps, displays to the user navigation information, based on the destination entered by the user. The Verizon VZ Navigator application or Google maps estimates/receives the location of the wireless communication device (specifically one or more of the mobile wireless communications devices identified on Exhibit B), by utilizing Exhibit C (wireless communication network), that is, Verizon communication network, and indicates it on

Exemplary Claim	Corresponding Structure in Accused Systems
communications device,	the map with respect of various geographic features such as streets, cities, or any point of interest. The Verizon VZ Navigator application or Google Maps provides route from present location to the destination entered by the user on the wireless communication device.
wherein the first processor further sends the user navigation information to the network as a number of segments,	Plaintiff contends that each Verizon wireless device (and others) corresponds to this claim limitation because each Exhibit-B item includes a processor. Wireless mobile communication device- including but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X, Apple iPhone SE etc. has a processor. Further, the Verizon VZ Navigator application or Google Maps or any other location based application, on the Exhibit-B utilizing the processor can send the user navigation information to the network as a number of segments as to receive the traffic information for the segments, it is required to send the navigation information to the network as a number of segments.
wherein at least one other processor outside the network updates the user navigation information in conformity with traffic congestion information accessible to the at least one other processor outside the network by computing a numerical value for the segments corresponding to	Plaintiff contends that Verizon Navigator server or Google Maps server or any other location based services server (Exhibit D) corresponds to this claim limitation because each such location based services server can be outside the network and needs to be contacted to update the user navigation information in conformity with traffic congestion information accessible to the server by computing a numerical value for the segments corresponding to the expected time to travel through the segments.

Exemplary Claim	Corresponding Structure in Accused Systems
the expected time to travel through the segments,	
updates the user navigation information in conformity with the numerical values for the segments, and sends the updated user navigation information to the wireless mobile communications device;	Plaintiff contends that Verizon Navigator server or Google Maps server or any other location based server corresponds to this claim limitation because each such server updates the user navigation information in conformity with the numerical values for the segments and sends the updated user navigation information to the wireless mobile communications device.
at least one second radio-frequency transceiver and an associated at least one second antenna of the wireless communications network to which the second radio-frequency transceiver is coupled; and	Plaintiff contends that each Verizon base station corresponds to this claim limitation because each is a base station. The Verizon's communication network includes cell sites or towers (examples of different types of compatible Verizon access points or towers are Verizon towers as well as towers sold by third-parties to Verizon, Verizon small cells, Verizon network extenders or signal boosters, Verizon antennae, etc.) which provide radio communication to and from wireless communication devices. Thus, the cell sites (base stations) include the radio frequency transceiver coupled with antenna in Verizon's communication network. Towers and base stations include radio-frequency transceivers designed and used for radio-frequency communication with at least one antenna. When base-station transceivers and antennas are in communication, they are coupled. Further, in addition to being so coupled, the transceivers and antenna, by placement within a base station, physically coupled.

Exemplary Claim	Corresponding Structure in Accused Systems
a second processor coupled to the at least one second radio-frequency transceiver programmed to acquire the information indicative of a location of the wireless mobile communications device,	Plaintiff contends that a computer corresponds to this claim limitation because each described computer is coupled to cell sites/base station of the Verizon's communication network which provides radio communication to and from wireless communication mobile devices. The cell sites/base station include the radio frequency transceiver(s) and the associated antenna(s). It is to be noted that Verizon uses network equipment or solutions supplied from vendors, for example, from Ericsson, etc. In addition to RAN vendor and third-party supplied SON features, Verizon has also developed its own proprietary SON implementation, known as V-SON. Plaintiff contends that a system of computers including Operations Support System (OSS or OSS-RC) of Verizon Wireless' wireless telecommunications network, Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in the wireless telecommunications network, is equivalent to the second processor and corresponds to this claim limitation, as such "system of computers" is coupled to the second radio-frequency transceiver and receives MDT (Minimization of Drive Tests) reports, UE Measurement Reports, CTR (Cell Traffic Recordings), UETR (UE Traffic Recording), etc., received or collected in the form of PM and Trace data. Therefore, the second processor ascertains wireless mobile communications device geolocation information from Position Reference Signals (PRS), the MDT reports, UE measurement reports and Trace data (CTR and UETR) received or collected in the form of PM (Performance Measurements) and Trace data. The second processor i.e. First Computer communicatively coupled to the second RF transceiver(s) and second antenna is programmed to determine a wireless mobile communication device's location.
wherein the second processor selectively acquires the information indicative of a	Plaintiff contends that the Verizon wireless network has a computer that corresponds to this claim limitation because second processor will only be able to determine the location of the Wireless communication device, if the location flag on the Wireless communication device is set or turned "ON".

Exemplary Claim	Corresponding Structure in Accused Systems
location of the wireless mobile communications device dependent on the setting of preference flags,	
wherein the second processor acquires the information indicative of a location of the wireless mobile communications device if the preference flags are set to a state that permits tracking of the wireless mobile communications device,	Plaintiff contends a wireless device can set preference flags that enable or disable accessibility to data relevant to the device's location by the Verizon computer or second processor. Such programmability by a wireless device is at times known as a privacy setting. Further, such programmability is available by location-permission granting (wireless mobile communications device must grant permission). The Verizon computer will only be able to determine and track the location of the Wireless communication device such as but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X, Apple iPhone SE etc., if the location flag on the Wireless communication device is turned "ON" (that is, locations privacy settings are set to "On").
and wherein the second processor does not acquire the information indicative of the location of the wireless mobile communications device if the preference flags are set to a state that prohibits tracking of the wireless mobile	Plaintiff contends that a Verizon wireless network computer corresponds to this claim limitation because if the preference flags are not enabled (i.e., the wireless-mobile-communication device's user has not granted permission), the computer or second processor do not proceed with determining the device's location or communicating that location. The computer will not be able to determine and track the location of the Wireless communication device such as but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X,

Exemplary Claim	Corresponding Structure in Accused Systems
communications device.	Apple iPhone SE etc. if the location flag on the Wireless communication device is turned off (that is, locations privacy settings are set to "off").

59. Verizon 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 Verizon infringes claims 1–24 of the '147 patent, literally or under the doctrine of equivalents.

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

61. More specifically, it is necessary for Verizon to have access to the location data of a wireless device. Stated another way, Verizon 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.

62. Verizon's Accused wireless communications systems put those features into use. Verizon 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 Verizon's Accused wireless communications systems put them

into use. In addition, operational and financial benefits are provided by those elements and functionalities to Verizon as explained below.

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

64. Verizon have 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 provide on-line and off-line navigation) such to cause infringement claims 1–24 of the '147 patent, literally or under the doctrine of equivalents. Moreover, Verizon 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 Verizon by the U.S. Patent and Trademark Office during prosecution of one of Verizon's patent applications.

65. Verizon has actively encouraged or instructed others (e.g., its customers and/or the customers of its related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components that provide on-line

and off-line navigation) such as to cause infringement of one or more of claims 1–24 of the '147 patent, literally or under the doctrine of equivalents. Moreover, Verizon has known of the '147 patent and the technology underlying it from at least the date of issuance of the patent or from the issuance of the '284 patent, which followed the date that the patent's underlying application was cited to Verizon by the U.S. Patent and Trademark Office during prosecution of one of Verizon's patent applications.

66. Verizon have caused and will continue to cause Traxcell damage by infringing the '147 patent.

B. Ericsson

67. The following preliminary exemplary chart provides Traxcell's allegations of infringement.

Exemplary Claim	Corresponding Structure in Accused Systems
A wireless communications system including:	
a first radio-frequency transceiver within a wireless mobile communications device and an associated first antenna to which the first radio-frequency transceiver is coupled,	Plaintiff contends that Ericsson makes, uses, imports and sell wireless devices which include radio-frequency transceivers and an associated antenna. When wireless communication device's transceivers and antennas are in communication, they are coupled. Such devices are capable of use with the Verizon wireless network.

Exemplary Claim	Corresponding Structure in Accused Systems
wherein the first radio-frequency transceiver is configured for radio-frequency communication with a wireless communications network;	Plaintiff contends that Ericsson's wireless communication devices (and others) include a radio frequency transceiver. Wireless mobile communication device— including but not limited to Ericsson branded devices—include radio-frequency transceivers and an associated antenna. When wireless communication device's transceivers and antennas are in communication, they are coupled.
a first processor within the wireless mobile communications device coupled to the at least one first radio-frequency transceiver programmed to receive information indicative of a location of the wireless mobile communications device and generate an indication of a location of the wireless mobile communications device with respect to geographic features according to mapping information stored within the wireless mobile	Plaintiff contends that Ericsson's wireless communication devices (and others) have a processor. When wireless communication device's transceivers and processor are in communication, they are coupled. Further, applications such as Google Maps, Waze, Apple Maps or the like, utilize the processor coupled to the transceiver to estimate/receive the location on mobile wireless communications devices and provide an icon showing the location with respect to geographic features and mapping information stored on the wireless device.

Exemplary Claim	Corresponding Structure in Accused Systems
communications device,	
and wherein the first processor determines user navigation information and displays the user navigation information according to the location of the wireless mobile communications device with respect to the geographic features and a destination specified at the wireless mobile communications device,	Plaintiff contends that the processor processes location-service information, including displaying user navigation information according to the device's location with regards to geographic features and a user-specified destination. For example, using Google Maps, or other such application, the user device locates the device's current location on Google Maps app and then provides details for destination on the options, provided in Google Maps, or other such application. The user can then navigate (i.e., the processor processes display information) in real time from current location to destination. The processor displays navigation information on Google Maps, Verizon VZ Navigator or other such application to display turn-by-turn directions. Using Google Maps, Verizon VZ Navigator or other such application, the processor will show the directions and use real-time traffic information to find the best route to the specified destination. The wireless communication device having Verizon VZ Navigator application or Google maps, displays to the user navigation information, based on the destination entered by the user. The Verizon VZ Navigator application or Google maps estimates/receives the location of the wireless communication device (specifically one or more of the mobile wireless communications devices, by utilizing the Verizon wireless network, that is, Verizon communication network, and indicates it on the map with respect of various geographic features such as streets, cities, or any point of interest. The Verizon VZ Navigator application or Google Maps provides route from present location to the destination entered by the user on the wireless communication device.
wherein the first processor further sends the user navigation information to the network as a number of segments,	Plaintiff contends that each such wireless device (and others) corresponds to this claim limitation because each includes a processor. Verizon VZ Navigator application or Google Maps or any other location based application, on the Exhibit-B utilizing the processor can send the user navigation information to the network as a number of segments as to receive the traffic information for the segments, it is required to send the navigation information to the network as a number of segments.

Exemplary Claim	Corresponding Structure in Accused Systems
wherein at least one other processor outside the network updates the user navigation information in conformity with traffic congestion information accessible to the at least one other processor outside the network by computing a numerical value for the segments corresponding to the expected time to travel through the segments,	Plaintiff contends that Verizon Navigator server or Google Maps server or any other location based services server corresponds to this claim limitation because each such location based services server can be outside the network and needs to be contacted to update the user navigation information in conformity with traffic congestion information accessible to the server by computing a numerical value for the segments corresponding to the expected time to travel through the segments.
updates the user navigation information in conformity with the numerical values for the segments, and sends the updated user navigation information to the wireless mobile communications device;	Plaintiff contends that Verizon Navigator server or Google Maps server or any other location based server corresponds to this claim limitation because each such server updates the user navigation information in conformity with the numerical values for the segments and sends the updated user navigation information to the wireless mobile communications device.
at least one second radio-frequency transceiver and an associated at least	Plaintiff contends that each Ericsson is a supplier to Verizon of base station corresponds to this claim limitation because each is a base station. The Verizon's communication network includes cell sites or towers (examples of different types of compatible Verizon access points or towers are Verizon towers as well as towers sold by third-parties to

Exemplary Claim	Corresponding Structure in Accused Systems
one second antenna of the wireless communications network to which the second radio-frequency transceiver is coupled; and	Verizon, Verizon small cells, Verizon network extenders or signal boosters, Verizon antennae, etc.) which provide radio communication to and from wireless communication devices. Ericsson makes many of these devices and sells them to Verizon, among others. Thus, the cell sites (base stations) include the radio frequency transceiver coupled with antenna in Verizon's communication network. Towers and base stations include radio-frequency transceivers designed and used for radio-frequency communication with at least one antenna. When base-station transceivers and antennas are in communication, they are coupled. Further, in addition to being so coupled, the transceivers and antenna, by placement within a base station, physically coupled.
a second processor coupled to the at least one second radio-frequency transceiver programmed to acquire the information indicative of a location of the wireless mobile communications device,	Plaintiff contends that a computer corresponds to this claim limitation because each described computer is coupled to cell sites/base station of the Verizon's communication network which provides radio communication to and from wireless communication mobile devices. The cell sites/base station include the radio frequency transceiver(s) and the associated antenna(s). It is to be noted that Verizon uses network equipment or solutions supplied from vendors, for example, from Ericsson, etc. In addition to RAN vendor and third-party supplied SON features, Verizon has also developed its own proprietary SON implementation, known as V-SON. Plaintiff contends that a system of computers including Operations Support System (OSS or OSS-RC) of Verizon Wireless' wireless telecommunications network, Ericsson's SON solution [which includes SON Optimization Manager, SON Policy Manager, SON Visualization, etc. and the software programs that run them] interfaced or integrated with said Operations Support System (OSS or OSS-RC), and a set or network of computers [which include Trace Processing Server (TPS), OSS Data Gateway, RAN Analyzer, RAN Configuration Manager, Frequency Optimizer, Cell Optimizer, Network Capacity Planner and Implementation Server] operating, implementing and supporting the Ericsson's SON solution in the wireless telecommunications network, is equivalent to the second processor and corresponds to this claim limitation, as such "system of computers" is coupled to the second radio-frequency transceiver and receives MDT (Minimization of Drive Tests) reports, UE Measurement Reports, CTR (Cell Traffic Recordings), UETR (UE Traffic Recording), etc., received or collected in the form of PM and Trace data. Therefore, the second processor ascertains wireless mobile communications device geolocation information from Position Reference Signals (PRS), the MDT reports, UE measurement reports and Trace data (CTR and UETR) received or collected in the form of PM (Performance Measurements) and Trace data.

Exemplary Claim	Corresponding Structure in Accused Systems
	The second processor i.e. First Computer communicatively coupled to the second RF transceiver(s) and second antenna is programmed to determine a wireless mobile communication device's location.
wherein the second processor selectively acquires the information indicative of a location of the wireless mobile communications device dependent on the setting of preference flags,	Plaintiff contends that the Verizon wireless network has a computer that corresponds to this claim limitation because second processor will only be able to determine the location of the Wireless communication device, if the location flag on the Wireless communication device is set or turned "ON".
wherein the second processor acquires the information indicative of a location of the wireless mobile communications device if the preference flags are set to a state that permits tracking of the wireless mobile	Plaintiff contends a wireless device can set preference flags that enable or disable accessibility to data relevant to the device's location by the Verizon computer or second processor. Such programmability by a wireless device is at times known as a privacy setting. Further, such programmability is available by location-permission granting (wireless mobile communications device must grant permission). The Verizon computer will only be able to determine and track the location of the Wireless communication device such as but not limited to Verizon or Ericsson branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple

Exemplary Claim	Corresponding Structure in Accused Systems
communications device,	iPhone X, Apple iPhone SE etc., if the location flag on the Wireless communication device is turned "ON" (that is, locations privacy settings are set to "On").
and wherein the second processor does not acquire the information indicative of the location of the wireless mobile communications device if the preference flags are set to a state that prohibits tracking of the wireless mobile communications device.	Plaintiff contends that a Verizon wireless network computer corresponds to this claim limitation because if the preference flags are not enabled (i.e., the wireless-mobile-communication device's user has not granted permission), the computer or second processor do not proceed with determining the device's location or communicating that location. The computer will not be able to determine and track the location of the Wireless communication device such as but not limited to Verizon branded devices (now discontinued) such as Verizon Wireless Ellipsis 8 HD, Verizon Wireless Ellipsis 10, Verizon Wireless Ellipsis 8, Verizon Wireless Ellipsis 7, etc. or other (third-parties) branded devices such as Samsung Galaxy S20, Samsung Galaxy S20+, Samsung Galaxy S20 Ultra, Samsung Galaxy S10, Samsung Galaxy S10+, Samsung Galaxy S9+, Samsung Galaxy S9, Samsung Galaxy S8, Samsung Galaxy S8+, Apple iPhone 11 Pro Max, Apple iPhone 11 Pro, Apple iPhone 11, Apple iPhone XR, Apple iPhone XS, Apple iPhone X, Apple iPhone SE etc. if the location flag on the Wireless communication device is turned off (that is, locations privacy settings are set to "off").

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 identified locations of wireless devices to provide directional assistance such that Ericsson infringes claims 1–24 of the '147 patent, literally or under the doctrine of equivalents.

69. Ericsson put the inventions claimed by the '147 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.

70. More specifically, it is necessary for Ericsson to have access to the location data of a wireless device. Stated another way, Ericsson 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.

71. Ericsson's Accused wireless communications systems put those features into use. Ericsson 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 Ericsson's Accused wireless communications systems put them into use. In addition, operational and financial benefits are provided by those elements and functionalities to Ericsson as explained below.

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

installation of the LBS service.").

73. Ericsson 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) such to cause infringement claims 1–24 of the '147 patent, literally or under the doctrine of equivalents. Moreover, Ericsson 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 Ericsson by the U.S. Patent and Trademark Office during prosecution of one of Ericsson's patent applications.

74. Ericsson has actively encouraged or instructed others (e.g., its customers and/or the customers of its related companies), and continues to do so, on how to use its products and services e.g., U.S. wireless networks, wireless-network components) such as to cause infringement of one or more of claims 1–24 of the '147 patent, literally or under the doctrine of equivalents. Moreover, Ericsson has known of the '147 patent and the technology underlying it from at least the date of issuance of the patent 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.

75. Ericsson have caused and will continue to cause Traxcell damage by infringing the '147 patent.

VIII. PRAYER FOR RELIEF

WHEREFORE, Traxcell respectfully requests that this Court:

i. enter judgment that Verizon and Ericsson have infringed the Patents-in-Suit;

ii. award Traxcell damages in an amount sufficient to compensate it for Verizon's 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 damages in an amount sufficient to compensate it for Ericsson's 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;

iv. 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 Verizon;

v. 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 Ericsson;

vi. 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 Verizon;

vii. 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 Ericsson;

viii. a decree addressing future infringement that either (i) awards a permanent injunction enjoining Verizon and their agents, servants, employees, affiliates, divisions, and subsidiaries, and those in association with Verizon, 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 Verizon 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;

ix. a decree addressing future infringement that either (i) awards a permanent injunction enjoining Ericsson and their agents, servants, employees, affiliates, divisions, and

subsidiaries, and those in association with Ericsson, 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 Ericsson 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; and,

x. 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 & Schwaller, LLP

By: /s/ William P. Ramey, III
William P. Ramey, III
Texas Bar No. 24027643
5020 Montrose Blvd., Suite 800
Houston, Texas 77006
(713) 426-3923 (telephone)
(832) 900-4941 (fax)
wramey@rameyfirm.com

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 on this day of March 24, 2022, with a copy of the foregoing via electronic filing.

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