IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

DALI WIRELESS, INC. a Delaware corporation, Plaintiff, v. JOHN MEZZALINGUA ASSOCIATES, LLC d/b/a JMA WIRELESS, a Delaware limited liability company, Defendant.	)	C.A. No. _____ **JURY TRIAL DEMANDED**

COMPLAINT

Plaintiff Dali Wireless, Inc. ("Dali") files this Complaint against Defendant John Mezzalingua Associates, LLC d/b/a JMA Wireless ("JMA Wireless").

NATURE OF THE CASE

1. This is an action for infringement of two patents: (1) United States Patent No. 10,334,499 ("the '499 patent") and (2) United States Patent No. 9,820,171 ("the '171 patent"). The patents ("Patents-in-Suit" or "Asserted Patents") relate to systems and products for providing in-building cellular network coverage.

2. Defendant JMA Wireless has been making, using and selling enterprise solutions for in-building cellular coverage, including its TEKO® Cell Hub and XRAN® server software products, that infringe the '499 patent and the '171 patent. Plaintiff Dali is seeking injunctive relief as well as damages.

PARTIES

3. Dali is a Delaware corporation having its principal place of business in Menlo Park, California.

4. Founded in 2006, Dali began as a designer and manufacturer of power amplifiers used in radio frequency ("RF") communications. Dali is known within the industry as an innovator in providing end-to-end software defined in-building digital radio distribution solutions that can be implemented for cellular, public safety, and other RF communications. Dali is a world-wide innovator in digital radio distribution systems and digital predistortion technology that revolutionized in-building and outdoor wireless coverage and capacity. Dali's groundbreaking products have been consistently recognized by industry publications. For example, Dali has been recognized as a "Hot Tech Innovator" by ABI Research and was ranked No. 1 in innovation in the latest ABI Research report, "In-Building Wireless, DAS Vendor Competitive Assessment." Dali's systems improve upon traditional in-building mobile communications systems by allowing the dynamic allocation of wireless coverage and capacity.

5. On information and belief, JMA Wireless is a limited liability company organized and existing under Delaware law and with a principal place of business at 7645 Henry Clay Boulevard, Liverpool, NY 13088.

JURISDICTION AND VENUE

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

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

8. On information and belief, this Court has personal jurisdiction over JMA Wireless because JMA Wireless is a company organized under the laws of the State of Delaware and because it regularly transacts business in this District.

9. On information and belief, JMA Wireless has committed, and continues to commit, acts of infringement of Dali's Patents-in-Suit in violation of the United States Patent Laws, and

has sold, offered for sale, marketed, and/or imported infringing products into this District. JMA Wireless' infringement has caused substantial injury to Dali, including within this District.

10. Venue is proper in this district pursuant to 28 U.S.C. §§ 1400 and 1391 because JMA Wireless is a Delaware company and therefore is deemed to reside in this judicial district.

THE PATENTS-IN-SUIT

11. The '499 patent is titled "Distributed Antenna System" and was issued by the United States Patent and Trademark Office to Shawn Patrick Stapleton, Paul Lemson, Bin Lin, and Albert S. Lee on June 25, 2019, and assigned to Dali. A true and correct copy of the '499 patent is attached hereto as Exhibit A.

12. Dali is the owner of all right, title, and interest in and to the '499 patent with the full and exclusive right to bring suit to enforce the '499 patent.

13. The '499 patent is valid and enforceable under the United States Patent Laws.

14. The '171 patent is titled "Remotely Reconfigurable Distributed Antenna System and Methods" and was issued by the United States Patent and Trademark Office to Paul Lemson, Shawn Patrick Stapleton, Sasa Trajkovic, and Albert S. Lee on November 14, 2017, and assigned to Dali. A true and correct copy of the '171 patent is attached hereto as Exhibit B.

15. Dali is the owner of all right, title, and interest in and to the '171 patent with the full and exclusive right to bring suit to enforce the '171 patent.

16. The '171 patent is valid and enforceable under the United States Patent Laws.

FIRST CAUSE OF ACTION
(PATENT INFRINGEMENT UNDER 35 U.S.C. § 271 OF '499 PATENT)

17. Dali re-alleges and incorporates by reference all of the foregoing paragraphs.

18. On information and belief, JMA Wireless has infringed and continues to infringe, either literally or under the doctrine of equivalents, one or more claims, including at least claim 1,

of the ’499 patent in violation of 35 U.S.C. §§ 271, et seq., directly and/or indirectly, by making, using, importing, selling, and/or offering certain equipment and systems relating to its wireless coverage systems, such as its infringing JMA Enterprise Platform, including its TEKO® Cell Hub and XRAN® Server products (collectively, “JMA Enterprise Platform”), throughout the United States without authority or license.

19. On information and belief, JMA Wireless has been, and currently is, an active inducer of infringement of the ’499 patent under 35 U.S.C. § 271(b).

20. According to product literature, JMA Wireless’ Enterprise Platform operates through the XRAN adaptive baseband server software, which processes the RF signals and delivers them to the TEKO® RF transmitting radios, and then to and from the mobile devices.” (https://jmawireless.com/resource/intel-solution-brief/.)

21. Claim 1 of the ’499 patent states:

> [Preamble] A system for transporting wireless communications, comprising:
>
> [A] a baseband unit;
>
> [B] a plurality of signal sources, including at least a first signal source and a second signal source;
>
> [C] a plurality of remote units, including at least a first remote unit and a second remote unit;
>
> [D] wherein the baseband unit comprises a plurality of interfaces to communicatively couple the baseband unit to the plurality of signal sources;
>
> [E] wherein the baseband unit is configured to receive a plurality of radio resources from the first signal source and the second signal source;
>
> [F] wherein the baseband unit is configured to send a digital representation of a first set of radio resources to the first remote unit at a first point in time, the first set of radio resources for transmission at an antenna of the first remote unit;

> [G] wherein the baseband unit is configured to send a digital representation of a second set of radio resources to the first remote unit at a second point in time, the second set of radio resources for transmission at the antenna of the first remote unit;
>
> [H] wherein a number of radio resources in the first set of radio resources is different from a number of radio resources in the second set of radio resources; and wherein the baseband unit is configured to receive digital signals from each of the plurality of remote units.

22. On information and belief, based on publicly available JMA Wireless documents, the JMA Enterprise Platform satisfies each and every limitation recited in at least claim 1 of the '499 patent as below.

23. On information and belief, the JMA Enterprise Platform meets the preamble of claim 1 of the '499 patent based on publicly available documents. JMA Enterprise Platform is a system for transporting wireless communications, and it comprises a server running XRAN adaptive baseband software and TEKO Cell Hubs for providing the communications to and from mobile units such as cell phones. (https://jmawireless.com/resource/intel-solution-brief/.) According to the publicly available documents:

> With fiber, a single [TEKO] Cell Hub delivers multiple mobile operators' licensed bands as well as the new CBRS (Citizens Broadband Radio Service) spectrum. The TEKO Cell Hub integrates directly with the JMA Wireless XRAN® technology, the only RF source in software that operates on off-the-shelf servers. Together, they provide a scalable, flexible and easy to deploy solution that uniquely address the needs of buildings to ensure best-in-class mobile performance. (https://jmawireless.com/resource/teko-cell-hub-solution-brief/.)

24. On information and belief, the "[TEKO] Cell Hub and XRAN can also be utilized in conjunction with the JMA Enterprise Platform as a hybrid solution, providing even further flexibility to address the unique needs of different buildings." (https://jmawireless.com/jma-wireless-launches-teko-cell-hub-the-first-solution-to-deliver-virtualized-enterprise-multi-service-capabilities-for-in-building-needs/.)

25. On information and belief, JMA Enterprise Platform meets limitation [A] of claim 1 of the '499 patent based on publicly available documents. Limitation [A] requires "a baseband unit . . . ."

26. The JMA Enterprise Platform includes an XRAN, a software-enabled baseband unit as recited by limitation [A]: "The JMA Wireless solution to this challenge is XRAN, a completely virtualized baseband function that can run on servers powered by Intel® processors that combines with the company's TEKO™ RF distribution technology to precisely address the key needs of the in-building market." (https://jmawireless.com/resource/intel-solution-brief/ at 2).

27. On information and belief, the JMA Enterprise Platform meets limitation [B] of claim 1 of the '499 patent based on publicly available documents. Limitation [B] requires, "a plurality of signal sources, including at least a first signal source and a second signal source . . . ."

28. The XRAN of the JMA Enterprise platform connects to multiple signal sources: "XRAN was created to deliver on the needs of both the carrier and the enterprise by offering: Support for multiple MNO network access, including public safety bands." (https://jmawireless.com/resource/intel-solution-brief/ at 3).

29. "The XRAN Adaptive Baseband software is compatible with all major wireless standards, including 3GPP* LTE, LTE category M (CAT-M), narrowband-IoT, and public safety bands and is capable of processing 3.5 GHz Citizens Broadband Radio Service (CBRS) in

software. XRAN utilizes 3GPP-defined network interfaces to be compatible with core mobile networks worldwide, and its software characteristics mean it can more easily be changed and enhanced for new spectrums, protocols, capabilities, and performance." (https://jmawireless.com/resource/intel-solution-brief/)

30. On information and belief, the JMA Enterprise Platform meets limitation [C] of claim 1 of the '499 patent based on publicly available documents. Limitation [C] requires, "a plurality of remote units, including at least a first remote unit and a second remote unit . . . ."

31. In the JMA Enterprise Platform, the XRAN delivers communications to and from the TEKO Cell Hubs:

(https://jmawireless.com/resource/teko-cell-hub-solution-brief/ at 3).

32. The JMA Enterprise Platform includes multiple Cell Hubs to provide connectivity throughout a venue: "Utilizing a common fiber infrastructure, multiple Cell Hub units can connect to the XRAN server or can be cascaded. Each Cell Hub provides MIMO (multiple input, multiple output) and is capable of covering up to 20K square feet of space . . . Cell Hub with XRAN aligns with the new Distributed Radio System (DRS) segment, but uniquely adds virtualized RQN to the solution (see graphic above)." (https://jmawireless.com/resource/teko-cell-hub-solution-brief/ at 3).

33. On information and belief, the JMA Enterprise Platform meets limitation [D] of claim 1 of the ’499 patent based on publicly available documents. Limitation [D] recites, “wherein the baseband unit comprises a plurality of interfaces to communicatively couple the baseband unit to the plurality of signal sources . . . .”

34. XRAN includes multiple interfaces for the plurality of signal sources. Publicly available materials explain that “[t]he XRAN Adaptive Baseband software is compatible with all major wireless standards, including 3GPP* LTE, LTE category M (CAT-M), narrowband-IoT, and public safety bands and is capable of processing 3.5 GHz Citizens Broadband Radio Service (CBRS) in software. XRAN utilizes 3GPP-defined network interfaces to be compatible with core mobile networks worldwide, and its software characteristics mean it can more easily be changed and enhanced for new spectrums, protocols, capabilities, and performance.” (https://jmawireless.com/resource/intel-solution-brief/.)

35. On information and belief, the JMA Enterprise Platform meets limitation [E] of claim 1 of the ’499 patent based on publicly available documents. Limitation [E] requires, “wherein the baseband unit is configured to receive a plurality of radio resources from the first signal source and the second signal source . . . .”

36. As discussed above in relation to limitations [B] and [D], the JMA Enterprise Platform receives communications compatible with “3GPP LTE” among other radio standards that include a plurality of radio resources for more than one signal source.

37. On information and belief, the JMA Enterprise Platform meets limitation [F] of claim 1 of the ’499 patent based on publicly available documents. Limitation [F] recites, “wherein the baseband unit is configured to send a digital representation of a first set of radio resources to

the first remote unit at a first point in time, the first set of radio resources for transmission at an antenna of the first remote unit . . . ."

38. The XRAN of the JMA Enterprise Platform sends a digital representation of the radio resources to a first remote unit, the Cell Hub, for transmission at an antenna of the Cell Hub. According to JMA Wireless product literature, by "[u]tilizing a common fiber infrastructure, multiple Cell Hub units can connect to the XRAN server or can be cascaded." (https://jmawireless.com/resource/teko-cell-hub-solution-brief/.)

39. The product literature further explains that "[e]ach Cell Hub provides MIMO (multiple input, multiple output) and is capable of covering up to 20K square feet of space" and that the "Cell Hub with XRAN aligns with the new Distributed Radio System (DRS) segment, but uniquely adds virtualized RAN to the solution (see graphic above)." (https://jmawireless.com/resource/teko-cell-hub-solution-brief/.)

40. Publicly available documents further note "Cell Hub utilizes a common fiber infrastructure, enabling multiple units to connect to the XRAN server " and "[e]ach Cell Hub provides 2X2 MIMO (multiple input, multiple output) with one watt of power, and Cell Hubs can be cascaded (daisy chained) to easily scale up coverage and capacity as needed." (https://jmawireless.com/jma-wireless-launches-teko-cell-hub-the-first-solution-to-deliver-virtualized-enterprise-multi-service-capabilities-for-in-building-needs/.)

41. Additionally, the communications transported from the XRAN to the Cell Hub are a digital representation of the radio resources because the communications conform to the CPRI standard. *See* (https://jmawireless.com/resource/intel-solution-brief/ at 3).

42. On information and belief, the JMA Enterprise Platform meets limitation [G] of claim 1 of the '499 patent based on publicly available documents. Limitation [G] recites, "wherein

the baseband unit is configured to send a digital representation of a second set of radio resources to the first remote unit at a second point in time, the second set of radio resources for transmission at the antenna of the first remote unit . . . ."

43. As discussed above in relation to limitation [B] and [D], the XRAN communicates signals from multiple sources, e.g. MNOs. As a result, at least a first and second sets of radio resources will be received by the XRAN and translated into first and second digital representations to be transmitted to first remote unit, the Cell Hub, as discussed above.

44. On information and belief, the JMA Enterprise Platform meets limitation [H] of claim 1 of the '499 patent based on publicly available documents. Limitation [H] recites, "wherein a number of radio resources in the first set of radio resources is different from a number of radio resources in the second set of radio resources; and wherein the baseband unit is configured to receive digital signals from each of the plurality of remote units."

45. According to publicly available documents, the XRAN is compatible with various radio standards, such as LTE. (https://jmawireless.com/resource/intel-solution-brief/).

46. These radio standards, such as LTE, have varying numbers of radio resources for communication with different end points. As such, the number of radio resources in a first and second set are different.

47. Additionally, the number of radio resources are different depending on which radio standard is being used.

48. Accordingly, on information and belief, the JMA Enterprise Platform product meets all elements of, and therefore infringes, at least claim 1 of the '499 patent.

49. As a result of JMA Wireless' infringement of the '499 patent, Dali has suffered, and continues to suffer, substantial injury and is entitled to recover all damages caused by JMA

Wireless' infringement to the fullest extent permitted by the Patent Act, together with prejudgment interests and costs for JMA Wireless' wrongful conduct.

50. Dali has no adequate remedy at law to prevent future infringement of the '499 patent. Dali suffers and continues to suffer irreparable harm as a result of JMA Wireless' patent infringement and is, therefore, entitled to injunctive relief to enjoin JMA Wireless' wrongful conduct.

SECOND CAUSE OF ACTION
(PATENT INFRINGEMENT UNDER 35 U.S.C. § 271 OF '171 PATENT)

51. Dali re-alleges and incorporates by reference all of the foregoing paragraphs.

52. On information and belief, JMA Wireless has infringed and continues to infringe, either literally or under the doctrine of equivalents, one or more claims, including at least claim 1, of the '171 patent in violation of 35 U.S.C. §§ 271, et seq., directly or indirectly, by making, using, importing, selling, and/or offering certain equipment and systems relating to its wireless coverage systems, such as its infringing JMA Enterprise Platform, including its TEKO® Cell Hub and XRAN® Server products, throughout the United States without authority or license.

53. On information and belief, JMA Wireless has been, and currently is, an active inducer of infringement of the '171 patent under 35 U.S.C. § 271(b).

54. Claim 1 of the '171 patent states,

> [Preamble] A method for routing and switching signals comprising:
>
> [A] providing a plurality of remote radio units, each remote radio unit configured to transmit one or more downlink signals and to receive one or more uplink signals;
>
> [B] providing at least one digital access unit configured to communicate with the plurality of remote radio units;
>
> [C] translating the uplink and downlink signals between RF and base band;

> [D] packetizing the uplink and downlink base band signals, wherein the packetized signals correspond to a plurality of carriers, each remote radio unit configured to receive or transmit a respective subset of the plurality of carriers;
>
> [E] routing and switching the packetized signals among the plurality of remote radio units via the at least one digital access unit;
>
> [F] reconfiguring at least one of the plurality of remote radio units by increasing or decreasing the number of carriers in the respective subset of the plurality of carriers; and
>
> [G] thereafter routing and switching the packetized signals among the plurality of remote radio units via the at least one digital access unit according to a result of the reconfiguring.

55. On information and belief, based on publicly available JMA Wireless product literature and other documents, the JMA Enterprise Platform satisfies each and every limitation recited in at least claim 1 of the ’171 patent as stated below.

56. On information and belief, the JMA Enterprise Platform meets the preamble of claim 1 of the ’171 patent based on publicly available documents. The preamble of claim 1 refers to “[a] method for routing and switching signals ….”

57. The JMA Enterprise Platform routes and switches RF signals. According to publicly available documents, the XRAN Adaptive Baseband “processes the RF signals and delivers them to the transmitting radios, and then to and from the mobile devices.” (https://jmawireless.com/resource/intel-solution-brief/.)

58. These documents further explains that “XRAN Adaptive Baseband software is compatible with all major wireless standards, including 3GPP* LTE, LTE category M (CAT-M), narrowband-IoT, and public safety bands and is capable of processing 3.5 GHz Citizens Broadband Radio Service (CBRS) in software” and that “the XRAN utilizes 3GPP-defined network interfaces to be compatible with core mobile networks worldwide, and its software characteristics mean it

can more easily be changed and enhanced for new spectrums, protocols, capabilities, and performance."

(https://jmawireless.com/resource/intel-solution-brief/.)

59. On information and belief, the JMA Enterprise Platform meets claim limitation [A] of claim 1 of the '171 patent based on publicly available documents. Limitation [A] requires "a plurality of remote radio units, each remote radio unit configured to transmit one or more downlink signals and to receive one or more uplink signals . . . ."

60. According to publicly available documents, the TEKO Cell Hub (remote radio unit) "is multi-carrier and multi-band" and "utilizes a common fiber infrastructure, enabling multiple units to connect to the XRAN server" wherein "[e]ach Cell Hub provides 2X2 MIMO (multiple input, multiple output) with one watt of power, and Cell Hubs can be cascaded (daisy chained) to easily scale up coverage and capacity as needed." (https://jmawireless.com/jma-wireless-launches-teko-cell-hub-the-first-solution-to-deliver-virtualized-enterprise-multi-service-capabilities-for-in-building-needs/.)."

61. Moreover, the publicly available materials for the JMA Enterprise Platform provide a diagram of the system architecture showing how the TEKO RF distribution units transmit one or more downlink RF signals and receive one or more uplink RF signals. (https://jmawireless.com/resource/intel-solution-brief/.)

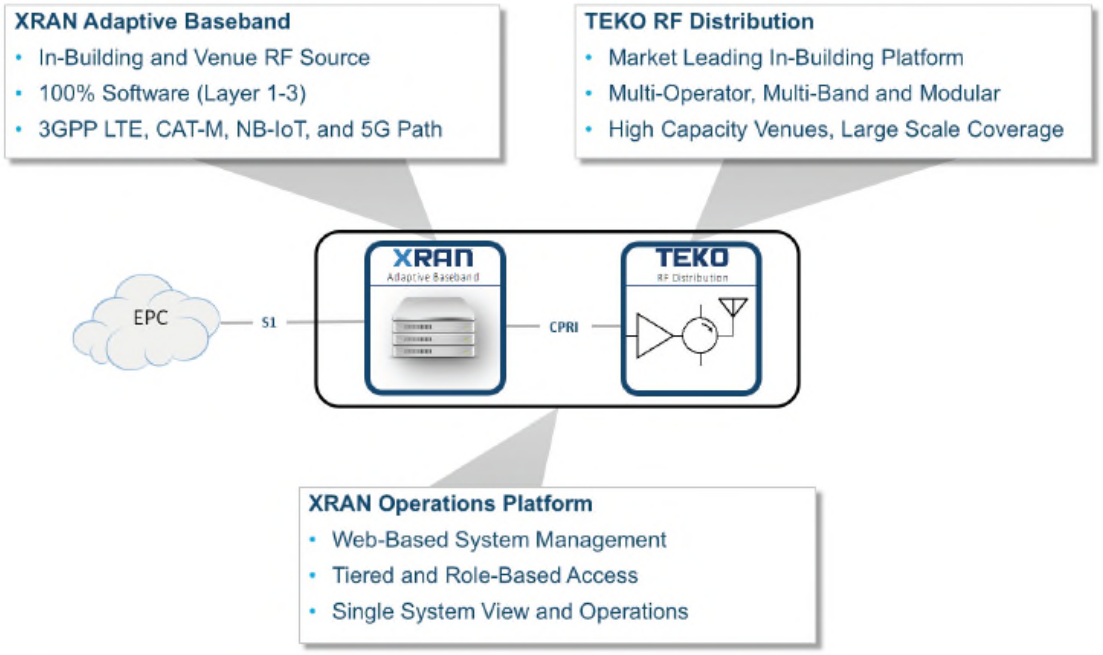

Figure 2. Diagram shows how the two main functions of the XRAN work together with the TEKO DAS.

62. The publicly available documents further explain that "[t]he XRAN Adaptive Baseband processes the RF signals and delivers them to the transmitting radios [e.g., TEKO Cell Hubs], and then to and from the mobile devices." (https://jmawireless.com/resource/intel-solution-brief/.)

63. On information and belief, the JMA Enterprise Platform meets claim limitation [B] of claim 1 of the '171 patent based on publicly available documents. Limitation [B] requires "at least one digital access unit configured to communicate with the plurality of remote radio units . . . ."

64. The JMA Enterprise Platform includes a baseband unit (XRAN Server) that acts as a digital access unit and communicates with one or more radio units (TEKO Cell Hub). According to JMA Wireless' product literature, the JMA Enterprise Platform "[u]tilizes a common fiber infrastructure" wherein "multiple [TEKO] Cell Hub units can connect to the XRAN server or be cascaded." (https://jmawireless.com/resource/teko-cell-hub-solution-brief/.)

65. Under this configuration "[e]ach [TEKO] Cell Hub provides MIMO (multiple input, multiple output) and is capable of covering up to 20K square feet of space." (https://jmawireless.com/resource/teko-cell-hub-solution-brief/.)

66. Other JMA Wireless product literature shows the relationship between the XRAN Server (DAS) and remote radio units in a JMA Enterprise Platform installation:

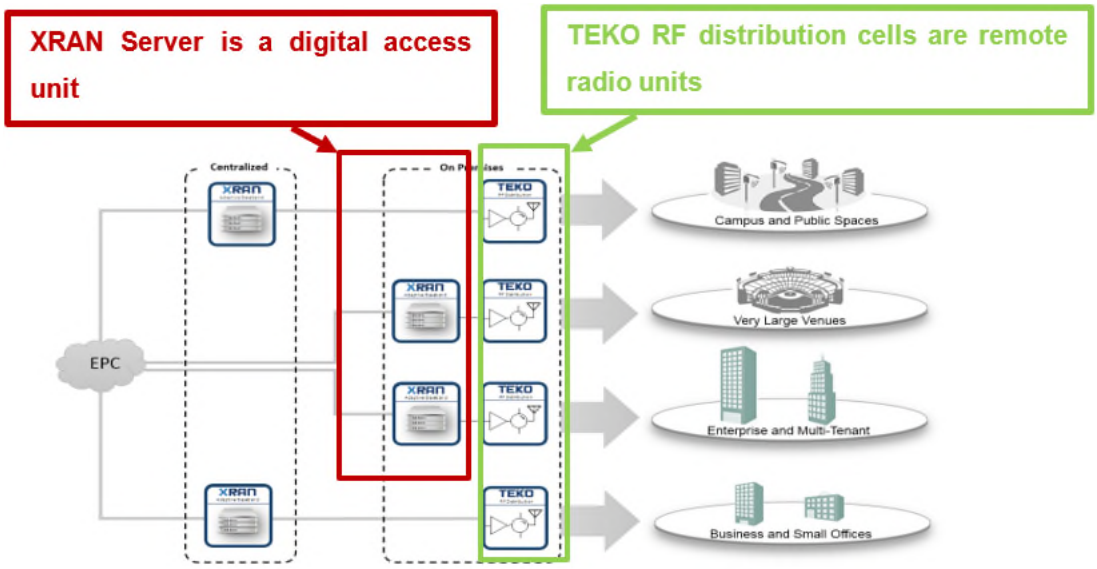

Figure 3. XRAN and TEKO DAS working together to provide wireless services to venues of different sizes.

(https://jmawireless.com/resource/intel-solution-brief/ (annotation added).)

67. This literature explains that the "XRAN Adaptive Baseband processes [in the XRAN Server] processes the RF signals and delivers them to the transmitting radios, and then to and from the mobile devices." (https://jmawireless.com/resource/intel-solution-brief/)

68. On information and belief, the JMA Enterprise Platform meets claim limitation [C] of claim 1 of the '171 patent based on publicly available documents. Limitation [C] requires "translating the uplink and downlink signals between RF and base band . . . ."

69. On information and belief, the components of the JMA Enterprise Platform translate or convert uplink and downlink signals between RF and baseband as appropriate.

70. According to publicly available information, the JMA Enterprise Platform architecture combines baseband processing and radio functions centralized in the Adaptive Baseband Server resulting in improved performance:

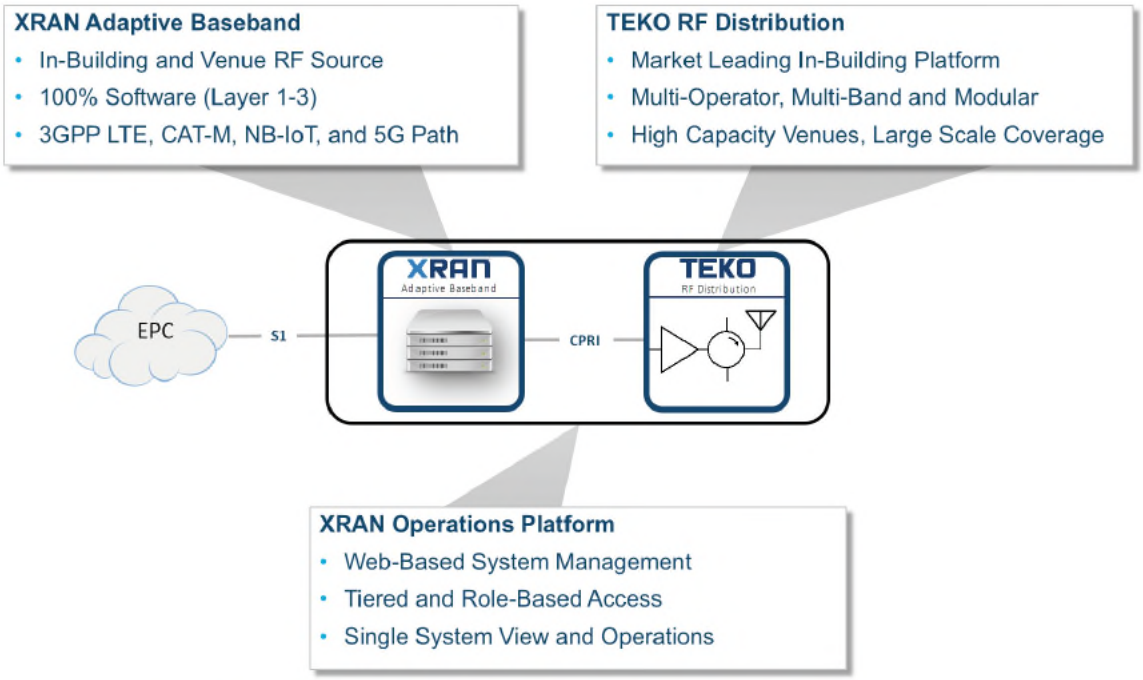

Figure 2. Diagram shows how the two main functions of the XRAN work together with the TEKO DAS.

(https://jmawireless.com/resource/intel-solution-brief/.)

71. According to this documentation, the XRAN Adaptive Baseband [Server] in the JMA Enterprise Platform "processes the RF signals and delivers them to the transmitting radios, and then to and from the mobile devices." (https://jmawireless.com/resource/intel-solution-brief/.)

72. According to other publicly available JMA Wireless press materials "[t]he XRAN software platform integrates with the TEKO RF Distribution platform via high capacity digital fiber connectivity, eliminating costly layers of analog equipment and cabling, and significantly reducing the footprint, power and cooling requirements." (https://info.jmawireless.com/jma-wireless-launches-xran-fully-virtualized-adaptive-baseband-software-to-radically-change-the-game-for-in-venue-wireless.)

73. In another configuration of the JMA Enterprise Platform, the TEKO Cell Hub units connect to the XRAN server by common fiber infrastructure, permitting the TEKO Cell Hub to "utilize[ ] XRAN for its baseband processing" providing for "adaptable sectorization" and "allow[ing] each operator individual sector mapping" that enables "RF engineers to virtually eliminate the battle against SINR (signal to interference plus noise ratio) experienced with small cells while optimizing in-building performance by further segmenting the sectors by tenant." (https://jmawireless.com/resource/teko-cell-hub-solution-brief/.)

74. Accordingly, on information and belief, by transmitting signals within a fiber network, the baseband controller of JMA Wireless' XRAN Server product must convert received downlink signals to baseband signals or convert baseband signals to uplink signals transmitted to a base station in the LTE network when appropriate.

75. On information and belief, the JMA Enterprise Platform meets claim limitation [D] of claim 1 of the '171 patent based on publicly available documents. Limitation [D] requires "packetizing the uplink and downlink baseband signals, wherein the packetized signals correspond to a plurality of carriers, each remote radio unit configured to receive or transmit a respective subset of the plurality of carriers . . . ."

76. On information and belief, the JMA Enterprise Platform implements a CPRI or CPRI-based communication protocol that performs packetizing. The JMA Enterprise Platform supports all major wireless standards, including 3GPP* LTE, LTE category M (CAT-M). (https://jmawireless.com/resource/intel-solution-brief/.)

77. LTE uses the evolved packet core ("EPC"), which is an evolution of the packet-switched architecture used in GPRS (2.5G technology for packet-based data services of GSM networks, i.e., 2G networks)/UMTS (3G technology using a packet-switched architecture for

CDMA). Signals, including downlink and uplink signals, can be transmitted in LTE using multiple carriers.

78. Accordingly, on information and belief, JMA Wireless' JMA Enterprise Platform "packetize[s] the uplink and downlink baseband signals, wherein the packetized signals correspond to a plurality of carriers."

79. The JMA Enterprise Platform further comprises remote radio units (TEKO Cell Hubs or TEKO RF distribution units) that can be configured to receive or transmit a respective subset of the plurality of carriers. According to JMA Wireless product literature, the TEKO Cell Hub units connect to the XRAN server in the JMA Enterprise Platform can "utilize[ ] XRAN for its baseband processing" providing for "adaptable sectorization" and "allow[ing] each operator individual sector mapping" that enables "RF engineers to virtually eliminate the battle against SINR (signal to interference plus noise ratio) experienced with small cells while optimizing in-building performance by further segmenting the sectors by tenant." (https://jmawireless.com/resource/teko-cell-hub-solution-brief/.)

80. On information and belief, the sector segmentation capabilities of the JMA Enterprise Platform permit remote radio units (TEKO Cell Hubs or TEKO RF distribution units) to receive or transmit a respective subset of the plurality of carriers.

81. On information and belief, the JMA Enterprise Platform meets claim limitation [E] of claim 1 of the '171 patent based on publicly available documents. Limitation [E] requires "routing and switching the packetized signals among the plurality of remote radio units via the at least one digital access unit . . . ."

82. Operation of the JMA Enterprise Platform involves routing and switching the packetized signals among the plurality of remote radio units (TEKO Cell Hubs or TEKO RF

distribution units) via the XRAN Adaptive Baseband Server. According to JMA Wireless product literature, the XRAN Adaptive Baseband [Server] "processes the RF signals and delivers them to the transmitting radios, and then to and from the mobile devices." (https://jmawireless.com/resource/intel-solution-brief/.)

83. Further, LTE uses the evolved packet core ("EPC"), which is an evolution of the packet-switched architecture used in GPRS (2.5G technology for packet-based data services of GSM networks, i.e., 2G networks)/UMTS (3G technology using a packet-switched architecture for CDMA).

84. On information and belief, the JMA Enterprise Platform further comprises remote radio units (TEKO Cell Hubs or TEKO RF distribution units) that can be configured to receive or transmit a respective subset of the plurality of carriers.

85. According to JMA Wireless product literature, the TEKO Cell Hub units connected to the XRAN server in the JMA Enterprise Platform can "utilize[ ] XRAN for its baseband processing" providing for "adaptable sectorization" and "allow[ing] each operator individual sector mapping" that enables "RF engineers to virtually eliminate the battle against SINR (signal to interference plus noise ratio) experienced with small cells while optimizing in-building performance by further segmenting the sectors by tenant." (https://jmawireless.com/resource/teko-cell-hub-solution-brief/.)

86. On information and belief, the sector segmentation capabilities of the JMA Enterprise Platform permit remote radio units (TEKO Cell Hubs or TEKO RF distribution units) to receive or transmit a respective subset of the plurality of carriers.

87. On information and belief, JMA Enterprise Platform meets claim limitation [F] of claim 1 of the '171 patent based on publicly available documents. Limitation [F] requires

"reconfiguring at least one of the plurality of remote radio units by increasing or decreasing the number of carriers in the respective subset of the plurality of carriers . . . ."

88. On information and belief, the JMA Enterprise Platform comprises software that can configure remote radio units (TEKO Cell Hubs or TEKO RF distribution units) by increasing or decreasing the number of carriers in the respective subset of the plurality of carriers.

89. According to JMA Wireless product literature, the JMA Enterprise Platform has "adaptive capacity" and by "[l]everaging embedded intelligence XRAN can increase or reduce capacity at a site based on how many mobile devices are present." (https://info.jmawireless.com/jma-wireless-launches-xran-fully-virtualized-adaptive-baseband-software-to-radically-change-the-game-for-in-venue-wireless.)

90. The JMA Enterprise Platform's XRAN Adaptive Baseband also "applies resources to sites when and where they are needed, increasing utilization efficiency dramatically."(https://info.jmawireless.com/jma-wireless-launches-xran-fully-virtualized-adaptive-baseband-software-to-radically-change-the-game-for-in-venue-wireless.)

91. According to Todd Landry, Corporate Vice President of Product and Market Strategy at JMA Wireless, "XRAN's intelligent software architecture makes capacity elastic, empowering XRAN baseband computing when and where needed, which will radically shift efficiency into the upper quadrant." (https://info.jmawireless.com/jma-wireless-launches-xran-fully-virtualized-adaptive-baseband-software-to-radically-change-the-game-for-in-venue-wireless.)

92. Similarly, according to other publicly available JMA Wireless documents, in the JMA Enterprise Platform the "[TEKO] Cell Hub utilizes XRAN for its baseband processing;

therefore, capabilities can be expanded or adjusted with just a simple software change." (https://jmawireless.com/resource/teko-cell-hub-solution-brief/.)

93. On information and belief, the JMA Enterprise Platform meets claim limitation [G] of claim 1 of the '171 patent based on publicly available documents. Limitation [G] requires "thereafter routing and switching the packetized signals among the plurality of remote radio units via the at least one digital access unit according to a result of the reconfiguring . . . ."

94. The JMA Enterprise Platform implements "adaptive capacity" and by "[l]everaging embedded intelligence XRAN can increase or reduce capacity at a site based on how many mobile devices are present." (https://info.jmawireless.com/jma-wireless-launches-xran-fully-virtualized-adaptive-baseband-software-to-radically-change-the-game-for-in-venue-wireless.)

95. As noted above, "XRAN's intelligent software architecture makes capacity elastic, empowering XRAN baseband computing when and where needed[.]" (https://info.jmawireless.com/jma-wireless-launches-xran-fully-virtualized-adaptive-baseband-software-to-radically-change-the-game-for-in-venue-wireless.) This allows for reconfiguring the routing and switching of the packetized signals among the one or more remote radio units (TEKO Cell Hubs or TEKO RF distribution units) through the XRAN baseband controller.

96. Accordingly, on information and belief, JMA Wireless' JMA Enterprise Platform meets all elements of, and therefore infringes, at least claim 1 of the '171 patent.

97. As a result of JMA Wireless' infringement of the '171 patent, Dali has suffered and continues to suffer substantial injury and is entitled to recover all damages caused by JMA Wireless' infringement to the fullest extent permitted by the Patent Act, together with prejudgment interests and costs for JMA Wireless' wrongful conduct.

98. Dali has no adequate remedy at law to prevent future infringement of the '171 patent. Dali suffers and continues to suffer irreparable harm as a result of JMA Wireless' patent infringement and is, therefore, entitled to injunctive relief to enjoin JMA Wireless' wrongful conduct.

PRAYER FOR RELIEF

WHEREFORE, Dali respectfully requests judgment against JMA Wireless as follows:

A. That the Court enter judgment for Dali on all causes of action asserted in this Complaint;

B. That the Court enter an injunction prohibiting JMA Wireless and its agents, officers, servants, employees and all persons in active concert or participation with JMA Wireless from making, using, advertising, selling, and offering for sale the infringing the JMA Enterprise Platform, including its component XRAN Server and Teko Cell Hub products, and from otherwise infringing any of the Patents-in-Suit.

C. That the Court enter judgment in favor of Dali and against JMA Wireless for monetary damages to compensate it for JMA Wireless' infringement of the Patents-in-Suit pursuant to 35 U.S.C. § 284, including costs and pre-judgment interest as allowed by law;

D. That the Court enter judgment in favor of Dali and against JMA Wireless for accounting and/or supplemental damages for all damages occurring after any discovery cutoff and through the Court's entry of final judgment;

E. That the Court enter judgment that this case is exceptional under 35 U.S.C. § 285 and enter an award to Dali of its costs and attorneys' fees; and

F. That the Court award Dali all further relief as the Court deems just and proper.

JURY DEMAND

Dali requests that all claims and causes of action raised in this Complaint against JMA Wireless be tried to a jury to the fullest extent possible.

Respectfully submitted,

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