

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

**JSDQ MESH TECHNOLOGIES LLC,**

**Plaintiff,**

**v.**

**DIGI INTERNATIONAL INC. and  
FIREBREAK CANADA CORP.,**

**Defendants.**

**Case No.:**

**JURY TRIAL DEMANDED**

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**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff JSDQ Mesh Technologies LLC complains of Defendants Digi International Inc. and Firebreak Canada Corp. as follows:

**NATURE OF LAWSUIT**

1. This is a claim for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code.

**THE PARTIES**

2. JSDQ Mesh Technologies LLC (“JSDQ”) is a Delaware limited liability company with its principal place of business at 401 Lake Avenue, Round Lake Beach, Illinois 60073.

3. JSDQ is the named assignee of, owns all right, title and interest in, and has standing to sue for infringement of United States Patent No. 7,286,828, entitled “Method of Call Routing and Connection,” which issued on October 23, 2007 (the “828 Patent”) (a true and correct copy is attached as Exhibit A); United States Patent No. 7,916,648, entitled “Method of Call Routing and Connection,” which issued on March 29, 2011 (the “648 Patent”) (a true and correct copy is attached as Exhibit B); United States Reissue Patent No. RE43,675, entitled “Wireless Radio Routing System,” which issued on September 18, 2012 (the “675 Patent”) (a

true and correct copy is attached as Exhibit C); and United States Reissue Patent No. RE44,607, entitled “Wireless Mesh Routing Method,” which issued on November 19, 2013 (the “‘607 Patent”) (a true and correct copy is attached as Exhibit D) (collectively, the “Patents-in-Suit”).

4. Defendant Digi International Inc. (“Digi”) is a Delaware corporation with a listed registered agent of The Corporation Trust Company, located at Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

5. Defendant Digi claims: “Our wireless communication adapters are small box or module products that utilize a variety of wireless protocols for PC-to-device or device-to-device connectivity, often in locations where deploying a wired network is not possible either because of cost, disruption or impracticality. By supporting ZigBee®, Wi-Fi® and proprietary radio frequency ‘RF’ technologies, we can meet most customer application requirements, such as ... mesh networking....”

6. Defendant Digi provides wireless networking solutions to businesses throughout the United States including Delaware and this Judicial District.

7. Upon information and belief, numerous customers use the infringing products of Defendant Digi and additional discovery will enable JSDQ to assess infringement thereby.

8. Upon information and belief, Defendant Firebreak Canada Corp. (dba Firebreak USA Corp.) (“Firebreak”) is a Canadian corporation with a principal address at P.O. Box 4070 Main, Olds, AB T4H 1P7, Canada.

9. Defendant Firebreak claims to be “a leading manufacturer of perimeter wildfire detection systems.... The company’s FirePosse™ system detects and reports wildfires to local authorities and area residents to protect homes, property and people.”

10. Moreover, “Firebreak turned to Digi International for their ConnectPort® X4 gateway and XBee® ZB ZigBee modules for system connectivity. The XBee ZB modules connect fire detection sensors to the ConnectPort X4 gateway. The gateway then broadcasts sensor information back to the network in real-time via cellular or satellite.”

11. Defendant Firebreak provides system products throughout the United States including Delaware and this Judicial District. Hence, Defendant Firebreak is subject to this Court’s jurisdiction based not only on its contacts with Delaware but also based on the aggregation of its contacts with the United States in regard to its status as a foreign entity.

### **JURISDICTION AND VENUE**

12. This Court has exclusive jurisdiction over the subject matter of the Complaint under 28 U.S.C. §§ 1331 and 1338(a).

13. Personal jurisdiction over Defendants is proper in this Court. Venue in this judicial district is proper under 28 U.S.C. §§ 1391(b), (c) and/or 1400(b).

### **THE ACCUSED WIRELESS ROUTING SYSTEMS**

14. Defendants infringe the Patents-in-Suit through the manufacture, sale, offer for sale and/or use of Defendant Digi’s wireless networking products, services and solutions.

15. Specifically, Defendant Digi offers several wireless networking solutions including those in Digi’s “Drop-In Network” product line.

16. Defendant Digi’s product offerings include wireless networking solutions based on the ZigBee protocol.

17. Defendant Digi’s products embodying the ZigBee protocol – including hardware (e.g., access points, antennas, etc.), software, and firmware components associated therewith – are herein referred to as the “Accused Wireless Routing Systems”.

18. Defendant Digi's product offerings further include wireless networking solutions based on Digi's own proprietary protocol, "DigiMesh". Defendant Digi's products embodying the DigiMesh protocol – including hardware (e.g., access points, antennas, etc.), software, and firmware components associated therewith – may also infringe the Patents-in-Suit. After adequate discovery, Plaintiff may seek leave to amend this Complaint to include thorough details of infringement, if any, by the DigiMesh product line.

19. Defendant Digi at least indirectly infringes the '675 Patent and the '607 Patent through the manufacture, sale, importation and/or offer for sale of the Accused Wireless Routing Systems and other third party components combined therewith.

20. Defendant Digi directly infringes the Patents-in-Suit at least through its use, installation and/or maintenance of the Accused Wireless Routing Systems.

21. Defendant Firebreak at least indirectly infringes the '675 Patent and the '607 Patent through the manufacture, sale, importation and/or offer for sale of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system and other third party components combined therewith.

22. Defendant Firebreak directly infringes the Patents-in-Suit at least through the use, installation and/or maintenance of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system.

23. According to Defendant Firebreak: "The *FirePosse*<sup>TM</sup> Early Warning Fire Detection and Integrated Security System from Firebreak Canada Corp. represents a major advance in wildfire detection technology by combining the most technologically advanced Flame Sensors available today with the latest wireless mesh digital signal processing techniques...."

24. Further, Defendant Firebreak contends: “*FirePosse*<sup>™</sup> Flame Sensor nodes deliver wireless connectivity through advanced mesh networks. These nodes utilize a patented Feature Set, for robust self healing, self configuring networks, and ideal for wireless enabling.”

25. Likewise, Defendant Firebreak maintains: “The *FirePosse*<sup>™</sup> Flame Sensor nodes and family of hardware devices such as wireless mesh gateways, adapters, modules, extenders and environmental sensors, as well as our RF-based serial and Ethernet cable replacement products, and software tools allow us to ‘drop-in’ devices for monitoring and control applications.”

26. Defendant Firebreak states: “With the iDigi cloud, the customers’ equipment is securely hosted on the iDigi network allowing [Firebreak] to easily monitor the equipment without having to maintain the servers.”

27. Moreover, “Firebreak found the Digi products to be easy to use and deploy. The modules can be programmed in the field from a laptop, and the iDigi platform allows for easy system configuration once the system is established.

28. According to Defendant Firebreak: “Digi listened to what [Firebreak] wanted to do and worked with [Firebreak] on developing a solution. Digi has provided suggestions and worked closely with [Firebreak] as a partner in developing this product.”

### **INFRINGEMENT BY DEFENDANT DIGI**

#### **INFRINGEMENT OF UNITED STATES PATENT NO. 7,286,828**

29. JSDQ realleges and incorporates by reference paragraphs 1 through 28, inclusive, as though fully set forth herein.

30. Defendant Digi directly infringes at least independent method claims 47, 56 and 68 of the ‘828 Patent through the use, installation and/or maintenance of the Accused Wireless Routing Systems.

31. Moreover, Defendant Digi's customers directly infringe at least independent method claims 47, 56 and 68 of the '828 Patent through their use of the Accused Wireless Routing Systems.

Claim 47

32. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale and/or used by Defendant Digi, provide a radio communication route among a plurality of individual nodes capable of distribution arbitrarily relative to each other, said nodes being controllable independent of a central computer separate from said nodes, in accordance with the limitations of claim 47 of the '828 Patent.

33. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale and/or used by Defendant Digi, perform each of the limitations of claim 47 of the '828 Patent by:

- (a) establishing radio links between pairs of said nodes using radio signals transmitted from each said node and received by other said nodes without regard to the relative locations of said nodes of said pair, wherein at least some of said radio signals include associated routing messages including an actual radio parameter of said radio signals;
- (b) storing said routing messages received by each said node;
- (c) selecting a said routing message associated with a preferred said radio link using said actual radio parameter of said received radio signals;
- (d) deleting at least some of said other stored routing messages;
- (e) modifying said selected routing message;
- (f) retransmitting said modified routing message; and

(g) assembling said preferred radio links into a radio communication route between an originating node and a destination node, said route including plural said radio links.

Claim 56

34. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale and/or used by Defendant Digi, provide a radio communication route among a plurality of individual nodes capable of distribution arbitrarily relative to each other, said nodes being controllable independent of a central computer separate from said nodes, in accordance with the limitations of claim 56 of the '828 Patent.

35. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale and/or used by Defendant Digi, perform each of the limitations of claim 56 of the '828 Patent by:

- (a) establishing radio links between pairs of said nodes using radio signals transmitted from each said node and received by other said nodes without regard to the relative locations of said nodes of said pair, at least some of said radio signals including routing messages;
- (b) storing said routing messages received by each said node;
- (c) selecting a said routing message associated with a preferred said radio link using a parameter of said routing messages in said received radio signals;
- (d) modifying said selected routing message;
- (e) deleting at least some of said other stored routing messages;
- (f) retransmitting said modified routing message;
- (g) assembling said preferred radio links into an optimum radio communication route between an originating node and a destination node, said route including plural said radio links; and

- (h) changing said route between said originating node and said destination node only when a condition of the route changes.

Claim 68

36. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale and/or used by Defendant Digi, provide a wireless communication route having a plurality of individual routing nodes distributed to form a mesh of said routing nodes throughout an area covered by a wireless communication system, in accordance with the limitations of claim 68 of the '828 Patent.

37. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale and/or used by Defendant Digi, perform each of the limitations of claim 68 of the '828 Patent by:

- (a) establishing wireless links between pairs of said routing nodes using wireless signals transmitted from each said routing node and received by other said routing nodes without regard to the relative locations of said routing nodes of said pair, at least some of said wireless signals including routing messages;
- (b) storing said routing messages received by each said node;
- (c) selecting a said routing message associated with a preferred said wireless link using a parameter of said received wireless signals;
- (d) modifying said selected routing message;
- (e) deleting at least some of said other stored routing messages;
- (f) retransmitting said modified routing messages; and
- (g) assembling said preferred wireless links into an optimum wireless communication route between a remote routing node and a destination routing node, said route including plural said wireless links.

38. To the extent required by law, JSDQ has complied with the provisions of 35 U.S.C. § 287.

39. Defendant Digi had notice of the '828 Patent and the likelihood of infringement at least as early as December 23, 2015, on which date JSDQ provided correspondence identifying the Patents-in-Suit and the likelihood of infringement thereof.

40. Defendant Digi's direct infringement as described above has injured and will continue to injure JSDQ as long as such infringement continues. JSDQ is entitled to recover damages adequate to compensate it for such infringement, but in no event less than a reasonable royalty.

**INFRINGEMENT OF UNITED STATES PATENT NO. 7,916,648**

41. JSDQ realleges and incorporates by reference paragraphs 1 through 28, inclusive, as though fully set forth herein.

42. Defendant Digi directly infringes at least independent method claims 29 and 36 of the '648 Patent through the use, installation and/or maintenance of the Accused Wireless Routing Systems.

43. Moreover, Defendant Digi's customers directly infringe at least independent method claims 29 and 36 of the '648 Patent through their use of the Accused Wireless Routing Systems.

Claim 29

44. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale and/or used by Defendant Digi, provide a radio communication route among individual nodes capable of distribution arbitrarily relative to each other, in accordance with the limitations of claim 29 of the '648 Patent.

45. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale and/or used by Defendant Digi, perform each of the limitations of claim 29 of the '684 Patent by:

- (a) establishing radio links between pairs of said nodes using radio signals transmitted from one said node and received directly by other said nodes without regard to the relative locations of said nodes of said pair transmitting and receiving said signals;
- (b) measuring values of a radio parameter of radio signals received by a said node;
- (c) transmitting from at least two of said nodes radio signals with associated routing messages, wherein said routing message from each of said two nodes identifies a multilink route segment to another said node and includes a value of a radio parameter related to a condition of said route segment;
- (d) selecting at a said node receiving said radio signals a preferred said multi-link route segment, wherein said selection is based on the measured values of said radio parameter of said received radio signals and the values of said radio parameter included with said routing messages in said received radio signals;
- (e) transmitting from said selecting node a radio signal with a routing message identifying said selecting node and said preferred route segment; and
- (f) assembling a radio communication route between an originating node and a destination node, said route being assembled by computers in a plurality of said nodes independently of any computer separate from said nodes in said route, and said route including at least one said preferred multi-link route segment.

Claim 36

46. The Accused Wireless Routing Systems, manufactured, sold, offered for sale and/or used by Defendant Digi, create a radio communications route comprising multiple radio

links between a plurality of pairs of nodes capable of distribution arbitrarily relative to each other, in accordance with the limitations of claim 36 of the '648 Patent.

47. The Accused Wireless Routing Systems, manufactured, sold, offered for sale and/or used by Defendant Digi, perform each of the limitations of claim 36 of the '684 Patent by:

- (a) receiving at a said node at least two radio signals including routing messages transmitted from other said nodes, said signals being received at said node directly from said nodes transmitting said signals without regard to the relative locations of said node receiving said signals and said nodes transmitting said signals, wherein said routing message from each said node has content (i) identifying at least one preferred multi-link route segment to another said node, (ii) including the number of said radio links in said route segment, and (iii) including at least one value of a radio parameter of radio signals associated with said radio links in said route segment;
- (b) measuring at said receiving node values of said radio parameter associated with at least some of said radio signals received by said receiving node;
- (c) storing at said receiving node said measured values of said radio parameter and said routing messages associated with said measured values;
- (d) selecting at a said node receiving said routing messages a preferred said route segment, wherein said selection is based on the measured values of said radio parameter of said received radio signals and the stored values of said radio parameter;
- (e) transmitting from said selecting node a routing message identifying said preferred route segment; and
- (f) assembling a radio communication route between an originating node and a destination node.

48. To the extent required by law, JSDQ has complied with the provisions of 35 U.S.C. § 287.

49. Defendant Digi had notice of the '828 Patent and the likelihood of infringement at least as early as December 23, 2015, on which date JSDQ provided correspondence identifying the Patents-in-Suit and the likelihood of infringement thereof.

50. Defendant Digi's direct infringement as described above has injured and will continue to injure JSDQ as long as such infringement continues. JSDQ is entitled to recover damages adequate to compensate it for such infringement, but in no event less than a reasonable royalty.

**INFRINGEMENT OF UNITED STATES REISSUE PATENT NO. RE 43,675**

51. JSDQ realleges and incorporates by reference paragraphs 1 through 28, inclusive, as though fully set forth herein.

52. Defendant Digi directly infringes at least independent method claim 15 of the '675 Patent through the use, installation and/or maintenance of the Accused Wireless Routing Systems in conjunction with directional radio signals.

53. Moreover, Defendant Digi's customers directly infringe at least independent method claim 15 of the '675 Patent through their use of the Accused Wireless Routing Systems in conjunction with directional signals.

54. Defendant Digi at least indirectly infringes at least independent method claim 15 of the '675 Patent through the manufacture, sale and/or offer for sale of the Accused Wireless Routing Systems.

Claim 15

55. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale and/or used by Defendant Digi, provide a radio communication route among individual nodes

capable of distribution arbitrarily relative to each other, in accordance with the limitations of claim 15 of the '675 Patent.

56. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale and/or used by Defendant Digi, perform each of the limitations of claim 15 of the '675 Patent by:

- (a) establishing radio links between respective pairs of said nodes, at least one said node using a directional radio signal transmitted from said node and received directly by another said node without regard to the relative locations of said nodes;
- (b) measuring a value of a radio parameter of a said directional radio signal received by at least one said node;
- (c) transmitting from said at least one node a radio signal with an associated routing message based on at least one measured value of the radio parameter; and
- (d) assembling a radio communication route between an originating node and a destination node, said route being assembled by computers in a plurality of said nodes using routing messages received by said nodes, wherein said computers in said nodes assemble said route independently of any computer separate from said nodes in said route, and said route includes at least one route segment with a said node transmitting a directional radio signal.

57. To the extent required by law, JSDQ has complied with the provisions of 35 U.S.C. § 287.

58. Defendant Digi had notice of the '675 Patent and the likelihood of infringement at least as early as December 23, 2015, on which date JSDQ provided correspondence identifying the Patents-in-Suit and the likelihood of infringement thereof.

59. Upon information and belief, Defendant Digi specifically intended its customers (including Defendant Firebreak) to directly infringe the '675 Patent (as set forth below) and knew that the customers' acts constituted infringement.

60. Defendant Digi's direct and/or indirect infringement as described above has injured and will continue to injure JSDQ as long as such infringement continues. JSDQ is entitled to recover damages adequate to compensate it for such infringement, but in no event less than a reasonable royalty.

**INFRINGEMENT OF UNITED STATES PATENT REISSUE NO. RE 44,607**

61. JSDQ realleges and incorporates by reference paragraphs 1 through 28, inclusive, as though fully set forth herein.

62. Defendant Digi directly infringes at least independent method claim 3 of the '607 Patent through the manufacture, sale, offer for sale, use, installation and/or maintenance of the Accused Wireless Routing Systems in conjunction with directional radio signals.

63. Moreover, Defendant Digi's customers directly infringe at least independent method claim 3 of the '607 Patent through their use of the Accused Wireless Routing Systems in conjunction with directional radio signals.

64. Defendant Digi at least indirectly infringes at least independent method claim 3 of the '607 Patent through the manufacture, sale and/or offer for sale of the Accused Wireless Routing Systems.

Claim 3

65. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale, used, installed and/or maintained by Defendant Digi, provide at least two radio communication routes among individual nodes capable of distribution arbitrarily relative to each other, in accordance with the limitations of claim 3 of the '607 Patent.

66. The Accused Wireless Routing Systems, as manufactured, sold, offered for sale, used, installed and/or maintained by Defendant Digi, perform each of the limitations of claim 3 of the '607 Patent by:

- (a) establishing radio links between respective pairs of said nodes using radio signals transmitted from said nodes and received by other said nodes, wherein at least some of said radio signals include routing messages;
- (b) using a directional radio signal transmitted from one said node in a directional link and received directly by the other said node in said directional link;
- (c) measuring a parameter of radio signals received by at least some of said nodes;
- (d) transmitting from at least some of said nodes radio signals with associated routing messages based on said measured parameter; and
- (e) assembling radio communication routes between at least two originating nodes and at least one destination node, wherein computers in a plurality of said nodes use routing messages received by said nodes to assemble said routes independently of any computer separate from said nodes in said routes and without regard to the relative locations of said nodes in a said route, both said routes including at least one said directional link.

67. To the extent required by law, JSDQ has complied with the provisions of 35 U.S.C. § 287.

68. Defendant Digi had notice of the '607 Patent and the likelihood of infringement at least as early as December 23, 2015, on which date JSDQ provided correspondence identifying the Patents-in-Suit and the likelihood of infringement thereof.

69. Upon information and belief, Defendant Digi specifically intended its customers (including Defendant Firebreak) to directly infringe the '607 Patent (as set forth below) and knew that the customers' acts constituted infringement.

70. Defendant Digi's direct and/or indirect infringement as described above has injured and will continue to injure JSDQ as long as such infringement continues. JSDQ is entitled to recover damages adequate to compensate it for such infringement, but in no event less than a reasonable royalty.

### **INFRINGEMENT BY DEFENDANT FIREBREAK**

#### **INFRINGEMENT OF UNITED STATES PATENT NO. 7,286,828**

71. JSDQ realleges and incorporates by reference paragraphs 1 through 28, inclusive, as though fully set forth herein.

72. Defendant Firebreak directly infringes at least independent method claims 47, 56 and 68 of the '828 Patent through the use, installation and/or maintenance of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system.

73. Moreover, Defendant Firebreak's customers directly infringe at least independent method claims 47, 56 and 68 of the '828 Patent through their use of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system.

#### **Claim 47**

74. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, provide a radio communication route among a plurality of individual nodes capable of distribution arbitrarily relative to each other, said nodes being controllable independent of a central computer separate from said nodes, in accordance with the limitations of claim 47 of the '828 Patent.

75. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, perform each of the limitations of claim 47 of the '828 Patent by:

- (a) establishing radio links between pairs of said nodes using radio signals transmitted from each said node and received by other said nodes without regard to the relative locations of said nodes of said pair, wherein at least some of said radio signals include associated routing messages including an actual radio parameter of said radio signals;
- (b) storing said routing messages received by each said node;
- (c) selecting a said routing message associated with a preferred said radio link using said actual radio parameter of said received radio signals;
- (d) deleting at least some of said other stored routing messages;
- (e) modifying said selected routing message;
- (f) retransmitting said modified routing message; and
- (g) assembling said preferred radio links into a radio communication route between an originating node and a destination node, said route including plural said radio links.

Claim 56

76. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, provide a radio communication route among a plurality of individual nodes capable of distribution arbitrarily relative to each other, said nodes being controllable independent of a central computer separate from said nodes, in accordance with the limitations of claim 56 of the '828 Patent.

77. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, perform each of the limitations of claim 56 of the '828 Patent by:

- (a) establishing radio links between pairs of said nodes using radio signals transmitted from each said node and received by other said nodes without regard to the relative locations of said nodes of said pair, at least some of said radio signals including routing messages;
- (b) storing said routing messages received by each said node;
- (c) selecting a said routing message associated with a preferred said radio link using a parameter of said routing messages in said received radio signals;
- (d) modifying said selected routing message;
- (e) deleting at least some of said other stored routing messages;
- (f) retransmitting said modified routing message;
- (g) assembling said preferred radio links into an optimum radio communication route between an originating node and a destination node, said route including plural said radio links; and
- (h) changing said route between said originating node and said destination node only when a condition of the route changes.

Claim 68

78. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, provide a wireless communication route having a plurality of individual routing nodes distributed to form a mesh of said routing nodes throughout an area covered by a wireless communication system, in accordance with the limitations of claim 68 of the '828 Patent.

79. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, perform each of the limitations of claim 68 of the '828 Patent by:

- (a) establishing wireless links between pairs of said routing nodes using wireless signals transmitted from each said routing node and received by other said routing nodes without regard to the relative locations of said routing nodes of said pair, at least some of said wireless signals including routing messages;
- (b) storing said routing messages received by each said node;
- (c) selecting a said routing message associated with a preferred said wireless link using a parameter of said received wireless signals;
- (d) modifying said selected routing message;
- (e) deleting at least some of said other stored routing messages;
- (f) retransmitting said modified routing messages; and
- (g) assembling said preferred wireless links into an optimum wireless communication route between a remote routing node and a destination routing node, said route including plural said wireless links.

80. To the extent required by law, JSDQ has complied with the provisions of 35 U.S.C. § 287.

81. Defendant Firebreak's direct infringement as described above has injured and will continue to injure JSDQ as long as such infringement continues. JSDQ is entitled to recover damages adequate to compensate it for such infringement, but in no event less than a reasonable royalty.

**INFRINGEMENT OF UNITED STATES PATENT NO. 7,916,648**

82. JSDQ realleges and incorporates by reference paragraphs 1 through 28, inclusive, as though fully set forth herein.

83. Defendant Firebreak directly infringes at least independent method claims 29 and 36 of the '648 Patent through the use, installation and/or maintenance of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system.

84. Moreover, Defendant Firebreak's customers directly infringe at least independent method claims 29 and 36 of the '828 Patent through their use of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system.

Claim 29

85. The Accused Wireless Routing Systems, implemented by Defendant Firebreak, provide a radio communication route among individual nodes capable of distribution arbitrarily relative to each other, in accordance with the limitations of claim 29 of the '648 Patent.

86. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, perform each of the limitations of claim 29 of the '684 Patent by:

- (a) establishing radio links between pairs of said nodes using radio signals transmitted from one said node and received directly by other said nodes without regard to the relative locations of said nodes of said pair transmitting and receiving said signals;
- (b) measuring values of a radio parameter of radio signals received by a said node;
- (c) transmitting from at least two of said nodes radio signals with associated routing messages, wherein said routing message from each of said two nodes identifies a multilink route segment to another said node and includes a value of a radio parameter related to a condition of said route segment;
- (d) selecting at a said node receiving said radio signals a preferred said multi-link route segment, wherein said selection is based on the measured values of said radio

parameter of said received radio signals and the values of said radio parameter included with said routing messages in said received radio signals;

(e) transmitting from said selecting node a radio signal with a routing message identifying said selecting node and said preferred route segment; and

(f) assembling a radio communication route between an originating node and a destination node, said route being assembled by computers in a plurality of said nodes independently of any computer separate from said nodes in said route, and said route including at least one said preferred multi-link route segment.

Claim 36

87. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, create a radio communications route comprising multiple radio links between a plurality of pairs of nodes capable of distribution arbitrarily relative to each other, in accordance with the limitations of claim 36 of the '648 Patent.

88. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, perform each of the limitations of claim 36 of the '684 Patent by:

(a) receiving at a said node at least two radio signals including routing messages transmitted from other said nodes, said signals being received at said node directly from said nodes transmitting said signals without regard to the relative locations of said node receiving said signals and said nodes transmitting said signals, wherein said routing message from each said node has content (i) identifying at least one preferred multi-link route segment to another said node, (ii) including the number of said radio links in said route segment, and (iii) including at least one value of a radio parameter of radio signals associated with said radio links in said route segment;

- (b) measuring at said receiving node values of said radio parameter associated with at least some of said radio signals received by said receiving node;
- (c) storing at said receiving node said measured values of said radio parameter and said routing messages associated with said measured values;
- (d) selecting at a said node receiving said routing messages a preferred said route segment, wherein said selection is based on the measured values of said radio parameter of said received radio signals and the stored values of said radio parameter;
- (e) transmitting from said selecting node a routing message identifying said preferred route segment; and
- (f) assembling a radio communication route between an originating node and a destination node.

89. To the extent required by law, JSDQ has complied with the provisions of 35 U.S.C. § 287.

90. Defendant Firebreak's direct infringement as described above has injured and will continue to injure JSDQ as long as such infringement continues. JSDQ is entitled to recover damages adequate to compensate it for such infringement, but in no event less than a reasonable royalty.

**INFRINGEMENT OF UNITED STATES REISSUE PATENT NO. RE 43,675**

91. JSDQ realleges and incorporates by reference paragraphs 1 through 28, inclusive, as though fully set forth herein.

92. Defendant Firebreak directly infringes at least independent method claim 15 of the '675 Patent through the use, installation and/or maintenance of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system in conjunction with directional radio signals.

93. Moreover, Defendant Firebreak's customers directly infringe at least independent method claim 15 of the '675 Patent through their use of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system in conjunction with directional radio signals.

94. Defendant Firebreak at least indirectly infringes at least independent method claim 15 of the '675 Patent through the manufacture, sale and/or offer for sale of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system.

Claim 15

95. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, provide a radio communication route among individual nodes capable of distribution arbitrarily relative to each other, in accordance with the limitations of claim 15 of the '675 Patent.

96. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, perform each of the limitations of claim 15 of the '675 Patent by:

- (a) establishing radio links between respective pairs of said nodes, at least one said node using a directional radio signal transmitted from said node and received directly by another said node without regard to the relative locations of said nodes;
- (b) measuring a value of a radio parameter of a said directional radio signal received by at least one said node;
- (c) transmitting from said at least one node a radio signal with an associated routing message based on at least one measured value of the radio parameter; and
- (d) assembling a radio communication route between an originating node and a destination node, said route being assembled by computers in a plurality of said nodes using routing messages received by said nodes, wherein said computers in said nodes assemble said route independently of any computer separate from said nodes in said

route, and said route includes at least one route segment with a said node transmitting a directional radio signal.

97. To the extent required by law, JSDQ has complied with the provisions of 35 U.S.C. § 287.

98. Defendant Firebreak's direct and/or indirect infringement as described above has injured and will continue to injure JSDQ as long as such infringement continues. JSDQ is entitled to recover damages adequate to compensate it for such infringement, but in no event less than a reasonable royalty.

**INFRINGEMENT OF UNITED STATES PATENT REISSUE NO. RE 44,607**

99. JSDQ realleges and incorporates by reference paragraphs 1 through 28, inclusive, as though fully set forth herein.

100. Defendant Firebreak directly infringes at least independent method claim 3 of the '607 Patent through the use, installation and/or maintenance of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system in conjunction with directional radio signals.

101. Moreover, Defendant Firebreak's customers directly infringe at least independent method claim 3 of the '607 Patent through their use of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system in conjunction with directional radio signals.

102. Defendant Firebreak at least indirectly infringes at least independent method claim 3 of the '607 Patent through the manufacture, sale and/or offer for sale of the Accused Wireless Routing Systems as implemented in Firebreak's FirePosse system.

Claim 3

103. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, provide at least two radio communication routes among individual nodes capable of distribution arbitrarily relative to each other, in accordance with the limitations of claim 3 of the '607 Patent.

104. The Accused Wireless Routing Systems, as implemented by Defendant Firebreak, perform each of the limitations of claim 3 of the '607 Patent by:

- (a) establishing radio links between respective pairs of said nodes using radio signals transmitted from said nodes and received by other said nodes, wherein at least some of said radio signals include routing messages;
- (b) using a directional radio signal transmitted from one said node in a directional link and received directly by the other said node in said directional link;
- (c) measuring a parameter of radio signals received by at least some of said nodes;
- (d) transmitting from at least some of said nodes radio signals with associated routing messages based on said measured parameter; and
- (e) assembling radio communication routes between at least two originating nodes and at least one destination node, wherein computers in a plurality of said nodes use routing messages received by said nodes to assemble said routes independently of any computer separate from said nodes in said routes and without regard to the relative locations of said nodes in a said route, both said routes including at least one said directional link.

105. To the extent required by law, JSDQ has complied with the provisions of 35 U.S.C. § 287.

106. Defendant Firebreak's direct and/or indirect infringement as described above has injured and will continue to injure JSDQ as long as such infringement continues. JSDQ is entitled to recover damages adequate to compensate it for such infringement, but in no event less than a reasonable royalty.

### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff JSDQ Mesh Technologies LLC respectfully requests this Court to enter judgment against Defendant Digi International, Inc. and Defendant Firebreak Canada Corp. – and against each of their subsidiaries, successors, parents, affiliates, officers, directors, agents, servants, employees, and all persons in active concert or participation with them – granting the following relief:

- A. The entry of judgment in favor of Plaintiff and against Defendants;
- B. An award of damages against Defendants (jointly and severally) adequate to compensate Plaintiff for the infringement that has occurred, but in no event less than a reasonable royalty as permitted by 35 U.S.C. § 284, together with prejudgment interest from the date the infringement began;
- C. A finding that this case is exceptional and an award to Plaintiff of its reasonable attorneys' fees and costs as provided by 35 U.S.C. § 285;
- D. A permanent injunction prohibiting further infringement of the asserted patents;  
and
- E. Such other relief to which Plaintiff is entitled under the law and any other and further relief that this Court or a jury may deem just and proper.

### **JURY DEMAND**

Plaintiff demands a trial on all issues presented in this Complaint.

Dated: December 23, 2015

*Of Counsel:*

Timothy J. Haller  
Daniel R. Ferri  
NIRO, HALLER & NIRO  
181 West Madison Street, Suite 4600  
Chicago, IL 60602  
Phone: (312) 236-0733  
Fax: (312) 236-3137  
haller@nshn.com  
dferri@nshn.com

Gabriel I. Opatken  
NOBLE IP LLC  
418 North Noble Street, Suite 4  
Chicago, IL 60642  
Phone: (773) 648-5433  
gabriel@nobleipllc.com

Respectfully submitted,

*/s/ George Pazuniak*

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George Pazuniak  
O'KELLY & ERNST, LLC  
901 North Market Street, Suite 1000  
Wilmington, DE 19801  
Phone: (302) 478-4230  
Fax: (302) 295-2873  
gp@del-iplaw.com

*Attorneys for Plaintiff, JSDQ Mesh  
Technologies LLC*