

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

WOODBURY WIRELESS LLC

Plaintiff,

v.

VERIZON COMMUNICATIONS, INC.
and CELLCO PARTNERSHIP D/B/A
VERIZON WIRELESS

Defendants.

Civil Action No. _____

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Woodbury Wireless LLC (“Woodbury Wireless” or “Plaintiff”), for its Complaint against Defendants Verizon Communications, Inc. and Cellco Partnership d/b/a/ Verizon Wireless (individually each a “Defendant,” and collectively “Verizon” or “Defendants”) alleges the following:

NATURE OF THE ACTION

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

THE PARTIES

2. Plaintiff is a limited liability company organized and existing under the laws of the State of Texas, having its principal place of business at 102 East Lamar, Jasper, Texas 75951.

3. Defendant Verizon Communications Inc. (“Verizon Communications”) is a Delaware corporation with a principal place of business at 1095 Avenue of Americas, New York, New York 10036. On information and belief, Verizon Communications may be served with process through

its registered agent at CT Corporation System, 350 North Street, Dallas, Texas 75201. Upon information and belief, Verizon Communications sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial district, and introduces products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States.

4. Defendant Cellco Partnership d/b/a Verizon Wireless (“Cellco Partnership”) is a Delaware partnership with its principal place of business at One Verizon Way, Basking Ridge, New Jersey 07920. Cellco Partnership is wholly owned by its corporate parent, Verizon Communications. Cellco Partnership may be served through its registered agent, The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, DE 19801. Upon information and belief, Cellco Partnership sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial district, and introduces infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States.

JURISDICTION AND VENUE

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

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

7. Venue is proper in this judicial district under 28 U.S.C. §1400(b).

8. This Court has general and specific personal jurisdiction over the Defendants under the laws of the State of Texas, due at least to their substantial business in Texas and in this judicial district, directly or through intermediaries, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct and/or deriving substantial revenue from goods and services provided to individuals in

the State of Texas. Verizon has purposefully availed itself of the privileges of conducting business in the State of Texas and in this judicial district. Venue is also proper in this district because Verizon has a regular and established place of business and has committed acts of infringement in this district. For example, Verizon has regular and established places of business at: 1006 East End Boulevard N., Suite A, Marshall, Texas 75670; 1111 East Grand Avenue, Marshall, Texas 75670; 741 N Central Expressway, Plano, Texas 75075; 2330 Preston Road, Suite 500, Frisco, Texas 75034; 3220 East Hebron Parkway, Suite 114, Carrollton, Texas 75010; 5020 State Highway 121, The Colony, Texas 75056; 204 Central Expressway S, Suite 40, Allen, Texas 75013; and 500 East Loop 281, Longview, Texas 75605. *See* <https://www.verizonwireless.com/stores/texas/>.

9. Further, this Court has jurisdiction and proper authority to exercise venue over Verizon because as part of its infringing products and services, Verizon has deployed equipment that has been and continues to be manufactured within this judicial district and the State of Texas. For example, upon information and belief, Verizon procures a variety of 5G equipment from Ericsson, such as Ericsson's radio system portfolio that includes, but is not limited to, Ericsson's 5G mmWave Street Macro base stations, Massive MIMO, Spectrum Sharing, Cloud RAN, and other radio access network (RAN) equipment. *See* <https://www.fiercewireless.com/operators/ericsson-wins-8-3b-5g-deal-verizon-its-largest-contract-ever>; <https://www.ericsson.com/48dca5/assets/local/campaigns/tech-unveiled/doc/tech-unveiled-cloudran-ebook.pdf> ("Ericsson Radio System interfaces evolve to also enable RAN processing on cloud infrastructure: . . . High band street macro with EMCA SoC . . . Beamforming, scheduling, CoMP, fast spectrum mgmt."). Ericsson has a manufacturing facility in this judicial district located at 2555 S Valley Pkwy, Lewisville, TX 75067. Upon information and belief,

Ericsson manufactures its 5G mmWave Street Macro base stations at its Lewisville facility, which Ericsson has supplied to Verizon for deployment in Verizon's infringing 5G Network products and services. *See e.g.*, <https://www.fiercewireless.com/operators/verizon-takes-delivery-ericsson-s-u-s-made-5g-base-station> ("Ericsson announced today that Verizon is the first recipient of a U.S.-manufactured commercial 5G base station from Ericsson's new smart factory in Texas. Ericsson back in March said that the first product made at the factory was a millimeter wave (mmWave) Street Macro solution, which is what Verizon received"); <https://www.ericsson.com/48dca5/assets/local/campaigns/tech-unveiled/doc/tech-unveiled-cloudran-ebook.pdf>.

10. As another example, upon information and belief, Verizon also conducts substantial business in the State of Texas by procuring 5G Network equipment from Samsung, which Verizon has deployed as part of its infringing 5G Network products and services. *See e.g.*, <https://www.sdxcentral.com/articles/news/cisco-lands-largest-telco-market-share-gain-in-2021/2022/03/> ("Samsung inked a \$6.64 billion deal with Verizon in mid-2020 to supply the carrier with 5G RAN equipment through 2025."); <https://www.sdxcentral.com/articles/news/verizon-boots-nokia-samsung-gets-the-spoils/2020/07/> ("Ericsson and Samsung will effectively split Verizon's RAN contract going forward."); <https://news.samsung.com/global/verizon-and-samsung-complete-fully-virtualized-5g-data-session-on-c-band-spectrum> ("Verizon and Samsung Electronics recently completed an end-to-end fully virtualized 5G data session . . . The trials, conducted over Verizon's network . . . in Texas . . . used Samsung's fully virtualized RAN (vRAN) solution built on its own software stack and C-band 64564R Massive MIMO radio."). Samsung maintains a manufacturing facility in Austin, Texas, where upon information and belief Samsung manufactures its 5G network solutions, that

are supplied to Verizon for deployment in Verizon's infringing 5G Network products and services.

<https://www.samsung.com/global/business/networks/solutions/smart-factory/>;

<https://www.fiercewireless.com/wireless/samsung-at-t-team-up-smart-5g-factory-austin>;

[https://techcrunch.com/2021/11/23/samsung-announces-new-advanced-semiconductor-](https://techcrunch.com/2021/11/23/samsung-announces-new-advanced-semiconductor-fabrication-site-in-taylor-texas/)

[fabrication-site-in-taylor-texas/](https://techcrunch.com/2021/11/23/samsung-announces-new-advanced-semiconductor-fabrication-site-in-taylor-texas/); [https://www.verizon.com/about/news/verizon-c-band-spectrum-](https://www.verizon.com/about/news/verizon-c-band-spectrum-mmwave)

[mmwave](https://www.verizon.com/about/news/verizon-c-band-spectrum-mmwave);

https://news.samsung.com/us/samsung-verizon-charge-ahead-with-vran/?utm_source=pr_media&utm_medium=email&utm_campaign=general.

11. Verizon's infringement has thus caused substantial injury to Woodbury Wireless, including in this judicial district.

BACKGROUND

The Invention

12. Roc Lastinger, John Spenik, and Brian C. Woodbury are the inventors of U.S. Patent Nos. 9,496,930 ("the '930 patent"; Exhibit A), 9,503,163 ("the '163 patent"; Exhibit B), 9,584,197 ("the '197 patent"; Exhibit C), 9,859,963 ("The '963 patent"; Exhibit D), 10,211,895 ("the '895 patent"; Exhibit E), and 10,516,451 ("the '451 patent"; Exhibit F), 11,108,443 ("the '443 patent"; Exhibit G) (collectively, "the Patents-In-Suit"). A true and correct copy of the Patents-In-Suit are attached as Exhibits A-G.

13. The Patents-In-Suit resulted from the pioneering efforts of Messrs. Lastinger, Spenik, and Woodbury (hereinafter "the Inventors") in the area of wireless communications using Multiple-Input Multiple-Output (MIMO) antennas and methods of operation. These efforts resulted in the development of a method and apparatus for "Overlapping MIMO Physical Sectors" in the first decade of the 2000s. At the time of these pioneering efforts, conventional wireless devices used to address interference resulting from noise sources by, for example, dividing the area of coverage into sectors, using a directional antenna, and using multiple antennas to provide

redundancy and spatial diversity. Those conventional wireless devices, however, would suffer reduced performance (such as a reduced signal-to-noise ratio, increased signal and data errors, increased retransmission requests, increased interference, lower transmission rates, reduced signal strength, and the like) as a result of changes in noise sources, environment conditions, and equipment performance. The Inventors conceived of the inventions claimed in the Patents-In-Suit as a way to respond to changes in noise sources, environmental conditions, and equipment performance by communicating through, just by way of example, the MIMO physical sector that provides increased performance.

14. For example, the Inventors developed a MIMO-capable system that includes directional antennas positioned in such a way that the physical sectors of the antennas of a wireless device overlap. The MIMO-capable system and methods enable the selection of a specific combination of antennas that operate as a single MIMO antenna and are oriented in a desired direction for communications. Because the physical sectors of the selected antennas that operate as a single MIMO antenna overlap, these physical sectors form a “MIMO physical sector.” As a result of the invention disclosed in the Patents-In-Suit, a wireless device is able to select an optimal combination of antennas in order to achieve a desired level of performance, even if noise sources or environmental conditions change.

15. As an additional example, the Inventors’ system and methods further provide for the assignment of any available channel to the selected antennas such that each individual antenna of a MIMO antenna operates on the same channel. Moreover, the invention discloses overlapping MIMO physical sectors that use different channels such that the MIMO physical sectors may communicate with different wireless devices simultaneously with reduced mutual interference. The invention of the Patents-In-Suit thus enables wireless devices to reduce interference from

noise sources by selecting a suitable channel, such as, for example, by selecting a channel that is different from the channel used by a noise source.

Advantages Over the Prior Art

16. The patented invention disclosed in the Patents-In-Suit, provides many optional advantages over the prior art, and in particular improved the operations of wireless devices such as those used in wireless communications between computers, wireless cells, access points, wireless clients, mobile computers, hand-held devices, other mobile devices, and file servers. (*See* '930 patent at 1:30-39, 3:4-7.) One optional advantage of the patented invention is improved performance of a wireless device as a result of the selection of an optimal combination of antennas to form a MIMO physical sector for wireless communications. (*See e.g., id.* at 4:14-37.) The MIMO physical sectors that result from the combination of the selected antennas' physical sectors may be formed in a variety of ways, and the orientation of some MIMO physical sectors may provide increased performance over the orientation of other MIMO physical sectors. (*See e.g., id.*) Thus, the inventions' ability to position antennas to form MIMO virtual sectors and then selecting a specific combination of antennas to operate as a MIMO antenna (and thus form a MIMO physical sector), permits wireless devices to respond to changes in noise sources, environmental conditions, and other factors affecting their performance. (*Id.* at 4:64-5:2, 5:3-14).

17. In one embodiment of many, the invention is highly adaptable because it permits a wireless device to use any criteria for selecting a MIMO physical/virtual sector for communications; for example, a wireless device may rely on the presence of noise sources, noise source channels used, signal-to-strength ratio, direction of primary data flow, signal quality, signal strength, and data throughput for its selection. (*see e.g., id.* at 10:65-11:4.) Thus, when the performance of a selected MIMO physical sector deteriorates, a wireless device can adapt and

select different antennas to operate as a MIMO antenna, thereby allowing the device to adapt to changing conditions and increase the wireless device's performance. (*See e.g., id.* at 5:7-33.)

18. Another optional advantage of the patented invention is that a wireless device may reduce interference by assigning optimal channels for its one or more MIMO physical sectors. (*See e.g., id.* at 9:35-62, 11:28-65.) Wireless devices may thus select a channel that is different from the channel used by noise sources or may assign a channel to each of its own MIMO physical sectors in a manner that reduces interference, thus providing a desired level of performance. (*See e.g., id.* at 11:28-65.)

19. Because of these significant advantages that can optionally be achieved through the use of the patented invention, Woodbury Wireless believes that the Patents-In-Suit present significant commercial value for companies like Verizon. Indeed, 5G networks tout its increased data speeds, reliability, and a uniform user experience as some of its benefits. The improved performance achievable by the pioneering developments described in the Patents-In-Suit make such benefits possible.

Technological Innovation

20. The patented invention disclosed in various embodiments in the Patents-In-Suit resolves technical problems related to wireless communications, particularly problems related to the utilization of wireless devices with MIMO antennas. As the Patents-In-Suit explain, one of the limitations of the prior art as regards the ineffective methods for adapting to changing sources of interference such as noise sources and changing environmental conditions. (*See e.g., id.* at 2:47-55, 4:64-5:2.)

21. The claims of the Patents-In-Suit do not merely recite the performance of some well-known business practice from the pre-Internet world along with the requirement to perform

it on the Internet. Instead, the claims of the Patents-In-Suit recite inventive concepts that are deeply rooted in engineering technology and overcome problems specifically arising out of how to maintain desired performance levels in the face of changing noise sources, environmental conditions, or deteriorating equipment performance.

22. In addition, the claims of the Patents-In-Suit recite inventive concepts that improve the functioning of wireless devices such as wireless cells, access points, wireless clients, wireless stations, cellular networks, mobile computers, hand-held devices, and portable wireless devices particularly by allowing such wireless devices to adapt to changing conditions in order to maintain a desired level of performance.

23. Moreover, the claims of the Patents-In-Suit recite inventive concepts that are not merely routine or conventional uses of MIMO antennas and technologies. Instead, the patented invention disclosed in the Patents-In-Suit provide a new and novel solution to specific problems related to improving signal-to-noise ratio, reducing signal and data errors, decreasing retransmission requests, decreasing interference, increasing transmission rates, increasing signal strength, and the like.

24. And finally, the patented invention disclosed in the Patents-In-Suit does not preempt all the ways that MIMO-capable systems may be used to improve the communications and performance of wireless devices, nor do the Patents-In-Suit preempt any other well-known or prior art technology.

25. Accordingly, the claims in the Patents-In-Suit recite a combination of elements sufficient to ensure that the claim in substance and in practice amounts to significantly more than a patent-ineligible abstract idea.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 9,496,930

26. The allegations set forth in the foregoing paragraphs 1 through 25 are incorporated into this First Claim for Relief.

27. On November 25, 2015, Roc Lastinger, John Spenik, and Brian C. Woodbury filed United States Patent Application No. 14/952,850 (“the ’850 Application”). On November 15, 2016, the ’850 Application was duly and legally issued by the United States Patent and Trademark Office as the ’930 patent under the title “Methods and Apparatus for Overlapping MIMO Physical Sectors.”

28. Woodbury Wireless is the assignee and owner of the right, title and interest in and to the ’930 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

29. The ’930 patent is valid and enforceable. A true and correct copy of the ’930 patent is attached hereto as Exhibit A.

30. Upon information and belief, Verizon has and continues to directly infringe one or more claims of the ’930 patent without authority by making, using (including without limitation testing), selling, importing, and/or offering to sell products and systems, including by way of example, the Verizon 5G Network, Verizon’s provision of related services and access to its 5G Network, and Verizon’s WiFi products and services—which include, but are not limited to, for example the Verizon Jetpack MiFi8800L, Verizon Orbic Speed Mobile Hotspot, Verizon Internet Gateway – Business, and the provision of services associated with these devices (the “Accused Instrumentalities”). *See* Claim Chart for the ’930 patent, attached hereto as Exhibit H.

31. Verizon has and continues to directly infringe, either literally or under the doctrine of equivalents, at least Claim 1 of the ’930 patent by making, using (including without limitation testing), selling, importing, and/or offering to sell the Accused Instrumentalities. *See* Claim Chart

for the '930 patent, attached hereto as Exhibit H. As demonstrated by the attached claim chart (Exhibit H), each and every element of Claim 1 of the '930 patent is found in the Accused Instrumentalities. This infringement analysis is necessarily preliminary, as it is provided in advance of any discovery provided by Verizon with respect to the '930 patent. Woodbury Wireless reserves all rights to amend, supplement and modify this preliminary infringement analysis. Nothing in the attached chart should be construed as any express or implied contention or admission regarding the construction of any term or phrase of the claims of the '930 patent.

32. Verizon has had actual knowledge of the '930 patent at least as early as the date of service of this Complaint.

33. Verizon's acts of infringement have occurred within this District and elsewhere throughout the United States.

34. Woodbury Wireless has been harmed by Verizon's infringing activities.

COUNT II – INFRINGEMENT OF U.S. PATENT NO. 9,503,163

35. The allegations set forth in the foregoing paragraphs 1 through 34 are incorporated into this Second Claim for Relief.

36. On September 3, 2014, Roc Lastinger, John Spenik, and Brian C. Woodbury filed United States Patent Application No. 14/476,628 ("the '628 Application"). On November 22, 2016, the '628 Application was duly and legally issued by the United States Patent and Trademark Office as the '163 patent under the title "Methods and Apparatus for Overlapping MIMO Physical Sectors."

37. Woodbury Wireless is the assignee and owner of the right, title and interest in and to the '163 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

38. The '163 patent is valid and enforceable. A true and correct copy of the '163 patent is attached hereto as Exhibit B.

39. Upon information and belief, Verizon has and continues to directly infringe one or more claims of the '163 patent without authority by making, using (including without limitation testing), selling, importing, and/or offering to sell products and systems, including by way of example, the Accused Instrumentalities. *See* Claim Chart for the '163 patent, attached hereto as Exhibit I.

40. Verizon has and continues to directly infringe, either literally or under the doctrine of equivalents, at least Claim 2 of the '163 patent by making, using (including without limitation testing), selling, importing, and/or offering to sell the Accused Instrumentalities. *See* Claim Chart for the '163 patent, attached hereto as Exhibit I. As demonstrated by the attached claim chart (Exhibit I), each and every element of Claim 2 of the '163 patent is found in the Accused Instrumentalities. This infringement analysis is necessarily preliminary, as it is provided in advance of any discovery provided by Verizon with respect to the '163 patent. Woodbury Wireless reserves all rights to amend, supplement and modify this preliminary infringement analysis. Nothing in the attached chart should be construed as any express or implied contention or admission regarding the construction of any term or phrase of the claims of the '163 patent.

41. Verizon has had actual knowledge of the '163 patent at least as early as the date of service of this Complaint.

42. Verizon's acts of infringement have occurred within this District and elsewhere throughout the United States.

43. Woodbury Wireless has been harmed by Verizon's infringing activities.

COUNT III – INFRINGEMENT OF U.S. PATENT NO. 9,584,197

44. The allegations set forth in the foregoing paragraphs 1 through 43 are incorporated into this Third Claim for Relief.

45. On November 25, 2015, Roc Lastinger, John Spenik, and Brian C. Woodbury filed United States Patent Application No. 14/952,874 (“the ’874 Application”). On February 28, 2017, the ’874 Application was duly and legally issued by the United States Patent and Trademark Office as the ’197 patent under the title “Methods and Apparatus for Overlapping MIMO Physical Sectors.”

46. Woodbury Wireless is the assignee and owner of the right, title and interest in and to the ’197 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

47. The ’197 patent is valid and enforceable. A true and correct copy of the ’197 patent is attached hereto as Exhibit C.

48. Upon information and belief, Verizon has and continues to directly infringe one or more claims of the ’197 patent without authority by making, using (including without limitation testing), selling, importing, and/or offering to sell products and systems, including by way of example, the Accused Instrumentalities. *See* Claim Chart for the ’197 patent, attached hereto as Exhibit J.

49. Verizon has and continues to directly infringe, either literally or under the doctrine of equivalents, at least Claim 1 of the ’197 patent by making, using (including without limitation testing), selling, importing, and/or offering to sell the Accused Instrumentalities. *See* Claim Chart for the ’197 patent, attached hereto as Exhibit J. As demonstrated by the attached claim chart (Exhibit J), each and every element of Claim 1 of the ’197 patent is found in the Accused Instrumentalities. This infringement analysis is necessarily preliminary, as it is provided in

advance of any discovery provided by Verizon with respect to the '197 patent. Woodbury Wireless reserves all rights to amend, supplement and modify this preliminary infringement analysis. Nothing in the attached chart should be construed as any express or implied contention or admission regarding the construction of any term or phrase of the claims of the '197 patent.

50. Verizon has had actual knowledge of the '197 patent at least as early as the date of service of this Complaint.

51. Verizon's acts of infringement have occurred within this District and elsewhere throughout the United States.

52. Woodbury Wireless has been harmed by Verizon's infringing activities.

COUNT IV – INFRINGEMENT OF U.S. PATENT NO. 9,859,963

53. The allegations set forth in the foregoing paragraphs 1 through 52 are incorporated into this Fourth Claim for Relief.

54. On January 13, 2017, Roc Lastinger, John Spenik, and Brian C. Woodbury filed United States Patent Application No. 15/406,661 ("the '661 Application"). On January 2, 2018, the '661 Application was duly and legally issued by the United States Patent and Trademark Office as the '963 patent under the title "Methods and Apparatus for Overlapping MIMO Physical Sectors."

55. Woodbury Wireless is the assignee and owner of the right, title and interest in and to the '963 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

56. The '963 patent is valid and enforceable. A true and correct copy of the '963 patent is attached hereto as Exhibit D.

57. Upon information and belief, Verizon has and continues to directly infringe one or more claims of the '963 patent without authority by making, using (including without limitation

testing), selling, importing, and/or offering to sell products and systems, including by way of example, the Accused Instrumentalities. *See* Claim Chart for the '963 patent, attached hereto as Exhibit K.

58. Verizon has and continues to directly infringe, either literally or under the doctrine of equivalents, at least Claim 1 of the '963 patent by making, using (including without limitation testing), selling, importing, and/or offering to sell the Accused Instrumentalities. *See* Claim Chart for the '963 patent, attached hereto as Exhibit K. As demonstrated by the attached claim chart (Exhibit K), each and every element of Claim 1 of the '963 patent is found in the Accused Instrumentalities. This infringement analysis is necessarily preliminary, as it is provided in advance of any discovery provided by Verizon with respect to the '963 patent. Woodbury Wireless reserves all rights to amend, supplement and modify this preliminary infringement analysis. Nothing in the attached chart should be construed as any express or implied contention or admission regarding the construction of any term or phrase of the claims of the '963 patent.

59. Verizon has had actual knowledge of the '963 patent at least as early as the date of service of this Complaint.

60. Verizon's acts of infringement have occurred within this District and elsewhere throughout the United States.

61. Woodbury Wireless has been harmed by Verizon's infringing activities.

COUNT V – INFRINGEMENT OF U.S. PATENT NO. 10,211,895

62. The allegations set forth in the foregoing paragraphs 1 through 61 are incorporated into this Fifth Claim for Relief.

63. On September 1, 2018, Roc Lastinger, John Spenik, and Brian C. Woodbury filed United States Patent Application No. 16/120,258 ("the '258 Application"). On February 19, 2019,

the '258 Application was duly and legally issued by the United States Patent and Trademark Office as the '895 patent under the title "MIMO Methods and Systems."

64. Woodbury Wireless is the assignee and owner of the right, title and interest in and to the '895 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

65. The '895 patent is valid and enforceable. A true and correct copy of the '895 patent is attached hereto as Exhibit E.

66. Upon information and belief, Verizon has and continues to directly infringe one or more claims of the '895 patent without authority by making, using (including without limitation testing), selling, importing, and/or offering to sell products and systems, including by way of example, the Accused Instrumentalities. *See* Claim Chart for the '895 patent, attached hereto as Exhibit L.

67. Verizon has and continues to directly infringe, either literally or under the doctrine of equivalents, at least Claim 1 of the '895 patent by making, using (including without limitation testing), selling, importing, and/or offering to sell the Accused Instrumentalities. *See* Claim Chart for the '895 patent, attached hereto as Exhibit L. As demonstrated by the attached claim chart (Exhibit L), each and every element of Claim 1 of the '895 patent is found in the Accused Instrumentalities. This infringement analysis is necessarily preliminary, as it is provided in advance of any discovery provided by Verizon with respect to the '895 patent. Woodbury Wireless reserves all rights to amend, supplement and modify this preliminary infringement analysis. Nothing in the attached chart should be construed as any express or implied contention or admission regarding the construction of any term or phrase of the claims of the '895 patent.

68. Verizon has had actual knowledge of the '895 patent at least as early as the date of service of this Complaint.

69. Verizon's acts of infringement have occurred within this District and elsewhere throughout the United States.

70. Woodbury Wireless has been harmed by Verizon's infringing activities.

COUNT VI – INFRINGEMENT OF U.S. PATENT NO. 10,516,451

71. The allegations set forth in the foregoing paragraphs 1 through 70 are incorporated into this Sixth Claim for Relief.

72. On January 9, 2019, Roc Lastinger, John Spenik, and Brian C. Woodbury filed United States Patent Application No. 16/243,421 ("the '421 Application"). On December 24, 2019, the '421 Application was duly and legally issued by the United States Patent and Trademark Office as the '451 patent under the title "MIMO Methods."

73. Woodbury Wireless is the assignee and owner of the right, title and interest in and to the '451 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

74. The '451 patent is valid and enforceable. A true and correct copy of the '451 patent is attached hereto as Exhibit F.

75. Upon information and belief, Verizon has and continues to directly infringe one or more claims of the '451 patent without authority by making, using (including without limitation testing), selling, importing, and/or offering to sell products and systems, including by way of example, the Accused Instrumentalities. *See* Claim Chart for the '451 patent, attached hereto as Exhibit M.

76. Verizon has and continues to directly infringe, either literally or under the doctrine of equivalents, at least Claim 1 of the '451 patent by making, using (including without limitation

testing), selling, importing, and/or offering to sell the Accused Instrumentalities. *See* Claim Chart for the '451 patent, attached hereto as Exhibit M. As demonstrated by the attached claim chart (Exhibit M), each and every element of Claim 1 of the '451 patent is found in the Accused Instrumentalities. This infringement analysis is necessarily preliminary, as it is provided in advance of any discovery provided by Verizon with respect to the '451 patent. Woodbury Wireless reserves all rights to amend, supplement and modify this preliminary infringement analysis. Nothing in the attached chart should be construed as any express or implied contention or admission regarding the construction of any term or phrase of the claims of the '451 patent.

77. Verizon has had actual knowledge of the '451 patent at least as early as the date of service of this Complaint.

78. Verizon's acts of infringement have occurred within this District and elsewhere throughout the United States.

79. Woodbury Wireless has been harmed by Verizon's infringing activities.

COUNT VII – INFRINGEMENT OF U.S. PATENT NO. 11,108,443

80. The allegations set forth in the foregoing paragraphs 1 through 79 are incorporated into this Seventh Claim for Relief.

81. On May 22, 2019, Roc Lastinger, John Spenik, and Brian C. Woodbury filed United States Patent Application No. 16/420,133 ("the '133 Application"). On August 31, 2021, the '133 Application was duly and legally issued by the United States Patent and Trademark Office as the '443 patent under the title "MIMO Methods and Systems."

82. Woodbury Wireless is the assignee and owner of the right, title and interest in and to the '443 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

83. The '443 patent is valid and enforceable. A true and correct copy of the '443 patent is attached hereto as Exhibit G.

84. Upon information and belief, Verizon has and continues to directly infringe one or more claims of the '443 patent without authority by making, using (including without limitation testing), selling, importing, and/or offering to sell products and systems, including by way of example, the Accused Instrumentalities. *See* Claim Chart for the '443 patent, attached hereto as Exhibit N.

85. Verizon has and continues to directly infringe, either literally or under the doctrine of equivalents, at least Claim 1 of the '443 patent by making, using (including without limitation testing), selling, importing, and/or offering to sell the Accused Instrumentalities. *See* Claim Chart for the '443 patent, attached hereto as Exhibit N. As demonstrated by the attached claim chart (Exhibit N), each and every element of Claim 1 of the '443 patent is found in the Accused Instrumentalities. This infringement analysis is necessarily preliminary, as it is provided in advance of any discovery provided by Verizon with respect to the '443 patent. Woodbury Wireless reserves all rights to amend, supplement and modify this preliminary infringement analysis. Nothing in the attached chart should be construed as any express or implied contention or admission regarding the construction of any term or phrase of the claims of the '443 patent.

86. Verizon has had actual knowledge of the '443 patent at least as early as the date of service of this Complaint.

87. Verizon's acts of infringement have occurred within this District and elsewhere throughout the United States.

88. Woodbury Wireless has been harmed by Verizon's infringing activities.

JURY DEMAND

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

PRAYER FOR RELIEF

WHEREFORE, Plaintiff demands judgment for itself and against Defendants as follows:

- A. An adjudication that each Defendant has infringed the Patents-In-Suit;
- B. An award of damages to be paid by Defendants adequate to compensate Plaintiff for Defendants' past infringement of the Patents-In-Suit, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;
- C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff's reasonable attorneys' fees; and
- D. An award to Plaintiff of such further relief at law or in equity as the Court deems just and proper.

Dated: December 20, 2022

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