# UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

VENKEE COMMUNICATIONS, LLC,

Plaintiff

Civil Action No.: 2:18-cv-00051

v.

ARUBA NETWORKS, INC., and HEWLETT PACKARD ENTERPRISE COMPANY JURY TRIAL DEMANDED

# PLAINTIFF VENKEE COMMUNICATIONS, LLC'S ORIGINAL COMPLAINT

Plaintiff VenKee Communications, LLC ("Plaintiff" or "VenKee") files this Complaint against Defendants Aruba Networks, Inc. ("Aruba") and Hewlett-Packard Enterprise Company ("HP") (collectively "Defendants") seeking damages and other relief for patent infringement, and alleges with knowledge to its own acts, and on information and belief as to other matters, as follows:

## **NATURE OF ACTION**

1. This is an action for patent infringement arising under Title 35 of the United States Code, seeking monetary damages and other relief against Defendants due to their infringement of United States Patent Nos. 6,504,515 (the "515 Patent"), and 7,916,684 (the "684 Patent") (collectively the "Patents-in-Suit") in accordance with 35 U.S.C. § 271.

#### **PARTIES**

2. VenKee is a limited liability company organized and existing under the laws of the State of Texas, having its principal place of business at 5068 West Plano Parkway, Suite 300, Plano, Texas 75093.

3. VenKee alleges that HP is a corporation organized under the laws of Delaware, with a place of business in Texas at 5400 Legacy Drive, Plano, Texas 75024. HP may be served with process through its registered agent, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

4. VenKee alleges that Aruba Networks, Inc. is a corporation organized under the laws of Delaware, with a place of business in Texas at 5400 Legacy Drive, Plano, Texas 75024. Aruba was acquired by HP in 2015, in a transaction completed on May 19, 2015. Aruba is now a wholly-owned subsidiary of HP, but remains separately incorporated. Aruba may be served with process through its registered agent, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

5. Aruba recruits and employs engineers in Plano, Texas. See, e.g,. https://careers.arubanetworks.com/job/plano/resident-engineer/3283/5086071.

#### JURISDICTION AND VENUE

6. This is an action under the patent laws of the United States, 35 U.S.C. §§ 1, et seq. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a). Venue is proper under 28 U.S.C. §§ 1391(a) & (c), and 1400(b).

7. This Court has personal jurisdiction over Defendants under the laws of the State of Texas, including the Texas long-arm statute, TEX. CIV. PRAC. & REM. CODE § 17.042.

### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 3 of 20 PageID #: 3

8. Plaintiff's cause of action arises directly from Defendants' business contacts and other activities in the State of Texas and in the Eastern District of Texas: Defendants are present within or have minimum contacts within the State of Texas and the Eastern District of Texas; Defendants have purposefully availed themselves of the privileges of conducting business in the State of Texas and in the Eastern District of Texas; Defendants have sought protection and benefit from the laws of the State of Texas; and Defendants regularly conduct business within the State of Texas and within the Eastern District of Texas.

9. Defendants directly and/or through intermediaries, make, use, offer for sale, import, sell, advertise and/or distribute products and services in the United States, the State of Texas, and the Eastern District of Texas.

10. This Court also has personal jurisdiction over Defendants because Defendants have committed acts of patent infringement.

11. Defendants have regularly and systematically conducted and solicited business in this District by and through at least sales and offers for sale of Defendants' products and services.

12. Defendants have been, and currently are, continuously and systematically conducting business in this jurisdiction and throughout Texas.

13. Defendants have systematically and continuously harmed Plaintiff in this jurisdiction by infringing one or more claims of the '515 Patent.

14. Venue is proper in this district because, *inter alia*, Defendants maintain a regular and established place of business in this judicial district.

#### PATENTS-IN-SUIT

#### U.S. Patent No. 6,504,515

15. On May 1, 2001, United States Patent Application No. 09/846,786 entitled "High Capacity Broadband Cellular/PCS Base Station Using a Phased Array Antenna" was filed with the United States Patent and Trademark Office.

16. Application No. 09/846,786 is a continuation application of United States Patent Application No. 09/138,491, which was filed on Aug. 24, 1998 and issued as United States Patent No. 6,226,531.

17. Application No. 09/846,786 issued as the '515 Patent on January 7, 2003. A true and correct copy of the '515 Patent is attached hereto as "Exhibit 1" and is incorporated herein by reference.

18. The '515 Patent was subject to two reexaminations.

- A first reexamination certificate was issued on May 8, 2014 in which the patentability of claims 1-2, 4-5, and 7-9 were confirmed – the other claims were not reexamined.
- b. A second reexamination certificate was issued on March 31, 2015 in which claims
  1 and 7 were determined to be patentable as amended, and claims 2, 4, 5, 8 and 9
  were determined to be patentable based on the amendments to claims 1 and 7 claims 3, 6, and 10 were not reexamined.
- 19. The '515 Patent is presumed valid.
- 20. Plaintiff is the sole owner of the '515 Patent.

21. The '515 Patent is directed to systems and methods for increasing the capacity of broadband base stations without a significant increase in hardware by combining a set of wideband

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 5 of 20 PageID #: 5

digital radios with a phased array antenna to provide higher channel reuse and higher trunking efficiency. *See* '515 Patent, col. 1, ll. 9-16.

22. Some prior wideband radio systems had limited capacity in a multiple base station environment due to co-channel interference. *Id.* at col. 1, ll. 19-28. As a consequence, these prior wideband radio systems suffered significant disadvantages compared to narrowband systems. *Id.* at col. 1, ll. 29-39.

23. One way to increase capacity of wideband radios is to implement a sectorized scheme employing directional antennas to subdivide spatial coverage. While this reduces potential interference, this approach suffers from reduced channel use. This approach also suffers from reduced trunking efficiency. *Id.* at col. 1, ll. 40-53.

24. The '515 Patent describes how the inventors overcame the disadvantages of prior art systems and describes methods and systems for increasing the capacity of broadband base stations without a significant increase in hardware by combining a set of wideband digital radios with a phased array antenna to provide higher channel reuse and higher trunking efficiency. *Id.* at col. 1, 11. 9-16.

25. In accordance with the disclosure of the '515 Patent, the disclosed system and methods provide a high capacity base station that combines wideband digital radio equipment with a phased array antenna to provide dynamic beam steering via the phased antenna array without a significant increase in hardware cost. *Id.* at col. 1, ll. 57-62.

26. The '515 Patent describes an improved approach to wideband digital radio communication. *See*, e.g., '515 Patent, col. 1, l. 63 – col. 2, l. 53.

27. The '515 Patent does not preempt the field of wideband radio communication. As noted, the '515 Patent refers to other wideband radio communication systems. *Id.* at col. 1, ll. 19-53.

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 6 of 20 PageID #: 6

28. The '515 Patent claims are not directed to a method of organizing human activity or to a fundamental economic practice long prevalent in our system of commerce. The '515 Patent claims are directed toward systems and methods that solve a technical problem – how to increase capacity of wideband digital radios while reducing co-channel interference without a significant increase in hardware costs. *Id.* at col. 1, 1. 19 – col. 2, 11. 53.

29. The '515 Patent describes a solution to a technical problem that arises in the context of wideband digital radio communications. The '515 Patent's solution improves wideband digital radio communication by, at least, increasing capacity of digital base stations while reducing co-channel interference without a significant increase in hardware costs. *Id.* 

30. By increasing capacity of a wideband digital radio base station, the '515 Patent describes a technical solution to a technical problem that is intrinsically tied to wireless communication systems. *Id.* 

31. The '515 Patent describes improvements to wideband digital radio base stations. As an example, rather than providing an omnidirectional base station that suffers from co-channel interference or a sectorized base station that suffers from reduced channel use, the '515 Patent describes a high capacity wideband digital radio base station with a phased array antenna so as to provide dynamic beam steering resulting in increased capacity. *Id.* at col. 1, ll. 19-62.

32. The '515 Patent discloses multiple inventive concepts and improvements over prior wideband digital radio systems. *Id.* at col. 2, 1. 55 – col. 6, 1. 20; Figs. 1-4.

33. As demonstrated by its frequent citation by the United States Patent and Trademark Office, and other patent offices around the world in other later-issued patents and pending patent applications involving wireless digital communication, the '515 Patent represents a fundamental technical improvement involving wideband digital radio base stations. Specifically, the '515

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 7 of 20 PageID #: 7

Patent has been cited during the prosecution of over eleven subsequently issued U.S. patents and pending U.S. patent applications.

#### U.S. Patent No. 7,916,684

34. On November 11, 2004, United States Patent Application No. 10/985,589 entitled "Wireless Communication Network Providing Communication Between Mobile Devices and Access Points" was filed with the United States Patent and Trademark Office.

35. Application No. 10/985,589 issued as the '684 Patent on March 29, 2011. A true and correct copy of the '684 Patent is attached hereto as "Exhibit 2" and is incorporated herein by reference.

36. The '684 Patent was subject to three reexaminations.

- a. A first reexamination certificate was issued on October 21, 2013 in which the patentability of claims 1, 7, and 13 were determined to be patentable as amended, claims 5, 11, and 17 were determined to be patentable based on the amendments to claims 1, 7, and 13, new claims 19 and 20 were determined to be patentable claims 2-4, 6, 8-10, 12, 14-16 and 18 were not reexamined.
- b. A second reexamination certificate was issued on August 27, 2014 in which the patentability of claims 1, 7, 13, and 19 were determined to be patentable as amended, and claims 5, 11, 17, and 20 were determined to be patentable based on the amendments to claims 1, 7, and 13 claims 2-4, 6, 8-10, 12, 14-16 and 18 were not reexamined.
- c. A third reexamination certificate was issued on January 8, 2016 in which the patentability of claims 1, 6, 7, 13, and 19 were determined to be patentable as amended, and claims 5, 11, 17, and 20 were determined to be patentable based on

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 8 of 20 PageID #: 8

the amendments to claims 1, 7, and 13 – claims 2-4, 6, 8-10, 12, 14-16 and 18 were not reexamined.

37. The '684 Patent is presumed valid.

38. Plaintiff is the sole owner of the '684 Patent.

39. The '684 Patent is directed to systems and methods to enable mobile devices to communicate over wireless mesh networks using multiple access points. *See* '684 Patent, col. 1, 11. 7-9.

40. One group of prior broadband wireless networks (e.g., 802.11 WLAN) required many high speed wired network connections, often referred to as a backhaul connection, for each access point in order to provide wireless communication to mobile devices. This increase in the number of wired connections increased the cost and complexity of these networks and made implementation of such networks impractical. *Id.* at col. 1, 11. 9-33.

41. Other prior wireless networks used a mesh configuration to address the backhaul issue. In these systems, the access points communicate with neighboring access points to provide wireless backhaul for the network. While such networks have fewer wired access points, the effective data rate of the network is substantially reduced as the traffic for a mobile device "hops" from one wireless access point to another wireless access point. *Id.* at col. 1, ll. 34-48. As a consequence, the prior wireless communication networks suffered significant disadvantages, including being complex to implement, having reduced throughput, and having limited scalability. *Id.* at col. 1, ll. 60-62.

42. The '684 Patent describes how the inventors overcame the disadvantages of prior art systems and describes methods and systems for increasing throughput while reducing the

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 9 of 20 PageID #: 9

complexity to implement a network system with the ability to scale the wireless network. *Id.* at col. 1, 1. 66 - col. 2, 1. 40.

43. In accordance with the disclosure of the '684 Patent, the disclosed system and methods provide a wireless communication network with a plurality of access points that function as local access points that operate at one set of frequencies with mobile devices. The network also includes a master access point that communicates with the local access points on a different set of frequencies than the set of the frequencies used to communicate between the local access points and the mobile devices. *Id.* at col. 1, 1. 66 – col. 2, 1. 9.

44. The '684 Patent does not preempt the field of wireless communications networks. As noted, the '684 Patent references other wireless communications networks. *Id.* at col. 1, ll. 9-59.

45. The '684 Patent claims are not directed to a method of organizing human activity or to a fundamental economic practice long prevalent in our system of commerce. The '684 Patent claims are directed toward systems and methods that solve a technical problem – how to increase capacity of wireless communications networks while reducing complexity and providing increased scalability. *Id.* at col. 1, 1. 9 – col. 2, 1. 40.

46. The '684 Patent discloses a solution to a technical problem that arises in the context of wireless communications networks. The '684 Patent's solution improves wireless communications networks by, at least, increasing the throughput of the network and increasing the scalability of the network while reducing the complexity to implement the network. *Id.* 

47. By increasing throughput of a wireless communication network, increasing the scalability of wireless communications networks, and reducing the complexity of implementing wireless communications networks, the '684 Patent discloses a technical solution to a technical problem that is intrinsically tied to wireless communications networks. *Id.* 

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 10 of 20 PageID #: 10

48. The '684 Patent describes improvements to wireless communications networks. As an example, rather than providing a network with access points having only wired backhaul communications paths, which suffer from increased complexity and impractical implementation for scaled networks, the '684 Patent discloses a wireless communication network with a plurality of access points that function as local access points that operate at one set of frequencies with mobile devices. The network also includes a master access point that communicates with the local access points on a different set of frequencies than the set of the frequencies used to communicate between the local access points and the mobile devices. *Id.* at col. 1, 1. 66 – col. 2, 1. 9. These described improvements of the '684 Patent provide reduced complexity and a practical implementation for scaled networks over other wireless communications networks.

49. As another example, rather than disclosing a mesh network in which backhaul communications "hop" from one wireless access point to another wireless access point in a series of communications in a manner in which throughput is significantly reduced, the '684 Patent discloses a wireless communication network with a plurality of access points that function as local access points that operate at one set of frequencies with mobile devices. The network also includes a master access point that communicates with the local access points on a different set of frequencies than the set of the frequencies used to communicate between the local access points and the mobile devices. *Id.* at col. 1, 1. 66 - col. 2, 1. 9. These described improvements of the '684 Patent provide increased throughput as compared to other wireless communications networks.

50. The technical problem addressed by the inventors of the '684 Patent specifically arises in the realm of wireless communications networks, namely the problem conventional systems had while attempting to provide increased throughput in scaled wireless communications networks. The claimed technical solution addresses this problem by describing a wireless communication

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 11 of 20 PageID #: 11

network with a plurality of access points that function as local access points that operate at one set of frequencies with mobile devices. The network also includes a master access point that communicates with the local access points on a different set of frequencies than the set of the frequencies used to communicate between the local access points and the mobile devices. *Id.* at col. 1, 1. 66 – col. 2, 1. 9.

51. The '684 Patent discloses multiple inventive concepts and improvements over prior wireless communications networks. *Id.* at col. 1, l. 66 - col. 7, l. 15; Figs. 1-6.

52. As demonstrated by its frequent citation by the United States Patent and Trademark Office, and other patent offices around the world, in other later-issued patents and pending patent applications involving wireless digital communication, the '684 Patent represents a fundamental technical improvement involving wireless communications networks. Specifically, the '684 Patent has been cited during the prosecution of over seven subsequently issued U.S. patents and pending U.S. patent applications.

### COUNT I INFRINGEMENT OF U.S. PATENT NO. 6,504,515

53. Plaintiff hereby incorporates by reference the proceeding paragraphs of the Complaint as if set forth here in full.

54. Defendants make, use, import, sell, import, and/or offer for sale in the United States, without authority, products, equipment, and/or services that infringe one or more claims of the '515 Patent, including without limitation, the Aruba 303 Series Campus Access Points, which include the Aruba 303H Hospitality Access Point (collectively, "515 Accused Products"). *See, e.g.*, Ex. 3, Aruba 303 Series Campus Access Points: Data Sheet; and Ex. 4, Aruba 303H Hospitality Access Points: Data Sheet; and Ex. 4, Aruba 303H

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 12 of 20 PageID #: 12

55. Defendants have been and are directly infringing, either literally or under the doctrine of equivalents, at least Claim 1 of the '515 Patent by making, using, offering to sell, importing, and/or selling the '515 Accused Products.

56. The '515 Accused Products include a base station that connects clients to a network.

57. The '515 Accused Products include multiple antenna elements to support multiple-input and multiple-output (MIMO) operation. The antenna elements are physically separated from each other and form a multi-dimensional spatial array. The '515 Accused Products support beamforming, indicating that the antennas form a phased array antenna. *See, e.g.*, Ex. 3, Aruba 303 Series Campus Access Points: Data Sheet; Ex. 4, Aruba 303H Hospitality Access Point: Data Sheet; Ex. 5, Very High-Density 802.11ac Networks, Planning Guide, Version 1.0; Ex. 6, 802.11ac In-Depth, White Paper; Ex. 7, Enterprise-grade Wi-Fi access points.

58. The '515 Accused Products include multiple wideband digital radios covering the 2.4 GHz and 5 GHz frequency bands. The frequency bands include multiple channels, and the multiple wideband digital radios have an operational bandwidth spanning the multiple channels. *Id.* 

59. The '515 Accused Products support multiple user MIMO (MU-MIMO), which requires multiple radio/antenna chains. *Id.* Each of the multiple radios is coupled to at least one antenna element. *Id.* 

60. For the '515 Accused Products, "receive" channel signal processing corresponds to the uplink direction in 802.11n and 802.11ac. The '515 Accused Products support channel bonding, which enables the use of multiple 20MHz sub-channels as a single larger channel, such as a 40MHz channel or an 80MHz channel. The radios of the '515 Accused Products are adapted to perform receive channel signal processing when 40MHz or 80 MHz channels are used, such that the digital

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 13 of 20 PageID #: 13

spectral representation for an antenna element is made up of respective receive channels representing waveforms of interest. *Id.* 

61. For the '515 Accused Products, "transmit" channel signal processing corresponds to the downlink direction in 802.11n and 802.11ac. *Id.* 

62. The '515 Accused Products support channel bonding, which enables the use of multiple 20MHz sub-channels as a single larger channel, such as a 40MHz channel or an 80MHz channel. *Id.* 

63. The radios of the '515 Accused Products are adapted to perform transmit channel signal processing when 40MHz or 80 MHz channels are used, such that digital representations of multiple individual 20MHz channels are combined into a single 40MHz or 80MHz transmission channel. *Id.* 

64. The '515 Accused Products support MU-MIMO operation defined by the 802.11ac specification. *Id.* 

65. In MU-MIMO, the '515 Accused Products direct multiple individual spatial streams (i.e., individual channels) to multiple client devices at the same time over the same frequency spectrum (i.e., the spatial streams (individual channels) are combined into a single channel). *Id*.

66. In view of the foregoing paragraphs, each and every element of Claim 1 of the '515 Patent is found in the '515 Accused Products. By making, using, offering for sale, importing, and/or selling the '515 Accused Products, Defendants have injured Plaintiff and are liable to Plaintiff for infringing one or more claims (including at least Claim 1) of the '515 Patent, pursuant to 35 U.S.C. § 271(a).

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 14 of 20 PageID #: 14

67. Where acts constituting direct infringement of the '515 Patent are not performed by Defendants, such acts constituting direct infringement of the '515 Patent are performed by Defendants' customers or end-users.

68. Defendants have had actual knowledge of the '515 Patent since at least the service of this Complaint.

69. At least as early as service of this Complaint, Defendants indirectly infringe the '515 Patent within the United States by inducement under 35 U.S.C. § 271(b). By failing to cease making, using, selling, importing, and/or offering for sale the '515 Accused Products at least as of the service of this Complaint, Defendants have knowingly and intentionally induced users of the Accused Products to directly infringe one or more claims of the '515 Patent, inter alia, by: (1) providing instructions or information, for example on its publicly available website, to explain how to use the '515 Accused Products in an infringing manner, including the use of the '515 Accused Products in manners described above, which are expressly incorporated herein; and (2) touting these infringing uses of the '515 Accused Products in advertisements, including but not limited to, those on its website.

70. At least as of the service of this Complaint, Defendants indirectly infringe the '515 Patent within the United States by contributory infringement under 35 U.S.C. § 271(c). Defendants are aware, at least as of the service of this Complaint, that components of the '515 Accused Products are a material and substantial part of the invention claimed by the '515 Patent, and that they are designed for a use that is both patented and infringing, and that has no substantial non-infringing uses.

71. Defendants' infringement of the '515 Patent has caused damages to Plaintiff, and Plaintiff is entitled to recover damages from Defendants (or any successor entity to Defendants).

# COUNT II INFRINGEMENT OF U.S. PATENT NO. 7,916,684

72. Plaintiff hereby incorporates by reference the proceeding paragraphs of the Complaint as if set forth here in full.

73. Defendants make, use, sell, import, and/or offer for sale in the United States, without authority, products, equipment, and/or services that infringe one or more claims of the '684 Patent, including without limitation, the Aruba MSR2000 and MSR4000 mesh access points ("MAPs") (collectively, "'684 Accused Products"). *See, e.g.*, Ex. 10, Aruba, Product Line Matrix, Mesh Router.

74. Defendants have been and are directly infringing, either literally or under the doctrine of equivalents, at least Claim 7 of the '684 Patent by making, using, offering to sell, importing, and/or selling the '684 Accused Products.

75. The '684 Accused Products are used to implement a wireless mesh network. For example, a combination of three MAPs operate as a communications cell that uses a common wireless communications protocol, such as a protocol in the IEEE 802.11 family. One of the three MAPs in the communications cell operates as a master access point and the other two MAPs operate as local access points. In a wireless mesh network, multiple communications cells are present. *See, e.g.*, Ex. 8, Aruba, Mesh, Chapter 7, Secure Enterprise Mesh, Configuration Considerations; Ex. 9, Aruba Mesh AP Setup – Release 6.2.1.2, Create a Mesh Virtual AP; Ex. 10, Aruba Product Line Matrix Mesh Router; Ex. 11, Aruba Solution Brief, Outdoor RF Planner; Ex. 12, Aruba Outdoor Planner – User Guide.

### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 16 of 20 PageID #: 16

76. One example of the configuration described in the preceding paragraph is illustrated in the figure below, which is based on an illustration from Ex. 11:



77. Communication between mesh access points and mobile client devices occurs using a set of frequencies, including frequencies in the 2.4 GHz frequency band and the 5 GHz frequency band (see IEEE 802.11 specifications).

78. In the above figure, Cell 1 includes a master access point (MAP-1) and two local access points (LAP-1a and LAP-1b). Cell 2 includes a master access point (MAP-2) and two local access points (LAP-2a and LAP-2b).

79. In each of the mesh access points in Cell 1 and Cell 2 (MAP-1, LAP-1a, LAP 1b, MAP-2, LAP-2a, and LAP-2b) the access point is configured to communicate with a mobile client device

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 17 of 20 PageID #: 17

within a respective wireless coverage area using a common wireless communications protocol (e.g., a protocol in the 802.11 protocol family). *Id*.

80. In each of the mesh access points in Cell 1 and Cell 2 (MAP-1, LAP-1a, LAP 1b, MAP-2, LAP-2a, and LAP-2b) the access point is configured to communicate with other mesh access points within a respective wireless coverage area using a common wireless communications protocol (e.g., a protocol in the 802.11 protocol family). *Id*.

81. Each of the mesh access points is able to simultaneouly communicate with other mesh access points using either the 2.4 or 5 GHz frequency while communicating with mobile client devices using the other of either the 2.4 or 5 GHz frequency.

82. The mesh access points labeled as MAP-1 and MAP-2 provide either a wired or wirelss backhaul communications link. In the above figure, MAP-1 provides a wireless backhaul communications link and MAP-2 provides a wireless backhaul communications link. *Id*.

83. Each of the local access points described in the preceding paragraphs includes a first radio to communicate with mobile client devices at either a 2.4 or 5 GHz frequency and a second radio to communicate with a master access point at the other of the 2.4 or 5 GHz frequency, such that mesh-to-mesh communication occurs using a different frequency than mesh-to-client communication. The respective radios are configured to perform 2.4 GHz and 5 GHz communication simultaneously, such that in Cell 1 and Cell 2, simulataneous communication occurs at different frequencies between (i) mobile client devices and local access points, and (ii) local access points and the master access point. *Id*.

84. A wireless network (e.g., mesh network) using the 802.11 protocol includes a plurality of communications cells, such as Cell 1 and Cell 2 in the above figure. Cell 1 and Cell 2 each include a master access point, where those master access points have alternating wired and wireless

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 18 of 20 PageID #: 18

backhaul communications links. For example, in the above figure, MAP-1 has a wireless backhaul communications link and MAP-2 has a wired backhaul communications link. *Id*.

85. In view of the foregoing paragraphs, each and every element of Claim 7 of the '684 Patent is found in the '684 Accused Products. By making, using, offering for sale, importing, and/or selling the '684 Accused Products, Defendants have injured Plaintiff and are liable to Plaintiff for directly infringing one or more claims (including at least Claim 7) of the '684 Patent, pursuant to 35 U.S.C. § 271(a).

86. Where acts constituting direct infringement of the '684 Patent are not performed by Defendants, such acts constituting direct infringement of the '684 Patent are performed by Defendants' customers or end-users.

87. Defendants have had actual knowledge of the '684 Patent since at least the service of this Complaint.

88. At least as early as service of this Complaint, Defendants indirectly infringe the '684 Patent within the United States by inducement under 35 U.S.C. § 271(b). By failing to cease making, using, selling, importing, and/or offering for sale the '684 Accused Products at least as of the service of this Complaint, Defendants have knowingly and intentionally induced users of the '684 Accused Products to directly infringe one or more claims of the '684 Patent, inter alia, by: (1) providing instructions or information, for example on their publicly available websites, to explain how to use the '684 Accused Products in an infringing manner, including the use of the '684 Accused Products in manners described above; and (2) touting these infringing uses of the '684 Accused Products in advertisements, including but not limited to, those on their websites.

89. At least as of the service of this Complaint, Defendants indirectly infringe the '684 Patent within the United States by contributory infringement under 35 U.S.C. § 271(c). Defendants are

#### Case 2:18-cv-00051 Document 1 Filed 03/02/18 Page 19 of 20 PageID #: 19

aware, at least as of the service of this Complaint, that components of the '684 Accused Products are a material and substantial part of the claimed invention of the '684 Patent, and that they are designed for a use that is both patented and infringing, and that has no substantial non-infringing uses.

90. Defendants' infringement of the '684 Patent has caused damages to Plaintiff, and Plaintiff is entitled to recover damages from Defendants (or any successor entity of Defendants).

### **RELIEF REQUESTED**

WHEREFORE, Plaintiff respectfully requests that the Court:

- A. Enter judgment that Defendants have infringed one or more claims of the '515
   Patent literally or under the doctrine of equivalents;
- B. Enter judgement that Defendants have induced infringement and continue to induce infringement of one or more claims of the '515 Patent;
- C. Enter judgement that Defendants have contributed to and continue to contribute to infringement of one or more claims of the '515 Patent;
- Enter judgment that Defendants have infringed one or more claims of the '684
   Patent literally and/or the doctrine of equivalents;
- E. Enter judgement that Defendants have induced infringement and continue to induce infringement of one or more claims of the '684 Patent;
- F. Enter judgement that Defendants have contributed to and continue to contribute to infringement of one or more claims of the '684 Patent;
- G. Award Plaintiff past and future damages, to be paid by Defendants, in an amount no less than a reasonable royalty and adequate to compensate Plaintiff for such past and future damages, together with pre-judgment and post-judgment interest for

Defendants' infringement of the '515 Patent and the '684 Patent through the date that such judgment is entered in accordance with 35 U.S.C. § 284, and increase such award by up to three times the amount found or assessed in accordance with 35 U.S.C. § 284;

- H. Declare this case exceptional pursuant to 35 U.S.C. § 285; and
- I. Award Plaintiff its costs, disbursements, attorneys' fees, and such further and additional relief as is deemed appropriate by this Court.

### JURY DEMAND

Pursuant to Federal Rule of Civil Procedure 38(b), Plaintiff hereby demands a trial by jury on all issues so triable.

Dated: March 2, 2018

Respectfully Submitted

/s/ Craig S. Jepson

Craig S. Jepson Texas State Bar No. 24061364 cjepson@tlgiplaw.com Jeffrey G. Toler Texas State Bar No. 24011201 jtoler@tlgiplaw.com Raymond W. Mort, III Texas State Bar No. 00791308 rmort@tlgiplaw.com

TOLER LAW GROUP, PC 8500 Bluffstone Cove, Suite A201 Austin, Texas 78759 Tel. (512) 327-5515 Fax (512) 327-5575

# ATTORNEYS FOR PLAINTIFF VENKEE COMMUNICATIONS, LLC