IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

WI-LAN INC.; WI-LAN USA, INC.; & WI-LAN LABS, INC., Plaintiffs, vs. MOTOROLA MOBILITY LLC; & MOTOROLA MOBILITY HOLDINGS, LLC, Defendants.	Civil Action No.: 1:19-cv-00941 Judge John F. Kness Magistrate Judge Gabriel A. Fuentes **Jury Trial Demanded**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiffs Wi-LAN Inc., Wi-LAN USA, Inc., and Wi-LAN Labs, Inc. (collectively, "Wi-LAN") hereby submit this First Amended Complaint against Defendants Motorola Mobility LLC and Motorola Mobility Holdings, LLC, (collectively, "Motorola" or "Defendants").

NATURE OF ACTION

1. This is an action for infringement of U.S. Patent Nos. 8,787,924 ("the '924 Patent") and 9,497,743 ("the '743 Patent") (collectively, the "patents-in-suit"). A true and correct copy of the '924 Patent is attached as Exhibit A. A true and correct copy of the '743 Patent is attached as Exhibit B.

THE PARTIES

2. Plaintiff Wi-LAN Inc. is a corporation organized and existing under the laws of Canada, with a Canadian Corporation Number of 854057-8 and Business Number (BN) of 811594530RC0001, with its principal place of business at 1891 Robertson Road, Suite 100, Ottawa, ON, K2H 5B7, Canada.

3. Plaintiff Wi-LAN USA, Inc. is a corporation organized and existing under the laws

of Florida with its principal executive office at 1891 Robertson Road, Suite 100, Ottawa, ON, K2H 5B7, Canada, and a principal business office at 555 Anton Boulevard Suites 263 & 266, Costa Mesa, CA, 92626.

4. Plaintiff Wi-LAN Labs, Inc. is a corporation organized and existing under the laws of Delaware with its principal executive office at 1891 Robertson Road, Suite 100, Ottawa, ON, K2H 5B7, Canada, and a principal business office at 555 Anton Boulevard Suites 263 & 266, Costa Mesa, CA, 92626.

5. Motorola Mobility LLC is a Delaware limited liability company with its principal place of business at 222 W. Merchandise Mart Plaza, Chicago, IL 60654. Motorola Mobility LLC may be served via its registered agent, The Corporation Trust Company, Corporation Trust Center, 1209 Orange St, Wilmington, DE 19801.

6. Motorola Mobility Holdings LLC is a Delaware limited liability company with its principal place of business at 222 W. Merchandise Mart Plaza, Chicago, IL 60654. Motorola Mobility Holdings LLC may be served via its registered agent, The Corporation Trust Company, Corporation Trust Center, 1209 Orange St, Wilmington, DE 19801.

JURISDICTION AND VENUE

7. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this action arises under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq*., including but not limited to, 35 U.S.C. § 271.

8. Motorola is subject to general and personal jurisdiction of this Court because, *inter alia*, Motorola is registered to transact business in the State of Illinois; Motorola's principal place of business is within this District; Motorola conducts continuous and systematic business in this

District and in the State of Illinois; and Motorola has committed and continues to commit acts of patent infringement in the State of Illinois, including by making, using, offering to sell, and/or selling accused products in the State of Illinois, and/or importing accused products into the State of Illinois. This Court's exercise of jurisdiction over Motorola would be consistent with the Illinois long-arm statute and traditional notions of fair play and substantial justice.

9. Venue is proper as to Motorola in this judicial district under 28 U.S.C. § 1400(b) because, *inter alia*, Motorola has a regular and established place of business in this judicial district and has committed and continues to commit acts of patent infringement in this judicial district and in the State of Illinois.

10. Joinder of Defendants is proper under 28 U.S.C. § 299(a) because Defendants are related parties which are jointly or severally liable for infringement, or which make, use, sell, offer for sale, or import the same or similar accused products that practice the same 4G LTE standards with respect to or arising out of the same transaction, occurrence, or series of transactions relating to infringement, with questions of fact common to Defendants.

BACKGROUND OF THE TECHNOLOGY

11. Wi-LAN Labs, Inc. developed advanced 4G technologies and products for Wi-LAN and others in the wireless industry that enhance the capacity, quality of user experience, and connectivity of 4G (and next generation 5G) mobile devices and networks.

12. Several of the 4G patents asserted in this action were developed by Wi-LAN's own Ken Stanwood, the president of Wi-LAN Labs, Inc. and current CTO at Wi-LAN Inc., and his team.

13. Mr. Stanwood has played a leadership role in the development of 4G technologies

and standards for more than a decade, starting with the industry's first major 4G cellular initiative, referred to as WiMAX. He served as Vice Chair of the IEEE 802.16 standards committee for WiMAX from 2003-2006 and as a principal contributor to the original IEEE 802.16 standard for 4G cellular networks and mobile devices.

14. Mr. Stanwood has written extensively on 4G technologies, including coauthoring a popular textbook on the subject, and has been awarded 149 U.S. patents, with many more patent applications currently pending before the United States Patent Office and other patent offices around the world, many of which relate to 4G technologies.

15. Like Ken Stanwood, Wi-LAN's founders, Michel Fattouche and Hatim Zaghloul, are widely recognized and acknowledged as wireless industry pioneers. Their technologies, patents and writings have been cited in patents and publications written by thousands of engineers and scientists in the wireless industry.

16. Wi-LAN's founders developed key cellular "data" technologies, including the W-OFDM air interface, to enable data to be exchanged at desktop speeds over a wireless channel, such as in Wi-Fi networks, or from mobile devices in 4G cellular networks. Wi-LAN's technologies have made Wi-Fi and 4G in mobile devices possible.[1]

17. The Wi-LAN success story is featured in major publications worldwide, including

[1] *See, e.g., Ergen, Mustafa, Mobile Broadband: Including WiMAX and LTE*, John Wiley & Sons, 2009 at p. 110, Section 4.1 "Principles of OFDM: Introduction" (recognizing one of Wi-LAN's first patents, U.S. Patent No. 5,282,222, to WOFDM as a major milestone in the development of Wi-Fi and 4G technologies, turning a single lane wireless communication channel into a multi-lane super highway, and enabling mobile devices to transmit and receive data at desktop speeds).

in such publications as Scientific American[2] and Time Magazine,[3] and in many others. Wi-LAN and its founders have also been the subject of numerous industry awards for their wireless innovations, and for their contribution to the growth in wireless data capability present in today's smartphones, tablets, and other mobile devices.

18. One of Wi-LAN's co-founders is featured in one of Canada's leading business publications as among the Top 100 Canadians of the 20th century for Wi-LAN's wireless innovations.[4] And Wi-LAN's original wireless designs and first wireless mobile device have been displayed in the Canadian equivalent of the Smithsonian Institution.

19. Enabling high-speed wireless data capability in mobile devices was no small task– it posed incredible challenges–something taken for granted today, with desktop speeds now standard in 4G mobile devices.

20. Over the years, Wi-LAN and their predecessors have invested hundreds of millions of dollars in developing, making, and selling many of the world's first fixed and mobile devices capable of transmitting and receiving wireless data at desktop speeds.

21. Wi-LAN's products which had 4G data speeds include, among others, the I.WILL,

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[2] The Future of Wireless, *Scientific American*, October 2000 at p. 57 ("To date, wireless multiplexing hasn't been exploited for cellular systems…. That may change soon…. Wi-LAN holds a number of key patents for multiplexing technology known as wideband orthogonal frequency division multiplexing, or WOFDM").

[3] Wi-LAN Shows How to be Successful-and Canadian-in the Global Economy, *Time Magazine*, April 3, 2000.

[4] Great Canadians, *Maclean's*, July 1, 2000 ("Riding the wave of invention ... Wi-LAN is one of those next generation companies. Its technology may well become the base for what some call the coming wireless revolution: the ability to e-mail, surf the Net, adjust the lights in your home and order theater tickets from a cellphone or handheld computer.")

BWS 300, LIBRA 3000, LIBRA 5800, LIBRA MX, and the LIBRA Mobilis.

22. Wi-LAN was the first company in the world to build Wi-Fi and 4G data speeds into mobile devices, with speeds reaching up to 100 megabits per second (Mbps), and it did so a decade before 4G would become the standard in the wireless industry that it is today.

23. A number of Wi-LAN's advanced 4G technologies have their origin in work started by Wi-LAN's Ken Stanwood and his team while at Ensemble Communications ("Ensemble"), a San Diego company that Mr. Stanwood helped grow (then, as Ensemble's Chief Technology Officer) to over 200 engineers, scientists, and support personnel.

24. Others of Wi-LAN's advanced 4G technologies have their origin in work created at NextWave Communications, another San Diego company where Mr. Stanwood served as a Vice President. And yet other technologies were first developed at SOMA Networks, a California-based company involved in 4G technologies.

25. The advanced 4G technologies developed by Mr. Stanwood and his team were employed in the network stacks utilizing the 4G WiMAX cellular standard, and were subsequently adopted for use in the network stacks utilizing the 4G LTE cellular standard used in today's 4G mobile devices.

26. These advanced 4G technologies include:

(i) the bandwidth-on-demand and periodic bandwidth services built into 4G mobile devices to enable apps installed on such devices to have the bandwidth they need, when they need it, in real-time;

(ii) the quality-of-service functions built into 4G mobile devices to enable mobile devices to prioritize the services that have the most pressing need for bandwidth; and

(iii) the handoff functionality built into 4G mobile devices to identify particular devices and use pre-allocated codes to respond faster to requests from mobile devices.

27. The efforts of Mr. Stanwood and other Wi-LAN inventors in developing these advanced 4G technologies have enabled 4G mobile devices to support a variety of services popular among users of Defendants' 4G LTE mobile devices, such as voice, conversational video, live streaming of video and music, real-time gaming, video and photo sharing, email, and instant messaging, all in the palm of your hand ("4G Network Services").

28. Wi-LAN's wireless technologies and patents, including its advanced 4G technologies, have been licensed by nearly all companies in the wireless industry, comprising more than 130 companies.

29. Defendants' infringement gives them an unfair advantage over their competitors, many of whom have chosen to do the right thing and license their use of Wi-LAN's wireless technologies and patents. Many of Defendants' major competitors in the mobile device industry, including Samsung, HTC, ZTE, Nokia, and Kyocera have licensed Wi-LAN's wireless technologies and patents.

30. Wi-LAN has made numerous efforts to license the unauthorized use of its wireless technologies by the Defendants, but Defendants have consistently refused to take a license, choosing to use Wi-LAN's 4G technologies without paying anything for that right.

31. Defendants have chosen to not respect the intellectual property of Wi-LAN, including the patents-in-suit asserted in this action directed to Wi-LAN's advanced 4G technologies, and it does so despite understanding the importance of intellectual property.

32. Before initiating litigation, Wi-LAN made substantial efforts to license Defendants'

use of Wi-LAN's advanced 4G technologies and patents in their 4G LTE mobile devices, expecting that Defendants would proceed in good faith.

33. During the spring of 2016, Wi-LAN contacted Defendants to engage in licensing the '924 Patent and the application that issued as the '743 Patent that all related to LTE and 4G wireless technology. Defendants initially expressed interest. But despite Wi-LAN's repeated efforts, Defendants failed to take a license.

34. Defendants' actions have forced Wi-LAN's hand, leaving it with no choice but to protect its intellectual property through litigation.

DEFENDANTS' INFRINGING PRODUCTS

35. Motorola, directly or indirectly, through subsidiaries or affiliated companies markets, distributes, manufactures, imports, sells, and/or offers for sale wireless communication products, such as products compliant with the 3rd Generation Partnership Project ("3GPP") 4G LTE standard (*See* "LTE" selection from the pulldown menu of the "selected Technology" at www.3gpp.org/dynareport/SpecList.htm), including but not limited to Droid Maxx 2, Droid Turbo 2, Moto E (2nd Gen), Moto E4, Moto E4 Plus, Moto E5, Moto E5 Play, Moto E5 Plus, Moto E5 Supra, Moto G3, Moto G4, Moto G4 Play, Moto G4 Plus, Moto G5 Plus, Moto G5S Plus, Moto G6, Moto G6 Forge, Moto G6 Play, Moto G7, Moto G7 Play, Moto G7 Power, Moto X Pure Edition, Moto X4, Moto X4 Android One, Moto Z, Moto Z Droid, Moto Z Force, Moto Z Force Droid, Moto Z Play, Moto Z Play Droid, Moto Z2 Force, Moto Z2 Play, Moto Z3, Moto Z3 Play, and Motorola One (collectively, the "Motorola Accused 4G LTE Devices"), in the United States and in this district. As some of these products, and additional Motorola Accused Devices, are known by internal model numbers, codenames, or have alternate versions and iterations, discovery will be necessary to finalize a list of devices that infringe the patents-in-suit.

36. The Motorola Accused 4G LTE Devices support at least Release 8, et seq. of the 3GPP 4G LTE standard.

37. The Droid Maxx 2 includes a processor, the Qualcomm Snapdragon 615 MSM8939, that is capable of performing one or more claim limitations of claims 1 and 17 of the '924 Patent and claim 6 of the '743 Patent (collectively, the "Preliminary Asserted Claims").

38. The Qualcomm Snapdragon 615 MSM8939 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

39. The Droid Turbo 2 includes a processor, the Qualcomm Snapdragon 810 MSM8994, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

40. The Qualcomm Snapdragon 810 MSM8994 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

41. The Moto E (2nd Gen) includes a processor, the Qualcomm Snapdragon 410, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

42. The Qualcomm Snapdragon 410 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

43. The Moto E4 includes a processor, the Qualcomm Snapdragon 425 MSM8917 or the Qualcomm Snapdragon 427 MSM8920, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

44. The Qualcomm Snapdragon 425 MSM8917 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

45. The Qualcomm Snapdragon 427 MSM8920 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

46. The Moto E4 Plus includes a processor, the Qualcomm Snapdragon 427 MSM8920, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

47. The Moto E5 includes a processor, the Qualcomm Snapdragon 425 MSM8917, that is capable of performing one or more of the Preliminary Asserted Claims.

48. The Moto E5 Play includes a processor, the Qualcomm Snapdragon 425 MSM8917 or the Qualcomm Snapdragon 427 MSM8920, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

49. The Moto E5 Plus includes a processor, the Qualcomm Snapdragon 425 MSM8917, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

50. The Moto E5 Supra includes a processor, the Qualcomm Snapdragon 425 MSM8917, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

51. The Moto G3 includes a processor, the Qualcomm Snapdragon 410 MSM8916, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

52. The Qualcomm Snapdragon 410 MSM8916 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

53. The Moto G4 includes a processor, the Qualcomm Snapdragon 617 MSM8952, that

is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

54. The Qualcomm MSM8952 Snapdragon 617 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

55. The Moto G4 Play includes a processor, the Qualcomm Snapdragon 410 MSM8916, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

56. The Moto G4 Plus includes a processor, the Qualcomm Snapdragon 617 MSM8952, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

57. The Moto G5 Plus includes a processor, the Qualcomm Snapdragon 625 MSM8953, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

58. The Qualcomm Snapdragon 625 MSM8953 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

59. The Moto G5S Plus includes a processor, the Qualcomm Snapdragon 625 MSM8953, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

60. The Moto G6 includes a processor, the Qualcomm Snapdragon 450 SDM450, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

61. The Qualcomm Snapdragon 450 SDM450 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

62. The Moto G6 Forge includes a processor, the Qualcomm Snapdragon 427 MSM8920, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

63. The Moto G6 Play includes a processor, the Qualcomm Snapdragon 427 MSM8920 or the Qualcomm Snapdragon 430 MSM8937, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

64. The Moto G7 includes a processor, the Qualcomm Snapdragon 632, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

65. The Qualcomm Snapdragon 632 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

66. The Moto G7 Play includes a processor, the Qualcomm Snapdragon 632, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

67. The Moto G7 Power includes a processor, the Qualcomm Snapdragon 632, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

68. The Moto X Pure Edition includes a processor, the Qualcomm Snapdragon 808 MSM8992, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

69. The Qualcomm Snapdragon 808 MSM8992 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

70. The Moto X4 includes a processor, the Qualcomm Snapdragon 630 SDM630, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

71. The Qualcomm Snapdragon 630 SDM630 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

72. The Moto X4 includes a processor, the Qualcomm Snapdragon 630, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

73. The Moto Z includes a processor, the Qualcomm Snapdragon 820 MSM8996, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

74. The Qualcomm Snapdragon 820 MSM8996 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

75. The Moto Z Droid includes a processor, the Qualcomm Snapdragon MSM8996 820, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

76. The Moto Z Force includes a processor, the Qualcomm Snapdragon 820 MSM8996, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

77. The Moto Z Force Droid includes a processor, the Qualcomm Snapdragon 820 MSM8996, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

78. The Moto Z Play includes a processor, the Qualcomm Snapdragon 625 MSM8953, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

79. The Moto Z Play Droid includes a processor, the Qualcomm Snapdragon 625 MSM8953, that is capable of performing one or more claim limitations of the Preliminary Asserted

Claims.

80. The Moto Z2 Force includes a processor, the Qualcomm Snapdragon 835 MSM8998, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

81. The Qualcomm Snapdragon 835 MSM8998 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

82. The Moto Z2 Play includes a processor, the Qualcomm Pro Snapdragon 626 MSM8953, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

83. The Qualcomm Pro Snapdragon 626 MSM8953 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

84. The Moto Z3 includes a processor, the Qualcomm Snapdragon 835 MSM8998, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

85. The Moto Z3 Play includes a processor, the Qualcomm Snapdragon 636 SDM636, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

86. The Qualcomm Snapdragon 636 SDM636 supports at least Release 8, et. seq. of the 3GPP 4G LTE standard.

87. The Motorola One includes a processor, the Qualcomm Snapdragon 625, that is capable of performing one or more claim limitations of the Preliminary Asserted Claims.

88. The claim charts attached hereto as Exhibits C and D (the “Claim Charts”) include citations to the 4G LTE standard, where the citations refer specifically to the sections and versions

of Release 8 of the 4G LTE standard identified below:

- 3GPP TS 36.300 V8.12.0 (2010-03) Evolved Universal Terrestrial Radio Access (E-UTRA), "Overall description", Stage 2 (Release 8);
- 3GPP TS 36.211 V8.9.0 (2009-12) Evolved Universal Terrestrial Radio Access (E-UTRA), "Physical Channels and Modulation" (Release 8);
- 3GPP TS 23.203 V8.14.0 (2012-06) Technical Specification Group Services and System Aspects, "Policy and charging control architecture" (Release 8);
- 3GPP TS 36.331 V8.21.0 (2014-06), Evolved Universal Terrestrial Radio Access (E-UTRA), Radio Resource Control (RRC), Protocol specification, (Release 8);
- 3GPP TS 36.321 V8.12.0 (2012-03), Evolved Universal Terrestrial Radio Access (E-UTRA) Medium Access Control (MAC) protocol specification (Release 8);
- 3GPP TS 36.302 V8.2.1 (2011-12) Evolved Universal Terrestrial Radio Access (E-UTRA), "Services provided by the physical layer" (Release 8);
- 3GPP TS 36.213 V8.8.0 (2009-09) Evolved Universal Terrestrial Radio Access (E-UTRA), "Physical layer procedures" (Release 8); and
- 3GPP TS 36.322 V8.8.0 (2010-06): Radio Link Control (RLC) protocol specification, (Release 8).

89. The Motorola Accused 4G LTE Devices operate as described in the portions of 3GPP TS 36.300 V8.12.0 (2010-03) Evolved Universal Terrestrial Radio Access (E-UTRA), "Overall description", Stage 2 (Release 8) referred to in the Claim Charts.

90. The Motorola Accused 4G LTE Devices operate as described in the portions of

3GPP TS 36.211 V8.9.0 (2009-12) Evolved Universal Terrestrial Radio Access (E-UTRA), "Physical Channels and Modulation" (Release 8) referred to in the Claim Charts.

91. The Motorola Accused 4G LTE Devices operate as described in the portions of 3GPP TS 23.203 V8.14.0 (2012-06) Technical Specification Group Services and System Aspects, "Policy and charging control architecture" (Release 8) referred to in the Claim Charts.

92. The Motorola Accused 4G LTE Devices operate as described in the portions of 3GPP TS 36.331 V8.21.0 (2014-06), Evolved Universal Terrestrial Radio Access (E-UTRA), Radio Resource Control (RRC), Protocol specification, (Release 8) referred to in the Claim Charts.

93. The Motorola Accused 4G LTE Devices operate as described in the portions of 3GPP TS 36.321 V8.12.0 (2012-03), Evolved Universal Terrestrial Radio Access (E-UTRA) Medium Access Control (MAC) protocol specification (Release 8) referred to in the Claim Charts.

94. The Motorola Accused 4G LTE Devices operate as described in the portions of 3GPP TS 36.302 V8.2.1 (2011-12) Evolved Universal Terrestrial Radio Access (E-UTRA), "Services provided by the physical layer" (Release 8) referred to in the Claim Charts.

95. The Motorola Accused 4G LTE Devices operate as described in the portions of 3GPP TS 36.213 V8.8.0 (2009-09) Evolved Universal Terrestrial Radio Access (E-UTRA), "Physical layer procedures" (Release 8) referred to in the Claim Charts.

96. The Motorola Accused 4G LTE Devices operate as described in the portions of 3GPP TS 36.322 V8.8.0 (2010-06): Radio Link Control (RLC) protocol specification, (Release 8) referred to in the Claim Charts.

INFRINGEMENT OF U.S. PATENT NO. 8,787,924

97. On July 22, 2014, the '924 Patent was duly and legally issued for inventions entitled "Methods and Systems for Transmission of Multiple Modulated Signals Over Wireless Networks." Wi-LAN Inc. owns the '924 Patent and holds the right to sue and recover damages for infringement thereof.

98. On information and belief, Defendants have directly infringed and continue to directly infringe numerous claims of the '924 Patent, including at least claims 1 and 17, by testing and using the Motorola Accused 4G LTE Devices. Defendants are liable for infringement of the '924 Patent pursuant to 35 U.S.C. § 271(a).

99. Defendants' customers have directly infringed and continue to directly infringe numerous claims of the '924 Patent, including at least claims 1 and 17, by using the Motorola Accused 4G LTE Devices.

100. For example, the Motorola Accused 4G LTE Devices comply with the 4G LTE standards, including the UL-SCH data transfer procedure specified by 3GPP TS 36.321 at section 5.4. In particular, the Motorola Accused 4G LTE Devices first transmit a Scheduling Request (*i.e.*, "a one bit message to the base station to request an allocation of UL bandwidth in which to transmit a bandwidth request") and then subsequently transmit a Buffer Status Report (*i.e.*, a "bandwidth request indicative of an amount of pending UL data"). Thereafter, the Motorola Accused 4G LTE Devices dynamically allocate the assigned UL bandwidth amongst their respective "UL services based on a QoS parameter of a respective service."

101. Specifically, Wi-LAN incorporates by reference Exhibit C, which is an infringement claim chart alleging how each of the Motorola Accused 4G LTE Devices read on the

limitations of at least claims 1 and 17 of the '924 Patent based on compliance with at least Release 8 of the 4G LTE standard.

102. Defendants have been and are now indirectly infringing at least one claim of the '924 Patent in accordance with 35 U.S.C. § 271(b) in this district and elsewhere in the United States. More specifically, Defendants have been and are now actively inducing direct infringement by other persons (*e.g.*, Defendants' customers who use, sell or offer for sale the Motorola Accused 4G LTE Devices that embody and/or otherwise practice one or more claims of the '924 Patent).

103. Prior to the filing of the original complaint, Defendants knew that they infringed the '924 Patent, or willfully blinded themselves to that infringement. On April 18, 2016, Wi-LAN invited Motorola to license its patents covering "4G wireless technology." On May 11, 2016, Wi-LAN provided Motorola with a detailed infringement claim chart for the '924, Patent, and identified representative infringing products as the "Moto X, Moto G, Moto E, DROID (Turbo 2, Maxx2, Turbo, Mini) … ." Each of these identified products are representative of the Motorola Accused 4G LTE Devices as to the infringement of the '924 Patent. Wi-LAN then presented that claim chart and reiterated Motorola's infringement during a May 25, 2016, meeting in Chicago with Kathryn Tsirigotis (Lenovo's Director of Licensing) and Gary Cunningham (Senior Counsel at Motorola). Despite Wi-LAN's repeated follow-up requests on June 2, 2016, June 23, 2016, and September 21, 2016, Motorola never replied, thereby effectively refusing to take a license. Through these communications and the meeting, Defendants gained knowledge that they were infringing the '924 Patent.

104. On February 23, 2017, Wi-LAN filed a complaint against Defendants in Case No. 3:17cv-00365-BEN-MDD in the Southern District of California ("2017 Complaint"), where the 2017 Complaint identified Motorola's infringement of the '924 Patent by the then representative

infringing devices, including Moto Z Force Droid, Moto Z, Moto Z Droid, Moto Z Play, Moto Z Play Droid, Moto G4 Plus, Moto G4, Moto G4 Play, Moto G3, Moto G, Moto E, Moto E3, Moto X, Moto X Pure Edition, Droid Maxx, and Droid Maxx2. These products identified in the 2017 Complaint are representative of the Motorola Accused 4G LTE Devices as to the infringement of the '924 Patent. On March 1, 2017, Defendants were effectively served with the 2017 Complaint.

105. Accordingly, Motorola has had knowledge, or reasonably should have had knowledge, of its infringement of the '924 Patent since at least February 23, 2017, and March 1, 2017.

106. Defendants also had knowledge, or reasonably should have had knowledge, of their infringement of the '924 Patent since the filing of the original complaint and the service of the original complaint.

107. Accordingly, Defendants had knowledge of the '924 Patent, that their actions resulted in a direct infringement of the '924 Patent, that their customers' use of the Motorola Accused 4G LTE Devices in the manner in which they were designed resulted in a direct infringement of the '924 Patent and knew or were willfully blind that their actions would induce direct infringement by others and intended that their actions would induce direct infringement by others.

108. Motorola designs the Motorola Accused 4G LTE Devices to be used by its customers on 4G LTE networks.

109. Motorola intends for its customers to use the Motorola Accused 4G LTE Devices on 4G LTE networks.

110. Defendants provide user manuals and other instruction material for the Motorola

Accused 4G LTE Devices that instruct their customers to use Defendants' devices in their normal and customary way to communicate via 4G LTE.

111. In its advertisements to consumers, Motorola also correctly concludes that its customers use the Motorola Accused 4G LTE Devices as designed and intended by Motorola – to connect to 4G LTE networks using the steps detailed herein, and benchmarks various specifications – battery life, for example – based on those usage patterns. *See, e.g.*, https://motorola-global-portal.custhelp.com/app/home/, as of the date of filing the 2017 Complaint, ("All battery life claims are approximate and based on a standard mixed use profile. The mixed use profile is based on Motorola devices on major 4G LTE networks with excellent coverage and includes both usage and standby time. Out-of-box settings are applied to the mixed use profile to project battery performance.").

112. Further, Motorola's website documentation provides instructions to its customers for using the Motorola Accused 4G LTE Devices on 4G LTE networks. *See, e.g.*, https://motorola-global-portal.custhelp.com/ci/fattach/get/2057848/1485874307/redirect/1/filename/68018224001B.pdf (teaching customers how to use the 4G LTE "Mobile network" and how to "process[] tons of information and apps at 4G LTE speed").

113. Motorola's customers use the Motorola Accused 4G LTE Devices for the purpose for which Motorola designs and advertises them, and in the manner instructed by Motorola – to connect to and use 4G LTE networks.

114. In using the Motorola Accused 4G LTE Devices on 4G LTE networks, the customers' device first transmits a Scheduling Request (*i.e.*, "a one bit message to the base station

to request an allocation of UL bandwidth in which to transmit a bandwidth request") and then subsequently transmits a Buffer Status Report (*i.e.*, a "bandwidth request indicative of an amount of pending UL data"). Thereafter, the Motorola Accused 4G LTE Devices dynamically allocate the assigned UL bandwidth amongst their respective "UL services based on a QoS parameter of a respective service."

115. In this way, Motorola instructs and intends its customers to take steps that Motorola knows constitute direct infringement of the '924 Patent, and its customers do indeed take those steps.

116. Through their manufacture and sales of their Motorola Accused 4G LTE Devices, Defendants specifically intended for their customers to infringe the '924 Patent. Further, Defendants were aware that these normal and customary activities would infringe the '924 Patent. Defendants performed the acts that constitute induced infringement, and that would induce actual infringement, with knowledge of the '924 Patent and with the knowledge or willful blindness that the induced acts would constitute direct infringement.

117. Accordingly, a reasonable inference is that Defendants specifically intend for others, such as their customers, to directly infringe at least claims 1 and 17 of the '924 Patent in the United States because Defendants had knowledge of the '924 Patent and actively induced others (*e.g.*, its customers) to directly infringe the '924 Patent by using, selling, or offering to sell Motorola's Accused 4G LTE Devices.

118. Defendants have been and are now indirectly infringing at least one claim of the '924 Patent in accordance with 35 U.S.C. § 271(c) in this district and elsewhere in the United States. More specifically, Defendants have been and are now providing non-staple articles of

commerce to others for use in an infringing system or method with knowledge of the ’924 Patent, and with knowledge that the use of the Motorola Accused 4G LTE Devices resulted in a direct infringement of the ’924 Patent by their customers, and with knowledge that these non-staple articles of commerce are used as a material part of the claimed invention of the ’924 Patent.

119. The Motorola Accused 4G LTE Devices compliant with 4G LTE include components comprising an application processor and a baseband processor specifically designed to support communication and transmission of data over 4G LTE-compliant networks. These components are mounted to a circuit board in Defendants’ Accused 4G LTE Devices and, absent these components, the Motorola Accused 4G LTE Devices compliant with 4G LTE would not function in an acceptable manner to send or receive data over 4G LTE networks. Further, the sole purpose of the 4G LTE components is to provide the infringing 4G LTE functionality, and do not serve any substantial use that does not infringe the ’924 Patent. A reasonable inference to be drawn from the facts set forth is that these components in the Motorola Accused 4G LTE Devices are especially made or especially adapted to operate in the Motorola Accused 4G LTE Devices to provide wireless communication, including the transmission of data in accordance with the 4G LTE standard. Further, a reasonable inference to be drawn from the facts is that these components comprising an application processor and a baseband processor are intended to support communication of data over a 4G LTE network and are not staple articles or commodities of commerce, have no substantial non-infringing uses, and that the use of the components is required for operation of the devices to send or receive data over a 4G LTE-compliant network.

120. The components comprising an application processor and a baseband processor designed to support communication of data using 4G LTE in the Motorola Accused 4G LTE Devices are each a material part of the invention of the ’924 Patent and are especially made for the

infringing manufacture, sale, and use of the Motorola Accused 4G LTE Devices. The Motorola Accused 4G LTE Devices, including those components, are especially made or adapted to infringe the '924 Patent, and have no substantial non-infringing uses.

121. The '924 Patent is valid and enforceable.

122. Defendants' infringement of the '924 Patent is willful and has damaged Wi-LAN, and Defendants are liable to Wi-LAN in an amount to be determined at trial that compensates Wi-LAN for the infringement, which by law can be no less than a reasonable royalty.

123. As a result of Defendants' infringement of the '924 Patent, Wi-LAN has suffered irreparable harm and will continue to suffer loss and injury unless Defendants are enjoined by this Court.

INFRINGEMENT OF U.S. PATENT NO. 9,497,743

124. On November 15, 2016, the '743 Patent was duly and legally issued for inventions entitled "Methods and Systems for Transmission of Multiple Modulated Signals Over Wireless Networks." Wi-LAN Inc. owns the '743 Patent and holds the right to sue and recover damages for infringement thereof.

125. Defendants have directly infringed and continue to directly infringe numerous claims of the '743 Patent, including at least claim 6, by manufacturing, using, selling, offering to sell, and/or importing the Motorola Accused 4G LTE Devices. Defendants are liable for infringement of the '743 Patent pursuant to 35 U.S.C. § 271(a).

126. Motorola designs the Motorola Accused 4G LTE Devices to be used on 4G LTE networks.

127. In use on 4G LTE networks, the Motorola Accused 4G LTE Devices first transmits

a Scheduling Request (*i.e.*, "a one bit message to the base station to request an allocation of UL bandwidth in which to transmit a bandwidth request") and then subsequently transmits a Buffer Status Report (*i.e.*, a "bandwidth request indicative of an amount of pending UL data"). Thereafter, the Motorola Accused 4G LTE Devices dynamically allocate the assigned UL bandwidth amongst their respective "UL services based on a QoS parameter of a respective service."

128. For example, the Motorola Accused 4G LTE Devices comply with the 4G LTE standards, including the UL-SCH data transfer procedure specified by 3GPP TS 36.321 at section 5.4. In particular, the Motorola Accused 4G LTE Devices first transmit a Scheduling Request (*i.e.*, "an explicit message to the base station informing the base station that the cellular telephone has data awaiting transmission to the base station over the UL connection between the cellular telephone and the base station") and then subsequently transmit a Buffer Status Report (*i.e.*, a "information indicative of an amount of data awaiting transmission to the base station over the UL connection between the cellular telephone and the base station").

129. Specifically, Wi-LAN incorporates by reference Exhibit D, which is an infringement claim chart alleging how each of the Motorola Accused 4G LTE Devices read on the claim limitations of at least claim 6 of the '743 Patent based on compliance with at least Release 8 of the 4G LTE standard.

130. Defendants knew that they infringed the '743 Patent, or willfully blinded themselves to that infringement. On April 18, 2016, Wi-LAN invited Motorola to license its patents covering "4G wireless technology." On May 11, 2016, Wi-LAN provided Motorola with a detailed infringement claim chart for the '924 Patent, and identified representative infringing products as the "Moto X, Moto G, Moto E, DROID (Turbo 2, Maxx2, Turbo, Mini) … ." Each of these identified products are representative of each of the Motorola Accused 4G LTE Devices as

to the infringement of the '743 Patent. Wi-LAN then presented that claim chart and reiterated Motorola's infringement during a May 25, 2016 meeting in Chicago with Kathryn Tsirigotis (Lenovo's Director of Licensing) and Gary Cunningham (Senior Counsel at Motorola). Despite Wi-LAN's repeated follow-up requests on June 2, 2016, June 23, 2016, and September 21, 2016, Motorola never replied, thereby effectively refusing to take a license. Through these communications and the meeting, Defendants gained knowledge that they were infringing at least the '924 Patent, and on information and belief, knew other patents would issue. Although the '743 Patent had not yet formally issued at that time, Motorola either knew or should have known of the '743 Patent at least as of its issue date on November 15, 2016.

131. On February 23, 2017, Wi-LAN filed the 2017 Complaint against Defendants in the Southern District of California, where the 2017 Complaint identified Motorola's infringement of the '743 Patent by the then representative infringing devices, including Moto Z Force Droid, Moto Z, Moto Z Droid, Moto Z Play, Moto Z Play Droid, Moto G4 Plus, Moto G4, Moto G4 Play, Moto G3, Moto G, Moto E, Moto E3, Moto X, Moto X Pure Edition, Droid Maxx, and Droid Maxx2. These products identified in the 2017 Complaint are representative of each of the Motorola Accused 4G LTE Devices as to the infringement of the '743 Patent. On March 1, 2017, Defendants were effectively served with the 2017 Complaint.

132. Accordingly, Motorola has had knowledge, or reasonably should have had knowledge, of its infringement of the '743 Patent since at least February 23, 2017, and March 1, 2017.

133. Defendants also had knowledge, or reasonably should have had knowledge, of their infringement of the '743 Patent since the filing of the original complaint and the service of the original complaint.

134. Accordingly, Defendants had prior knowledge of the '743 Patent, that their actions resulted in a direct infringement of the '743 Patent, and knew or were willfully blind that their actions were infringing.

135. The '743 Patent is valid and enforceable.

136. Defendants' infringement of the '743 Patent has damaged Wi-LAN, and Defendants are liable to Wi-LAN in an amount to be determined at trial that compensates Wi-LAN for the infringement, which by law can be no less than a reasonable royalty.

137. As a result of Defendants' infringement of the '743 Patent, Wi-LAN has suffered irreparable harm and will continue to suffer loss and injury unless Defendants are enjoined by this Court.

WILLFUL INFRINGEMENT

138. Prior to the filing of the original complaint, Defendants knew or should have known that they infringed the patents-in-suit, or willfully blinded themselves to that infringement.

139. On April 18, 2016, Wi-LAN invited Motorola to license its patents covering "4G wireless technology." On May 11, 2016, Wi-LAN provided Motorola with a detailed infringement claim chart for the '924 Patent, and identified representative infringing products as the "Moto X, Moto G, Moto E, DROID (Turbo 2, Maxx2, Turbo, Mini) … ." Each of these identified products are representative of each of the Motorola Accused 4G LTE Devices as to the infringement of the patents-in-suit. Wi-LAN then presented that claim chart and reiterated Motorola's infringement during a May 25, 2016, meeting in Chicago with Kathryn Tsirigotis (Lenovo's Director of Licensing) and Gary Cunningham (Senior Counsel at Motorola). Despite Wi-LAN's repeated follow-up requests on June 2, 2016, June 23, 2016, and September 21, 2016, Motorola never

replied, thereby effectively refusing to take a license. Through these communications and the meeting, Defendants gained knowledge that they were infringing the '924 Patent (and the application that issued as the '743 Patent, on information and belief).

140. Accordingly, Motorola has had knowledge of its infringement of the '924 Patent since at least May 11, 2016.

141. On information and belief, Motorola has had knowledge of its infringement of the '743 Patent since at least the issue date of the '743 Patent on November 15, 2016.

142. On February 23, 2017, Wi-LAN filed the 2017 Complaint against Defendants in the Southern District of California, where the 2017 Complaint identified Motorola's infringement of the patents-in-suit by the then representative infringing devices, including Moto Z Force Droid, Moto Z, Moto Z Droid, Moto Z Play, Moto Z Play Droid, Moto G4 Plus, Moto G4, Moto G4 Play, Moto G3, Moto G, Moto E, Moto E3, Moto X, Moto X Pure Edition, Droid Maxx, and Droid Maxx2. These products identified in the 2017 Complaint are representative of each of the Motorola Accused 4G LTE Devices as to the infringement of the patents-in-suit.

143. On March 1, 2017, Defendants were effectively served with the 2017 Complaint.

144. Accordingly, Motorola has had knowledge, or reasonably should have had knowledge, of its infringement of the patents-in-suit since at least February 23, 2017, and March 1, 2017.

145. Further, Defendants also had knowledge, or reasonably should have had knowledge, of their infringement of the patents-in-suit since the filing of the original complaint and the service of the original complaint.

146. Despite such knowledge of the patents-in-suit, and knowledge that they are directly

and/or indirectly infringing claims of the patents-in-suit, Defendants have proceeded to infringe the patents-in-suit, and instruct their customers to do the same, with full and complete knowledge of their applicability to their respective Motorola Accused 4G LTE Devices without taking a license and without a good faith belief that the patents-in-suit are invalid and not infringed. Defendants' infringement of the patents-in-suit thus occurs with knowledge of infringement and/or objective recklessness and has been and continues to be willful, egregious, and deliberate. This includes, but is not limited to, Defendants' collective willful blindness, including their refusal to investigate whether the Motorola Accused 4G LTE Devices infringe claims of each of the patents-in-suit. Thus, Defendants' infringement of the patents-in-suit have been, and continue to be, willful, egregious, wanton, and deliberate, entitling Wi-LAN to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

PRAYER FOR RELIEF

WHEREFORE, Wi-LAN prays for the following relief:

147. A judgment in favor of Wi-LAN that one or more Defendants have infringed and are infringing, either literally and/or under the doctrine of equivalents, U.S. Patent Nos. 8,787,924 and 9,497,743.

148. An award of damages to Wi-LAN arising out of Defendants' infringement of U.S. Patent Nos. 8,787,924 and 9,497,743, including enhanced damages pursuant to 35 U.S.C. § 284, together with prejudgment and post-judgment interest, in an amount according to proof;

149. An award of an ongoing royalty for Defendants' post-judgment infringement in an amount according to proof;

150. Declaring that Defendants' infringement of U.S. Patent Nos. 8,787,924; and 9,497,743 is willful and that this is an exceptional case under 35 U.S.C. § 285 and awarding attorneys' fees and costs in this action.

151. Granting Wi-LAN its costs and further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

152. Wi-LAN demands a trial by jury of any and all issues triable of right before a jury.

Dated: December 16, 2020

Respectfully submitted,

/s/ Barry J. Bumgardner

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CERTIFICATE OF SERVICE

I hereby certify that on this 16th day of December, 2020, the foregoing was served via email on the following:

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