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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ENTROPIC COMMUNICATIONS, LLC, Plaintiff, v. DISH NETWORK CORPORATION; DISH NETWORK LLC; DISH NETWORK SERVICE, LLC; AND DISH NETWORK CALIFORNIA SERVICE CORPORATION, Defendants.	Case No. 2:23-cv-01043 **ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff, Entropic Communications, LLC ("Entropic"), files this complaint for patent infringement against DISH Network Corporation, DISH Network LLC, DISH Network Service, LLC, and DISH Network California Service Corporation (collectively "DISH") and in support thereof alleges as follows:

1. Around the turn of the millennium, cable and satellite providers were eager to deploy new and improved services, but they faced a big problem. The providers needed a high-speed data network inside buildings to deliver those services to various rooms. With existing technology, this meant installing new cabling inside each premises to carry the network. Aside from the costly materials themselves, technicians would be forced to spend hours planning the work, cutting and drilling into walls, and fishing cables throughout a building, all while doing so in ways customers might tolerate. The costs would run into the billions of dollars.

2. A group of inventors had a vision: what if they could repurpose the already-existing coaxial cables common in buildings to do the job? The challenges were daunting. Existing coaxial cabling was never intended to work this way. The mess of existing coax topologies in homes and businesses was a formidable barrier. The splitter devices used to distribute legacy TV obstructed signals from room-to-room. Making it all work would require nothing less than the invention of a new networking architecture founded upon a host of new technologies.

3. They succeeded. The inventors' company, called Entropic Communications Inc. ("Entropic Inc."), made the technology work. The company was awarded a portfolio of patents for the advances that made it possible. And the company spearheaded forming a new industry standard for the architecture, commonly called MoCA.

4. Today, MoCA is the backbone of data and entertainment services for tens of millions of customers. MoCA is widely used by every major provider in the industry, saving them billions of dollars in costs and avoiding the hassle of re-wiring for providers and customers alike. Unfortunately, the defendants take advantage of

MoCA without paying appropriate licensing fees for the technology. This lawsuit is about redressing that wrong.

5. This is a civil action arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, including specifically 35 U.S.C. § 271, based on the defendants' infringement of U.S. Patent Nos. 7,295,518 (the "'518 Patent"), 7,594,249 (the "'249 Patent") (together the "Network Patents"); U.S. Patent Nos. 7,889,759 (the "'759 Patent"), 8,085,802 (the "'802 Patent") (together the "Node Admission Patents"); U.S. Patent Nos. 9,838,213 (the "'213 Patent"), 10,432,422 (the "'422 Patent") (together the "PQoS Flows Patents"); U.S. Patent Nos. 8,631,450 (the "'450 Patent"), 8,621,539 (the "'539 Patent") (together the "Link Maintenance Patents"); U.S. Patent No. 8,320,566 (the "'0,566 Patent" or the "OFDMA Patent"); U.S. Patent No. 10,257,566 (the "'7,566 Patent" or the "Network Coordinator Patent"); U.S. Patent No. 8,228,910 (the "'910 Patent" or the "Packet Aggregation Patent"); U.S. Patent No. 8,363,681 (the "'681 Patent" or the "Clock Sync Patent") (collectively all of the patents are referred to herein as the "Patents-in-Suit" or "Asserted Patents"). These patents incorporate various elements of technology set forth in the Multimedia over Coax Alliance standards (the "MoCA" standards)[1].

THE PARTIES

6. Entropic is a Delaware limited liability company with an office at 7150 Preston Road, Suite 300, Plano, Texas 75024.

7. Entropic is the owner by assignment to all right, title, and interest to the Patents-in-Suit. Entropic is the successor-in-interest for the Patents-in-Suit.

8. Upon information and belief, DISH Network Corporation is a Nevada corporation, with a principal place of business at 9601 S. Meridian Boulevard, Englewood, Colorado 80112.

[1] Each version of the MoCA standards is referred to herein as "MoCA 1.0," "MoCA 1.1," and "MoCA 2.0."

9. DISH Network Corporation has as its registered agent in California, Corporation Service Company d/b/a CSC - Lawyers Incorporating Service Company, located at 2710 Gateway Oaks Dr., Suite 150N, Sacramento, California 95833.

10. Upon information and belief, DISH Network LLC is a Colorado Limited Liability Company, with a principal place of business at 9601 S. Meridian Boulevard, Englewood, Colorado 80112.

11. DISH Network LLC has as its registered agent in California, Corporation Service Company d/b/a CSC - Lawyers Incorporating Service Company, located at 2710 Gateway Oaks Dr., Suite 150N, Sacramento, California 95833.

12. Upon information and belief, DISH Network Service, LLC is a Colorado Limited Liability Company, with a principal place of business at 9601 S. Meridian Boulevard, Englewood, Colorado 80112.

13. Upon Information and belief, DISH Network California Service Corporation ("DISH California") is a wholly owned subsidiary of DISH Network LLC, and is a Colorado Corporation with its principal place of business at 9601 S. Meridian Boulevard, Englewood, Colorado 80112.

14. DISH California has as its registered agent in California, Corporation Service Company d/b/a CSC - Lawyers Incorporating Service Company, located at 2710 Gateway Oaks Dr., Suite 150N, Sacramento, California 95833.

15. As further alleged herein, this Court has personal jurisdiction over the defendants, and venue is proper in this Judicial District.

PRESUIT DISCUSSIONS

16. Prior to filing this Complaint, Entropic sent a communication by electronic means to DISH, which was sent on March 9, 2022 in an attempt to engage DISH and/or its agents in good faith licensing discussions regarding Entropic's patent portfolio, including the Patents-in-Suit. On December 23, 2022 and January 2, 2023, Entropic sent DISH another communication by both physical and electronic means regarding a separate license to Entropic's patents for the field of the standardized

networking technology commonly called MoCA, and also seeking to discuss with DISH a typical non-disclosure agreement in order to share such information. DISH has not responded to any of these communications.

ENTROPIC'S LEGACY AS AN INNOVATOR

17. Entropic Inc., the predecessor-in-interest to Entropic as to the Patents-in-Suit, was founded in San Diego, California in 2001 by Dr. Anton Monk, Itzhak Gurantz, Ladd El Wardani and others. Entropic Inc. was exclusively responsible for the development of the initial versions of the MoCA standards, including MoCA 1.0, ratified in 2006, MoCA 1.1, ratified in 2007, and was instrumental in the development of MoCA 2.0, ratified in 2010. It also developed Direct Broadcast Satellite ("DBS") Outdoor Unit ("ODU") single wire technology, and System-on-Chip ("SoC") solutions for set-top boxes (STBs) in the home television and home video markets.

18. Under the technical guidance of Dr. Monk, Entropic Inc. grew to be publicly listed on the NASDAQ in 2007. After the public listing, the company acquired RF Magic, Inc. in 2007, a company specializing in DBS ODU technology and related hardware.

19. Additional growth between 2007 and 2015 bolstered the technical expertise of Entropic Inc. with respect to signal acquisition, stacking, filtering, processing, and distribution for STBs and cable modems.

20. For years, Entropic Inc. pioneered innovative networking technologies, as well as television and internet related technologies. These technologies simplified the installation required to support wideband reception of multiple channels for demodulation, improved home internet performance, and enabled more efficient and responsive troubleshooting and upstream signal management for cable providers. These innovations represented significant advances in the field, simplified the implementation of those advances, and reduced expenses for providers and customers alike.

21. In 2015, MaxLinear, Inc. ("MaxLinear")—a leading provider of radio-frequency, analog, digital, and mixed-signal semiconductor solutions—acquired Entropic Inc., and the pioneering intellectual property developed by Dr. Monk and his team.

22. In 2021, Plaintiff Entropic was established and MaxLinear transferred to Entropic a portfolio of intellectual property representing the Entropic and MaxLinear innovation in the cable and satellite services markets.

MOCA® AND THE MOCA® STANDARDS

23. MoCA is an alliance of companies that operate in the field of technology associated with providing multimedia services, such as television operators, consumer electronics, manufacturers, semiconductor vendors, and original equipment manufacturers (OEMs). MoCA has developed and published a standard governing the operation of devices using existing coaxial cable.

24. By the year 2000, cable and satellite providers were facing the problem of distributing services as data between the various locations in a dwelling where desired by customers. This would require a full digital network, capable of communication between any node in the network, in any direction. Traditional computer networking such as Ethernet provided some of the functionality, but the cabling necessary for Ethernet or the like was (and is) very expensive to install.

25. At the time, millions of dwellings and businesses across the United States often already had existing coaxial cable ("coax") deployed throughout the premises to provide traditional television programming services to various rooms. However, this cabling was not designed or envisaged as a two-way and point-to-point network, nor a network capable of carrying high speed digital data traffic. The coax was deployed as a "tree" topology which simply splits the signal coming from an external source (the cable or satellite feed) for distribution of video content to the various locations on the premises in the "downlink" direction only. Thus, it was impossible to simply use this existing cable to make the new point-to-point high-

quality network connections between devices located on the premises desired by the cable and satellite providers.

26. Entropic Inc. tackled the problem and managed what was considered unlikely or impossible—to make a high-speed point-to-point digital communication network using existing coax installations. This required substantial inventive effort that is embodied by the Patents-in-Suit. For example, one of the significant challenges faced by Entropic Inc. was the varying nature of the exact topology of existing on-premises coax infrastructure that a network architecture would have to handle. The topology and types of devices (such as passive or active splitters, their characteristics, etc.) greatly influence the environment for signals transferred from node to node.

27. Entropic Inc. later founded an organization to standardize the networking architecture and promote its use. This became known as the Multimedia over Coax Alliance, or "MoCA." That acronym has also come into common usage as the name given to the networking architecture itself—now embodied in the MoCA standards. The technology defined in the MoCA standards enables the point-to-point high-quality network so badly needed by cable and satellite providers. Crucially it also provides the operators the ability to deploy their services without the enormously costly effort of installing Ethernet or similar cabling to carry the data.

28. There have been several iterations of the MoCA standards, beginning with MoCA 1.0, which was ratified in 2006. Since 2006, MoCA has ratified subsequent versions of the MoCA standards, including MoCA 1.1 and MoCA 2.0.

29. The MoCA standards ensure network robustness along with inherent low packet error rate performance and very low latency that is relatively independent of network load. The logical network model of the MoCA network is significantly different from the underlying on-premises legacy coaxial network. For example, due to the effects of splitter jumping and reflections, the channel characteristics for a link

between two MoCA nodes may be dramatically different from a link between any other two MoCA nodes.

30. **The Network Patents (the ’518 and ’249 Patents)** and the **OFDMA Patent (the ’0,566 Patent)** describe MoCA networks, including how data communicated via MoCA networks is modulated by full-mesh pre-equalization techniques known as Adaptive Constellation Multitone (ACMT), a form of OFDM modulation.

31. As described in the **Network Coordinator Patent (the ’7,566 Patent) and the Node Admission Patents (the ’759 and ’802 Patents)**, a particular MoCA node, known as a Network Coordinator, controls the admission of nodes to the MoCA Network. The Network Coordinator sends out a variety of data packets using a modulation profile that all the MoCA nodes can receive. For broadcast and multicast transmissions, a broadcast bitloading profile can be calculated and used for each node receiving the transmissions in the MoCA network.

32. MoCA nodes use a modulation profile for every point-to-point link. A variety of probe messages are transmitted by the MoCA nodes and used to create modulation profiles, optimize performance, and allow for various calibration mechanisms. In order to maintain network performance as network conditions change, the MoCA standards define techniques to maintain optimized point-to-point and broadcast links between all of the MoCA nodes. The **Link Maintenance Patents (the ’450 and ’539 Patents)** describe link maintenance operations involving the processing of probe messages at regular intervals to recalculate parameters such as modulation profile and transmit power.

33. This MoCA network allows for devices (MoCA nodes) connected to a MoCA network to communicate data formatted in a variety of formats. **The Packet Aggregation Patent (the ’910 Patent)**, for example, describes the communication of data packets in an Ethernet format, via the on-premises coaxial network without the need to deploy a separate physical network on the premises.

34. **The Clock Sync Patent (the '681 Patent)** describes the synchronization of the clocks of each MoCA node in the network with a master clock provided by the Network Coordinator as these transmissions are fully coordinated.

35. The MoCA standards and the **PQoS Flow Patents (the '213 and '422 Patents)** describe how particular MoCA nodes can request additional network resources and/or transmission opportunities. This allows the MoCA node to transfer data more quickly across the MoCA network by borrowing resources that have been scheduled to other MoCA nodes.

36. These technological developments enable users to avoid the significant costs associated with rewiring their home or business in order to deploy a number of devices throughout the premises. Further, these technological developments allow services requiring reliable, high-speed data and video communications to be provided to the user while utilizing the on-premises coaxial network already present in the user's home or business.

37. Entropic Inc. spearheaded MoCA, and its founders are the inventors of several patents that cover various mandatory aspects of the MoCA standards. In other words, by conforming to the MoCA standards, a product necessarily practices those patents, either by itself, as a part of a MoCA-compliant system, or in the method in which it operates.

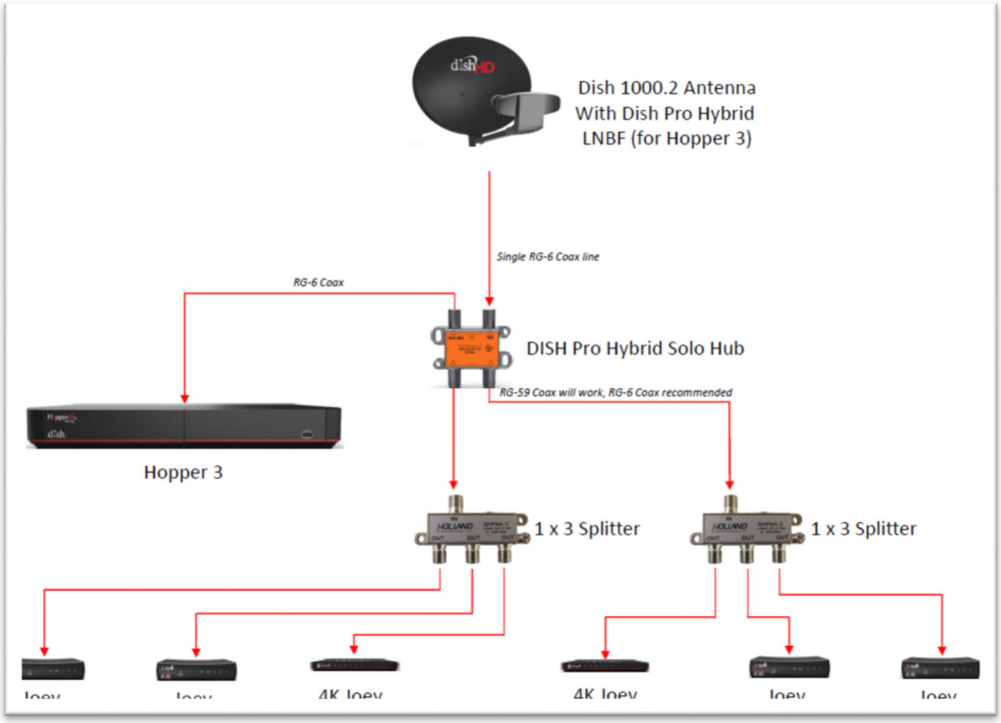
THE ACCUSED MOCA INSTRUMENTALITIES AND ACCUSED SERVICES

38. DISH utilizes various instrumentalities, deployable as nodes in a MoCA-compliant coaxial cable network.

39. DISH deploys the instrumentalities to, *inter alia*, provide a whole-premises DVR network over an on-premises coaxial cable network, with DISH "Hopper" and "Joey" nodes operating with data connections compliant with MoCA 1.0, 1.1, and/or 2.0. Such components are referred to herein as the "Accused MoCA Instrumentalities." The MoCA-compliant services offered by DISH employing the

Accused MoCA Instrumentalities, including the operation of a MoCA-compliant network in which such instrumentalities are deployed, are referred to herein as the "Accused Services."

40. An exemplary illustration of the topology of various Accused MoCA Instrumentalities in a DISH deployment is pictured below.[2]



41. Upon information and belief, DISH instrumentalities including the DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, form networks over a coaxial cable network in accordance with MoCA 1.0 and/or 1.1.

42. Upon information and belief, DISH instrumentalities including the DISH Hopper 3, DISH 4K Joey, and DISH Joey 3 form networks over a coaxial cable network in accordance with MoCA 1.0, 1.1, and/or 2.0.

[2] This is an example of the products used in the infringing network and is not intended to limit the scope of products accused of infringement.

43. DISH's business includes the provision of Accused Services to its customers, by means of Accused MoCA Instrumentalities.

44. Most commonly, the Accused Services are offered and provided in exchange for fees paid to DISH.

45. DISH itself also sometimes tests and demonstrates the Accused Services, by means of Accused MoCA Instrumentalities.

46. In some deployments of the Accused MoCA Instrumentalities and the performance of the Accused Services, DISH uses one or more of: DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, DISH Super Joey, DISH Hopper 3, DISH 4K Joey, and/or DISH Joey 3 to provide signals, programming and content utilizing a data connection carried over a coaxial cable network in accordance with the MoCA standards.

47. Upon information and belief, in 2012, EchoStar Corporation was the manufacturer of DISH's Hopper and Joey products.

48. In or about January 2012, Michael Hawkey, vice president of sales and Marketing for EchoStar Corporation announced at the Consumer Electronics Show (CES) that it "chose the MoCA technology" for use in DISH's Hopper and Joey products "to allow the best bandwidth and use of quality of service that we could get a connected system solution."[3]

49. Upon information and belief, Mr. Hawkey was authorized to speak on Echostar's behalf at CES 2012.

50. Upon information and belief, DISH subsequently acquired EchoStar's digital set-top box business in or about 2017 and brought manufacturing of its set-top boxes, including the "Hopper" and the "Joey," in-house.

[3] https://vimeo.com/35044366

51. DISH was aware of its deployment and use of MoCA at least as early the later of its involvement with MoCA and six years prior to the filing of this complaint.

52. Upon information and belief, DISH was aware that Entropic Inc. invented technology underlying the MoCA standards. Accordingly, such Entropic, Inc. technology would be incorporated into any instrumentality compliant with the MoCA standards.

53. Upon information and belief, DISH and/or its subsidiaries was a member of the Board of the MoCA Alliance from 2017 to 2019, which provided DISH full access to all then-existing versions of the MoCA standards.

54. Upon information and belief, DISH was aware that Entropic Inc. intended to and did pursue patent protection for technology related to MoCA, at least as early the later of its involvement with MoCA and the issue date of the Asserted Patents.

55. When DISH obtained, deployed and/or used instrumentalities with MoCA functionality not provided by Entropic Inc., DISH knew or should have known that Entropic Inc. had provided no authorization for such activities, for example by a patent license.

56. Upon information and belief, when DISH obtained, deployed and/or used instrumentalities with MoCA functionality not provided by Entropic Inc., DISH failed to investigate whether Entropic Inc. authorized the use of Entropic Inc.'s patents for such activity.

57. Alternatively, upon information and belief, when DISH obtained, deployed and/or used instrumentalities with MoCA functionality not provided by Entropic Inc., DISH knew the use of Entropic Inc.'s patents for such activity was not authorized by Entropic Inc.

JURISDICTION AND VENUE

58. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a) because the claims herein arise under the patent laws of the United States, 35 U.S.C. § 1 et seq., including 35 U.S.C. § 271.

59. Venue in this Judicial District is proper under 28 U.S.C. § 1400(b) because DISH has regular and established places of business in this Judicial District. The defendants, by themselves and/or through their agents have committed acts of patent infringement within the State of California and in this Judicial District by making, importing, using, selling, offering for sale, and/or leasing the Accused MoCA Instrumentalities, as well as Accused Services employing the Accused MoCA Instrumentalities, that comply with one or more of MoCA 1.0, 1.1, and/or 2.0.

60. This Court currently has before it another case involving the same parties that also concerns DISH providing satellite television services to its customers, including those in this Judicial District. *Entropic Comm's. LLC v. DISH Network Corp.*, Case No. 2:22-cv-07959-JWH-(JEMx) (the "*DISH I CDCA*") was transferred to this Court from the Eastern District of Texas (*Entropic Comm's, LLC v. Dish Network Corp., Dish Network LLC, Dish Network Service LLC*, Case No. 2:22-cv-00076 JRG ("*DISH I EDTX*") on October 24 2022. *See DISH I CDCA*, Dkt. No. 21.

61. In the order granting Entropic's motion to transfer *DISH I EDTX* to this Judicial District, the district court for the Eastern District of Texas determined that this Court has personal jurisdiction over Defendants DISH Network Corporation, DISH Network Service, LLC, and DISH Network LLC. *See DISH I CDCA*, Dkt. No. 21 at 6 ("DISH does not dispute that CDCA has subject matter jurisdiction over the instant claims, nor does it dispute that it is subject to personal jurisdiction in CDCA").

62. The Court has general personal jurisdiction over DISH California because upon information and belief, and based on the conclusions of the district court, DISH Network Service LLC conducts systematic and regular business within

the State of California under the DISH California name. *See DISH I CDCA*, Dkt. No. 21 at 8. Such contacts include, but are not limited to managing DISH warehouses and employing DISH employees within the State of California, and this Judicial District.

63. The Court has specific personal jurisdiction over DISH because DISH has committed acts of infringement within the State of California and this Judicial District through, for example, making infringing networks using the Accused MoCA Instrumentalities, and using the Accused MoCA Instrumentalities to provide the Accused Services in the State of California and this Judicial District.

64. The Accused Services are available to California consumers for subscription online from the DISH website.

65. DISH operates and maintains a nationwide television and data network through which it sells, leases, and offers for sale products including, the Accused MoCA Instrumentalities and Services, to businesses, consumers, and government agencies, including, within this Judicial District.

66. DISH offers various telecommunication services throughout the United States and in this Judicial District. Furthermore, as determined by the district court, DISH Network Corporation, DISH Network Service, LLC, and DISH Network LLC, "have a physical place in [this Judicial District] from which their business is carried out." *See DISH I CDCA*, Dkt. No. 21, at 8.

67. Upon information and belief, DISH Network, Corporation, DISH Network LLC, and/or DISH Network Service, LLC, collectively, by themselves and/or through their agent DISH California, operates its businesses through *inter alia* offices, warehouses, storefronts, and/or other operational locations within this Judicial District, including, for example, at 3226 W. 131st St., Hawthorne, California, 90250; 4223 Fairgrounds Street, Riverside, California 92501; 2602 South Halladay Street, Santa Ana, California; and 1500 Potrero Avenue, South El Monte, California, 91733. DISH holds out these locations as its own through the use of branding both on the locations themselves, and on the vehicles that are deployed from such

locations. Likewise, DISH installation technicians employed by DISH California carry business cards that identify DISH as their employer.

68. Upon information and belief, the Accused Services are provided through and using the Accused MoCA Instrumentalities.

69. DISH has adopted and ratified the DISH-branded locations identified in this Judicial District. The DISH website advertises DISH service packages available from DISH-authorized retailers in this Judicial District, and prospective employees can find DISH job listings in this Judicial District. Furthermore, DISH's main website has a section in its privacy statement that is made "in accordance with the California Consumer Privacy Act," which demonstrates that DISH is purposefully holding itself out as providing products and services in California.

70. Venue is further proper because DISH has committed and continues to commit acts of patent infringement in this Judicial District, including, making, using, importing, offering to sell, and/or selling Accused Services and Accused MoCA Instrumentalities, and MoCA networks, and thereafter providing Accused Services in this Judicial District, including by Internet sales and sales via retail and wholesale stores. Furthermore, for example, DISH deploys Accused MoCA Instrumentalities to many thousands of locations (customer premises) in this Judicial District and subsequently, by means of those Accused MoCA Instrumentalities, uses the claimed inventions at those locations in this Judicial District. DISH infringes by inducing and contributing to acts of patent infringement in this Judicial District and/or committing at least a portion of any other infringements alleged herein in this Judicial District.

71. DISH continues to conduct business in this Judicial District, including the acts and activities described in the preceding paragraph.

COUNT I

(Infringement of the '518 Patent)

72. Entropic incorporates by reference each allegation of Paragraphs 1 through 71.

73. The ’518 Patent duly issued on November 13, 2007 from an application filed December 18, 2002, an application filed August 29, 2002 and, *inter alia*, a provisional application filed August 30, 2001.

74. Entropic owns all substantial rights, interest, and title in and to the ’518 Patent, including the sole and exclusive right to prosecute this action and enforce the ’518 Patent against infringers, and to collect damages for all relevant times.

75. The ’518 Patent is one of the Network Patents, and is generally directed to, *inter alia,* broadband local area data networks using on-premises coaxial cable wiring for interconnection of devices. Probe messages can be “sent between devices to characterize the communication channel and determine optimum bit loading” for communicating data between devices. ’518 Patent, Abstract. The ’518 Patent has four claims, of which claims 1 and 4 are independent. At least these claims of the ’518 Patent are directed to the creation of the MoCA network using the on-premises coaxial cable wiring. A true and accurate copy of the ’518 Patent is attached hereto as Exhibit A.

76. The ’518 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

77. The ’518 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

78. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

79. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

80. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

81. As set forth in the attached non-limiting claim chart (Exhibit B), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 1.0, 1.1, and/or 2.0 necessarily infringes at least claim 1 of the ’518 Patent.

82. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

83. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

84. The Accused MoCA Instrumentalities are compliant with the provisions of MoCA 1.0, 1.1., and/or 2.0, as described in the ’518 Patent claim chart, Exhibit B.

85. DISH therefore directly infringes at least claim 1 of the ’518 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

86. DISH directly infringes at least claim 1 of the ’518 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services.

87. DISH directly infringes at least claim 1 of the ’518 Patent by making, importing, selling, and/or offering for sale the Accused MoCA Instrumentalities in connection with providing the Accused Services over an on-premises coaxial cable network, which meets each and every limitation of at least claim 1 of the ’518 Patent.

88. DISH had knowledge of ’518 Patent no later than its receipt of Entropic’s communications sent to DISH on March 9, 2022.

89. DISH has been aware that it infringes the ’518 Patent since at least as early as receipt of Entropic’s communications sent to DISH on March 9, 2022.

90. DISH has known of or has been willfully blind to the ’518 Patent since before the March 9, 2022 communications from Entropic.

91. The ’518 Patent issued while or before DISH was a member of MoCA.

92. Because of DISH’s knowledge of Entropic Inc.’s work and contributions related to MoCA technology, DISH had knowledge of the ’518 Patent before March 9, 2022 or was willfully blind to its existence.

93. The claims of the ’518 Patent are essential to practicing at least MoCA standards versions 1.0, 1.1, and/or 2.0.

94. DISH knew, or was willfully blind to the fact that the technology of the ’518 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the ’518 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.0, 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the ’518 Patent.

95. Since learning of the ’518 Patent and its infringing activities, DISH has failed to cease its infringing activities.

96. DISH’s customers and subscribers directly infringe at least claim 1 of the ’518 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

97. DISH actively induces its customers’ and subscribers’ direct infringement by providing the Accused Services and associated support.

98. For example, DISH actively induces infringement of at least claim 1 of the ’518 Patent by providing the Accused MoCA Instrumentalities to DISH customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities in a manner that infringes the ’518 Patent.

99. DISH aids, instructs, supports, and otherwise acts with, the intent to cause an end user to make and/or use the MoCA network and/or use the Accused

MoCA Instrumentalities in a manner that infringes each and every element of at least claim 1 of the ’518 Patent.

100. Additionally, DISH contributes to the customers’ and subscribers’ direct infringement. DISH provides at least the Accused MoCA Instrumentalities that create and are at least substantially all of a MoCA network to be used to infringe at least claim 1 of the ’518 Patent.

101. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user necessarily directly infringes at least claim 1 of the ’518 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

102. DISH’s inducement of, and contribution to, the direct infringement of at least claim 1 of the ’518 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH’s provision of the Accused Services.

103. DISH’s infringement of the ’518 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic’s rights under the patent.

104. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH’s infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

105. Upon information and belief there is no duty to mark any instrumentality with the ’518 Patent in accordance with 35 U.S.C. § 287.

COUNT II

(Infringement of the ’249 Patent)

106. Entropic incorporates by reference each allegation of Paragraphs 1 through 105.

107. The ’249 Patent duly issued on September 22, 2009 from an application filed July 21, 2001 and a provisional application filed May 4, 2001.

108. Entropic owns all substantial rights, interest, and title in and to the ’249 Patent, including the sole and exclusive right to prosecute this action and enforce the ’249 Patent against infringers, and to collect damages for all relevant times.

109. The ’249 Patent is one of the Network Patents, and is generally directed to, *inter alia*, broadband cable networks that allow devices to communicate directly over the existing coaxial cable with its current architecture without the need to modify the existing cable infrastructure. Each device communicates with the other devices in the network and establishes parameters to overcome channel impairments in the coaxial cable network. ’249 Patent, col. 3, lines 11–22. The ’249 Patent has 17 claims, of which claims 1, 5, and 10 are independent. At least these claims of the ’249 Patent are directed to the creation of the MoCA network using the on-premises coaxial cable wiring. A true and accurate copy of the ’249 Patent is attached hereto as Exhibit C.

110. The ’249 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

111. The ’249 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

112. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

113. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

114. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

115. As set forth in the attached non-limiting claim chart (Exhibit D), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 1.0, 1.1, and/or 2.0 necessarily infringes at least claim 10 of the ’249 Patent.

116. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

117. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

118. The Accused MoCA Instrumentalities are compliant with MoCA 1.0, 1.1., and/or 2.0, as described in the ’249 Patent claim chart, Exhibit D.

119. DISH therefore directly infringes at least claim 10 of the ’249 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

120. DISH directly infringes at least claim 10 of the ’249 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services.

121. DISH directly infringes at least claim 10 of the ’249 Patent by making, importing, selling, and/or offering for sale the Accused MoCA Instrumentalities in connection with providing the Accused Services over an on-premises coaxial cable network, which meets each and every limitation of at least claim 10 of the ’249 Patent.

122. DISH had knowledge of the ’249 Patent no later than its receipt of Entropic’s communications sent to DISH on March 9, 2022.

123. DISH has been aware that it infringes the ’249 Patent no later than its receipt of Entropic’s communications sent to DISH on March 9, 2022.

124. DISH has known of or has been willfully blind to the ’249 Patent since before the March 9, 2022 communications from Entropic.

125. The ’249 Patent issued while or before DISH was a member of MoCA.

126. Because of DISH’s knowledge of Entropic Inc.’s work and contributions related to MoCA technology, DISH had knowledge of the ’249 Patent before March 9, 2022 or was willfully blind to its existence.

127. The claims of the ’249 Patent are essential to practicing at least MoCA standards versions 1.0, 1.1, and/or 2.0.

128. DISH knew, or was willfully blind to the fact that the technology of the ’249 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the ’249 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.0, 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the ’249 Patent.

129. Since learning of the ’249 Patent and its infringing activities, DISH has failed to cease its infringing activities.

130. DISH’s customers and subscribers directly infringe at least claim 10 of the ’249 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

131. DISH actively induces its customers’ and subscribers’ direct infringement by providing the Accused Services and associated support.

132. For example, DISH actively induces infringement of at least claim 10 of the ’249 Patent by providing the Accused MoCA Instrumentalities to DISH customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities in a manner that infringes the ’249 Patent.

133. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities in a manner that infringes every element of at least claim 10 of the '249 Patent.

134. Additionally, DISH contributes to the customers' and subscribers' direct infringement. DISH provides at least the Accused MoCA Instrumentalities that create and are at least substantially all of a MoCA network to be used to infringe at least claim 10 of the '249 Patent.

135. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user necessarily directly infringes at least claim 10 of the '249 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

136. DISH's inducement of, and contribution to, the direct infringement of at least claim 10 of the '249 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH's provision of the Accused Services.

137. DISH's infringement of the '249 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

138. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

139. Entropic is aware of no obligation to mark any instrumentality with the '249 Patent in accordance with 35 U.S.C. § 287.

COUNT III

(Infringement of the ’759 Patent)

140. Entropic incorporates by reference each allegation of Paragraphs 1 through 139.

141. The ’759 Patent duly issued on February 15, 2011 from an application filed July 12, 2004, an application filed August 29, 2002, and, *inter alia* a provisional application filed August 30, 2001.

142. Entropic owns all substantial rights, interest, and title in and to the ’759 Patent, including the sole and exclusive right to prosecute this action and enforce the ’759 Patent against infringers, and to collect damages for all relevant times.

143. The ’759 Patent is one of the Node Admission Patents, and is generally directed to, *inter alia*, broadband cable networks that allow devices to communicate directly over the existing coaxial cable with its current architecture without the need to modify the existing cable infrastructure. Each device communicates with the other devices in the network and establishes a common modulation scheme between the devices in the network. ’759 Patent, Abstract. The ’759 Patent has 22 claims, of which claims 1–7, 14, 20–22 are independent. At least these claims of the ’759 Patent are directed to a variety of techniques for establishing a modulation scheme for communications between nodes in the MoCA network. A true and correct copy of the ’759 Patent is attached hereto as Exhibit E.

144. The ’759 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

145. The ’759 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

146. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

147. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

148. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

149. As set forth in the attached non-limiting claim chart (Exhibit F), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 1.0, 1.1, and/or 2.0 necessarily infringes at least claim 2 of the '759 Patent.

150. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

151. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

152. The Accused MoCA Instrumentalities are compliant with MoCA 1.0, 1.1., and/or 2.0, as described in the '759 Patent claim chart, Exhibit F.

153. DISH therefore directly infringes at least claim 2 of the '759 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

154. DISH sells the Accused Services to its customers and subscribers for a fee. Pursuant to the sale of these services, DISH uses the method recited in at least claim 2 of the '759 Patent to provide the Accused Services to DISH's customers and subscribers through the Accused MoCA Instrumentalities. DISH is therefore engaging in the infringing use of at least claim 2 of the '759 Patent in order to generate revenue from its customers and subscribers.

155. DISH directly infringes at least claim 2 of the '759 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services.

156. DISH had knowledge of the '759 Patent no later than its receipt of Entropic's communications sent to DISH on March 9, 2022.

157. DISH has been aware that it infringes the '759 Patent no later than its receipt of Entropic's communications sent to DISH on March 9, 2022.

158. DISH has known of or has been willfully blind to the '759 Patent since before the March 9, 2022 communications from Entropic.

159. The '759 Patent issued while or before DISH was a member of MoCA.

160. Because of DISH's knowledge of Entropic Inc.'s work and contributions related to MoCA technology, DISH had knowledge of the '759 Patent before March 9, 2022 or was willfully blind to its existence.

161. The claims of the '759 Patent are essential to practicing at least MoCA standards versions 1.0, 1.1, and/or 2.0.

162. DISH knew, or was willfully blind to the fact that the technology of the '759 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the '759 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.0, 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the '759 Patent.

163. Since learning of the '759 Patent and its infringing activities, DISH has failed to cease its infringing activities.

164. DISH's customers and subscribers directly infringe at least claim 2 of the '759 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

165. DISH actively induces its customers' and subscribers' direct infringement by providing the Accused Services and associated support.

166. For example, DISH actively induces infringement of at least claim 2 of the '759 Patent by providing the Accused MoCA Instrumentalities to DISH

customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities to infringe the '759 Patent.

167. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities to infringe every element of at least claim 2 of the '759 Patent.

168. Additionally, DISH contributes to the customers' and subscribers' direct infringement. DISH provides at least the Accused MoCA Instrumentalities that create and are at least substantially all of a MoCA network to be used to infringe at least claim 2 of the '759 Patent.

169. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user necessarily directly infringes at least claim 2 of the '759 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

170. DISH's inducement of, and contribution to, the direct infringement of at least claim 2 of the '759 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH's provision of the Accused Services.

171. DISH's infringement of the '759 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

172. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

173. Upon information and belief, there is no duty to mark any instrumentality with the '759 Patent in accordance with 35 U.S.C. § 287.

COUNT IV

(Infringement of the ’802 Patent)

174. Entropic incorporates by reference each allegation of Paragraphs 1 through 173.

175. The ’802 Patent duly issued on December 27, 2011 from an application filed December 2, 2005, and a provisional application filed December 2, 2004.

176. Entropic owns all substantial rights, interest, and title in and to the ’802 Patent, including the sole and exclusive right to prosecute this action and enforce the ’802 Patent against infringers, and to collect damages for all relevant times.

177. The ’802 Patent is one of the Node Admission Patents, and is generally directed to, *inter alia,* broadband cable networks that allow devices to communicate directly over the existing coaxial cable with its current architecture without the need to modify the existing cable infrastructure. Each device communicates with the other devices in the network and establishes the best modulation and other transmission parameters that is optimized and periodically adapted to the channel between each pair of devices. ’802 Patent, col. 4, lines 7–24. The ’802 Patent has four claims, all of which are independent. At least these claims of the ’802 Patent are directed to a variety of techniques for establishing a modulation scheme for communications between nodes in the MoCA network. A true and accurate copy of the ’802 Patent is attached hereto as Exhibit G.

178. The ’802 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

179. The ’802 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

180. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

181. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

182. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

183. As set forth in the attached non-limiting claim chart (Exhibit H), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 1.0, 1.1, and/or 2.0 necessarily infringes at least claim 3 of the '802 Patent.

184. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

185. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

186. The Accused MoCA Instrumentalities are compliant with MoCA 1.0, 1.1., and/or 2.0, as described in the '802 Patent claim chart, Exhibit H.

187. DISH therefore directly infringes at least claim 3 of the '802 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

188. DISH sells the Accused Services to its customers and subscribers for a fee. Pursuant to the sale of these services, DISH uses the method recited in at least claim 3 of the '802 Patent to provide the Accused Services to DISH's customers and subscribers through the Accused MoCA Instrumentalities. DISH is therefore engaging in the infringing use of at least claim 3 of the '802 Patent in order to generate revenue from its customers and subscribers.

189. DISH directly infringes at least claim 3 of the '802 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services and/or the Accused MoCA Instrumentalities.

190. DISH had knowledge of the '802 Patent no later than its receipt of Entropic's communications sent to DISH on March 9, 2022.

191. DISH has been aware that it infringes the '802 Patent no later than its receipt of Entropic's communication sent to DISH on March 9, 2022.

192. DISH has known of or has been willfully blind to the '802 Patent since before the March 9, 2022 communications from Entropic.

193. The '802 Patent issued while or before DISH was a member of MoCA.

194. Because of DISH's knowledge of Entropic Inc.'s work and contributions related to MoCA technology, DISH had knowledge of the '802 Patent before March 9, 2022 or was willfully blind to its existence.

195. The claims of the '802 Patent are essential to practicing at least MoCA standards versions 1.0, 1.1, and/or 2.0.

196. DISH knew, or was willfully blind to the fact that the technology of the '802 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the '802 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.0, 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the '802 Patent.

197. Since learning of the '802 Patent and its infringing activities, DISH has failed to cease its infringing activities.

198. DISH's customers and subscribers directly infringe at least claim 3 of the '802 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

199. DISH actively induces its customers' and subscribers' direct infringement by providing the Accused Services and associated support.

200. For example, DISH actively induces infringement of at least claim 3 of the '802 Patent by providing the Accused MoCA Instrumentalities to DISH

customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities to infringe the '802 Patent.

201. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities to infringe every element of at least claim 3 of the '802 Patent.

202. Additionally, DISH contributes to the customers' and subscribers' direct infringement. DISH provides at least the Accused MoCA Instrumentalities that create and are at least substantially all of a MoCA network to be used to infringe at least claim 3 of the '802 Patent.

203. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user necessarily directly infringes at least claim 3 of the '802 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

204. DISH's inducement of, and contribution to, the direct infringement of at least claim 3 of the '802 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH's provision of the Accused Services.

205. DISH's infringement of the '802 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

206. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

207. Upon information and belief, there is no duty to mark any instrumentality with the '802 Patent in accordance with 35 U.S.C. § 287.

COUNT V

(Infringement of the ’450 Patent)

208. Entropic incorporates by reference each allegation of Paragraphs 1 through 207.

209. The ’450 Patent duly issued on January 14, 2014, from an application filed September 19, 2005, and, *inter alia*, a provisional application filed December 2, 2004.

210. Entropic owns all substantial rights, interest, and title in and to the ’450 Patent, including the sole and exclusive right to prosecute this action and enforce the ’450 Patent against infringers, and to collect damages for all relevant times.

211. The ’450 Patent is one of the Link Maintenance Patents, and is generally directed to, *inter alia*, broadband cable networks that allow devices to communicate directly over the existing coaxial cable with its current architecture without the need to modify the existing cable infrastructure. Each device communicates with the other devices in the network and establishes a common modulation scheme between the devices in the network. ’450 Patent, col. 4, lines 12-28. The ’450 Patent has 38 claims, of which, claim 1, 8, 27, 29, and 34 are independent. At least these claims of the ’450 Patent are directed to a variety of techniques for determining a common modulation scheme for communications between nodes in the MoCA network. A true and accurate copy of the ’450 Patent is attached hereto as Exhibit I.

212. The ’450 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

213. The ’450 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

214. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

215. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

216. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

217. As set forth in the attached non-limiting claim chart (Exhibit J), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 1.0, 1.1, and/or 2.0 necessarily infringes at least claim 29 of the '450 Patent.

218. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

219. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

220. The Accused MoCA Instrumentalities are compliant with MoCA 1.0, 1.1., and/or 2.0, as described in the '450 Patent claim chart, Exhibit J.

221. DISH therefore directly infringes at least claim 29 of the '450 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

222. DISH sells the Accused Services to its customers and subscribers for a fee. Pursuant to the sale of these services, DISH uses the method recited in at least claim 29 of the '450 Patent to provide the Accused Services to DISH's customers and subscribers through the Accused MoCA Instrumentalities. DISH is therefore engaging in the infringing use of at least claim 29 of the '450 Patent in order to generate revenue from its customers and subscribers.

223. DISH directly infringes at least claim 29 of the '450 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services.

224. DISH had knowledge of the ’450 Patent no later than its receipt of Entropic’s communications sent to DISH on March 9, 2022.

225. DISH has been aware that it infringes the ’450 Patent no later than its receipt of Entropic’s communication sent to DISH on March 9, 2022.

226. DISH has known of or has been willfully blind to the ’450 Patent since before the March 9, 2022 communications from Entropic.

227. The ’450 Patent issued while or before DISH was a member of MoCA.

228. Because of DISH’s knowledge of Entropic Inc.’s work and contributions related to MoCA technology, DISH had knowledge of the ’450 Patent before March 9, 2022 or was willfully blind to its existence.

229. The claims of the ’450 Patent are essential to practicing at least MoCA standards versions 1.0, 1.1, and/or 2.0.

230. DISH knew, or was willfully blind to the fact that the technology of the ’450 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the ’450 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.0, 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the ’450 Patent.

231. Since learning of the ’450 Patent and its infringing activities, DISH has failed to cease its infringing activities.

232. DISH’s customers and subscribers directly infringe at least claim 29 of the ’450 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

233. DISH actively induces its customers’ and subscribers’ direct infringement by providing the Accused Services and associated support.

234. For example, DISH actively induces infringement of at least claim 29 of the ’450 Patent by providing the Accused MoCA Instrumentalities to DISH

customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities to infringe the ’450 Patent.

235. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities to infringe every element of at least claim 29 of the ’450 Patent.

236. Additionally, DISH contributes to the customers’ and subscribers’ direct infringement. DISH provides at least the Accused MoCA Instrumentalities that create and are at least substantially all of a MoCA network to be used to infringe at least claim 29 of the ’450 Patent.

237. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user directly infringes at least claim 29 of the ’450 Patent. The Accused MoCA Instrumentalities are especially made or especially adapted for use in an infringing manner.

238. DISH’s inducement of, and contribution to, the direct infringement of at least claim 29 of the ’450 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH’s provision of the Accused Services.

239. DISH’s infringement of the ’450 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic’s rights under the patent.

240. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH’s infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

241. Upon information and belief, there is no duty to mark any instrumentality with the ’450 Patent in accordance with 35 U.S.C. § 287.

COUNT VI

(Infringement of the ’7,566 Patent)

242. Entropic incorporates by reference each allegation of Paragraphs 1 through 241.

243. The ’7,566 Patent duly issued on April 9, 2019 from an application filed February 7, 2017, an application filed September 19, 2005, and *inter alia*, a provisional application filed December 2, 2004.

244. Entropic owns all substantial rights, interest, and title in and to the ’7,566 Patent, including the sole and exclusive right to prosecute this action and enforce the ’7,566 Patent against infringers, and to collect damages for all relevant times.

245. The ’7,566 Patent is the Network Coordinator Patent, and is generally directed to, *inter alia,* broadband cable networks that allow devices to communicate directly over the existing coaxial cable with its current architecture without the need to modify the existing cable infrastructure. Each device communicates with the other devices in the network and establishes the best modulation and other transmission parameters that is optimized and periodically adapted to the channel between each pair of devices. ’7,566 Patent, col. 4, lines 23–39. The ’7,566 Patent has 20 claims, of which claims 1, 11, and 19 are independent. At least these claims of the ’7,566 Patent are directed to a variety of techniques for controlling the admission of nodes in the MoCA network. A true and accurate copy of the ’7,566 Patent is attached hereto as Exhibit K.

246. The ’7,566 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

247. The ’7,566 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

248. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

249. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

250. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

251. As set forth in the attached non-limiting claim chart (Exhibit L), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 1.0, 1.1, and/or 2.0 necessarily infringes at least claim 11 of the '7,566 Patent.

252. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

253. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

254. The Accused MoCA Instrumentalities are compliant with MoCA 1.0, 1.1., and/or 2.0, as described in the '7,566 Patent claim chart, Exhibit L.

255. DISH therefore directly infringes at least claim 11 of the '7,566 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

256. DISH directly infringes at least claim 11 of the '7,566 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services and/or the Accused MoCA Instrumentalities.

257. DISH directly infringes at least claim 11 of the '7,566 Patent by making, importing, selling, and/or offering for sale the Accused MoCA Instrumentalities,

which meet every limitation of at least claim 11 of the '7,566 Patent, in connection with providing the Accused Services over an on-premises coaxial cable network.

258. DISH had knowledge of the '7,566 Patent no later than its receipt of Entropic's communications sent to DISH on March 9, 2022.

259. DISH has been aware that it infringes the '7,566 Patent no later than its receipt of Entropic's communication sent to DISH on March 9, 2022.

260. DISH has known of or has been willfully blind to the '7,566 Patent since before the March 9, 2022 communications from Entropic.

261. The '7,566 Patent issued while or before DISH was a member of MoCA.

262. Because of DISH's knowledge of Entropic Inc.'s work and contributions related to MoCA technology, DISH had knowledge of the '7,566 Patent before March 9, 2022 or was willfully blind to its existence.

263. The claims of the '7,566 Patent are essential to practicing at least MoCA standards versions 1.0, 1.1, and/or 2.0.

264. DISH knew, or was willfully blind to the fact that the technology of the '7,566 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the '7,566 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.0, 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the '7,566 Patent.

265. Since learning of the '7,566 Patent and its infringing activities, DISH has failed to cease its infringing activities.

266. DISH's customers and subscribers directly infringe at least claim 11 of the '7,566 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

267. DISH actively induces its customers' and subscribers' direct infringement by providing the Accused Services through the Accused MoCA Instrumentalities, and associated support.

268. For example, DISH actively induces infringement of at least claim 11 of the '7,566 Patent by providing the Accused MoCA Instrumentalities to DISH customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities to infringe the '7,566 Patent.

269. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities to infringe every element of at least claim 11 of the '7,566 Patent.

270. Additionally, DISH contributes to the customers' and subscribers' direct infringement. DISH provides, *inter alia*, the Accused MoCA Instrumentalities designed and configured to create a MoCA network and operate as nodes in the network, the use of which infringes at least claim 11 of the '7,566 Patent.

271. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user directly infringes at least claim 11 of the '7,566 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

272. DISH's inducement of, and contribution to, the direct infringement of at least claim 11 of the '7,566 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH's provision of the Accused Services.

273. DISH's infringement of the '7,566 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

274. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

275. Entropic is aware of no obligation to mark any instrumentality with the '7,566 Patent in accordance with 35 U.S.C. § 287.

COUNT VII

(Infringement of the '539 Patent)

276. Entropic incorporates by reference each allegation of Paragraphs 1 through 275.

277. The '539 Patent duly issued on December 31, 2013 from an application filed September 29, 2005 and, *inter alia*, a provisional application filed December 2, 2004.

278. Entropic owns all substantial rights, interest, and title in and to the '539 Patent, including the sole and exclusive right to prosecute this action and enforce the '539 Patent against infringers, and to collect damages for all relevant times.

279. The '539 Patent is one of the Link Maintenance Patents, and is generally directed to, *inter alia,* a physical layer transmitter that performs all of the necessary RF, analog and digital processing required for transmitting MAC messages between devices in a broadband cable network. '539 Patent, col. 4, lines 37–48. The '539 Patent has seven claims, of which claim 1 is independent. At least this claim of the '539 Patent is directed at a variety of techniques for monitoring and maintaining utilized modulation profiles in the MoCA network. A true and accurate copy of the '539 Patent is attached hereto as Exhibit M.

280. The '539 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

281. The '539 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

282. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

283. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

284. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

285. As set forth in the attached non-limiting claim chart (Exhibit N), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 1.0, 1.1, and/or 2.0 necessarily infringes at least claim 1 of the ’539 Patent.

286. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

287. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

288. The Accused MoCA Instrumentalities are compliant with MoCA 1.0, 1.1., and/or MoCA 2.0, as described in the ’539 Patent claim chart, Exhibit N.

289. DISH therefore directly infringes at least claim 1 of the ’539 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

290. DISH directly infringes at least claim 1 of the ’539 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services.

291. DISH directly infringes at least claim 1 of the ’539 Patent by making, importing, selling, and/or offering for sale the Accused MoCA Instrumentalities,

which meet every limitation of at least claim 1 of the '539 Patent, in connection with providing the Accused Services over an on-premises coaxial cable network.

292. DISH had knowledge of the '539 Patent no later than its receipt of Entropic's communications sent to DISH on March 9, 2022.

293. DISH has been aware that it infringes the '539 Patent no later than its receipt of Entropic's communication sent to DISH on March 9, 2022.

294. DISH has known of or has been willfully blind to the '539 Patent since before the March 9, 2022 communications from Entropic.

295. The '539 Patent issued while or before DISH was a member of MoCA.

296. Because of DISH's knowledge of Entropic Inc.'s work and contributions related to MoCA technology, DISH had knowledge of the '539 Patent before March 9, 2022 or was willfully blind to its existence.

297. The claims of the '539 Patent are essential to practicing at least MoCA standards versions 1.0, 1.1, and/or 2.0.

298. DISH knew, or was willfully blind to the fact that the technology of the '539 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the '539 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.0, 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the '539 Patent.

299. Since learning of the '539 Patent and its infringing activities, DISH has failed to cease its infringing activities.

300. DISH's customers and subscribers directly infringe at least claim 1 of the '539 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

301. DISH actively induces its customers' and subscribers' direct infringement by providing the Accused Services through the Accused MoCA Instrumentalities, and associated support.

302. For example, DISH actively induces infringement of at least claim 1 of the '539 Patent by providing the Accused MoCA Instrumentalities to DISH customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities to infringe the '539 Patent.

303. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities to infringe every element of at least claim 1 of the '539 Patent.

304. Additionally, DISH contributes to the customers' and subscribers' direct infringement. DISH provides, *inter alia*, the Accused MoCA Instrumentalities designed and configured to create a MoCA network and operate as nodes in the network, the use of which infringes at least claim 1 of the '539 Patent.

305. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user directly infringes at least claim 1 of the '539 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

306. DISH's inducement of, and contribution to, the direct infringement of at least claim 1 of the '539 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH's provision of the Accused Services.

307. DISH's infringement of the '539 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

308. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

309. Entropic is aware of no obligation to mark any instrumentality with the '539 Patent in accordance with 35 U.S.C. § 287.

COUNT VIII

(Infringement of the '213 Patent)

310. Entropic incorporates by reference each allegation of Paragraphs 1 through 309.

311. The '213 Patent duly issued on December 5, 2017 from an application filed February 6, 2008, and, *inter alia*, a provisional application filed on February 6 2007.

312. Entropic owns all substantial rights, interest, and title in and to the '213 Patent, including the sole and exclusive right to prosecute this action and enforce the '213 Patent against infringers, and to collect damages for all relevant times.

313. The '213 Patent is one of the PQoS Flows Patents, and is generally directed to, *inter alia*, low-cost and high-speed management of resources within a network in order to secure the capability to distribute multimedia data (such as video/audio, games, images, generic data, and interactive services) between devices within existing on-premises coaxial cable networks. '213 Patent, col. 3, lines 46–53. The '213 Patent has 24 claims, of which claims 1, 13, and 23 are independent. At least these claims of the '213 Patent are directed to a variety of techniques for allocating resources for guaranteed quality of service flows in the MoCA network. A true and accurate copy of the '213 Patent is attached hereto as Exhibit O.

314. The '213 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

315. The ’213 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

316. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

317. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

318. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

319. As set forth in the attached non-limiting claim chart (Exhibit P), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 1.1, or 2.0 necessarily infringes at least claim 1 of the ’213 Patent.

320. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

321. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

322. The Accused MoCA Instrumentalities are compliant with MoCA 1.1 and/or MoCA 2.0, as described in the ’213 Patent claim chart, Exhibit P.

323. DISH therefore directly infringes at least claim 1 of the ’213 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

324. DISH sells the Accused Services to its customers and subscribers for a fee. Pursuant to the sale of these services, DISH uses the method recited in at least claim 1 of the ’213 Patent to provide the Accused Services to DISH’s customers and

subscribers through the Accused MoCA Instrumentalities. DISH is therefore engaging in the infringing use of at least claim 1 of the ’213 Patent in order to generate revenue from its customers and subscribers.

325. DISH directly infringes at least claim 1 of the ’213 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services.

326. DISH had knowledge of the ’213 Patent no later than its receipt of Entropic’s communications sent to DISH on March 9, 2022.

327. DISH has been aware that it infringes the ’213 Patent no later than its receipt of Entropic’s communications sent to DISH on March 9, 2022.

328. DISH has known of or has been willfully blind to the ’213 Patent since before the March 9, 2022 communications from Entropic.

329. The ’213 Patent issued while or before DISH was a member of MoCA.

330. Because of DISH’s knowledge of Entropic Inc.’s work and contributions related to MoCA technology, DISH had knowledge of the ’213 Patent before March 9, 2022 or was willfully blind to its existence.

331. The claims of the ’213 Patent are essential to practicing at least MoCA standards versions 1.1, and/or 2.0.

332. DISH knew, or was willfully blind to the fact that the technology of the ’213 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the ’213 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the ’213 Patent.

333. Since learning of the ’213 Patent and its infringing activities, DISH has failed to cease its infringing activities.

334. DISH's customers and subscribers directly infringe at least claim 1 of the '213 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

335. DISH actively induces its customers' and subscribers' direct infringement by providing the Accused Services and associated support.

336. For example, DISH actively induces infringement of at least claim 1 of the '213 Patent by providing the Accused MoCA Instrumentalities to DISH customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities to infringe the '213 Patent.

337. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities to infringe every element of at least claim 1 of the '213 Patent.

338. Additionally, DISH contributes to the customers' and subscribers' direct infringement. DISH provides at least the Accused MoCA Instrumentalities that create and are at least substantially all of a MoCA network to be used to infringe at least claim 1 of the '213 Patent.

339. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user directly infringes at least claim 1 of the '213 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

340. DISH's inducement of, and contribution to, the direct infringement of at least claim 1 of the '213 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH's provision of the Accused Services.

341. DISH's infringement of the '213 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

342. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

343. Upon information and belief, there is no duty to mark any instrumentality with the '213 Patent in accordance with 35 U.S.C. § 287(a).

COUNT IX

(Infringement of the '422 Patent)

344. Entropic incorporates by reference each allegation of Paragraphs 1 through 343.

345. The '422 Patent duly issued on October 1, 2019 from an application filed December 5, 2017, an application filed February 6, 2008, and, *inter alia*, a provisional application filed February 6, 2007.

346. Entropic owns all substantial rights, interest, and title in and to the '422 Patent, including the sole and exclusive right to prosecute this action and enforce the '422 Patent against infringers, and to collect damages for all relevant times.

347. The '422 Patent is one of the PQoS Flows Patents, and is generally directed to, *inter alia*, low-cost and high-speed management of resources within a network in order to secure the capability to distribute multimedia data (such as video/audio, games, images, generic data, and interactive services) between devices within existing on-premises coaxial cable networks. '422 Patent, col. 3, lines 53–60. The '422 Patent has 20 claims, of which, claims 1, 5, 12–17 are independent. At least these claims of the '422 Patent are directed to a variety of techniques for allocating resources for guaranteed quality of service flows in the MoCA network. A true and accurate copy of the '422 Patent is attached hereto as Exhibit Q.

348. The ’422 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

349. The ’422 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

350. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

351. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

352. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

353. As set forth in the attached non-limiting claim chart (Exhibit R), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 1.1, or 2.0 necessarily infringes at least claim 1 of the ’422 Patent.

354. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

355. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

356. The Accused MoCA Instrumentalities are compliant with MoCA 1.1 and/or MoCA 2.0, as described in the ’422 Patent claim chart, Exhibit R.

357. DISH therefore directly infringes at least claim 1 of the ’422 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

358. DISH directly infringes at least claim 1 of the ’422 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services.

359. DISH directly infringes at least claim 1 of the ’422 Patent by making, importing, selling, and/or offering for sale the Accused MoCA Instrumentalities in connection with providing the Accused Services over an on-premises coaxial cable network, which meets every limitation of at least claim 1 of the ’422 Patent.

360. DISH had knowledge of the ’422 Patent no later than its receipt of Entropic’s communications sent to DISH on March 9, 2022.

361. DISH has been aware that it infringes the ’422 Patent no later than its receipt of Entropic’s communication sent to DISH on March 9, 2022.

362. DISH has known of or has been willfully blind to the ’422 Patent since before the March 9, 2022 communications from Entropic.

363. The ’422 Patent issued while or before DISH was a member of MoCA.

364. Because of DISH’s knowledge of Entropic Inc.’s work and contributions related to MoCA technology, DISH had knowledge of the ’422 Patent before March 9, 2022 or was willfully blind to its existence.

365. The claims of the ’422 Patent are essential to practicing at least MoCA standards versions 1.1, and/or 2.0.

366. DISH knew, or was willfully blind to the fact that the technology of the ’422 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the ’422 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the ’422 Patent.

367. Since learning of the ’422 Patent and its infringing activities, DISH has failed to cease its infringing activities.

368. DISH's customers and subscribers directly infringe at least claim 1 of the '422 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

369. DISH actively induces its customers' and subscribers' direct infringement by providing the Accused Services and associated support.

370. For example, DISH actively induces infringement of at least claim 1 of the '422 Patent by providing the Accused MoCA Instrumentalities to DISH customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities to infringe the '422 Patent.

371. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities to infringe every element of at least claim 1 of the '422 Patent.

372. Additionally, DISH contributes to the customers' and subscribers' direct infringement. DISH provides at least the Accused MoCA Instrumentalities that create and are at least substantially all of a MoCA network to be used to infringe at least claim 1 of the '422 Patent.

373. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user directly infringes at least claim 1 of the '422 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

374. DISH's inducement of, and contribution to, the direct infringement of at least claim 1 of the '422 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH's provision of the Accused Services.

375. DISH's infringement of the '422 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

376. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

377. Upon information and belief, there is no duty to mark any instrumentality with the '422 Patent in accordance with 35 U.S.C. § 287.

COUNT X

(Infringement of the '910 Patent)

378. Entropic incorporates by reference each allegation of Paragraphs 1 through 377.

379. The '910 Patent duly issued on July 24, 2012 from an application filed May 9, 2008 and a provisional application filed May 9, 2007.

380. Entropic owns all substantial rights, interest, and title in and to the '910 Patent, including the sole and exclusive right to prosecute this action and enforce the '910 Patent against infringers, and to collect damages for all relevant times.

381. The '910 Patent is the Packet Aggregation Patent, and is generally directed to, *inter alia,* transmitting data over a network, where the transmitting device aggregates packets that are directed to a common destination node. This reduces the transmitted packet overhead of the network by eliminating interframe gaps, preamble information, and extra headers. '910 Patent, col. 1, line 66 – col. 2, line 3. The '910 Patent has three claims, all of which are independent. At least these claims of the '910 Patent are directed to a variety of techniques for aggregating packet data units in the MoCA network. A true and accurate copy of the '910 Patent is attached hereto as Exhibit S.

382. The ’910 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

383. The ’910 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

384. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

385. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

386. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

387. As set forth in the attached non-limiting claim chart (Exhibit T), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 1.1, or 2.0 necessarily infringes at least claim 3 of the ’910 Patent.

388. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

389. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

390. The Accused MoCA Instrumentalities are compliant with MoCA 1.1., and/or MoCA 2.0, as described in the ’910 Patent claim chart, Exhibit T.

391. DISH therefore directly infringes at least claim 3 of the ’910 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

392. DISH directly infringes at least claim 3 of the ’910 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services.

393. DISH directly infringes at least claim 3 of the ’910 Patent by making, importing, selling, and/or offering for sale the Accused MoCA Instrumentalities, which meet every limitation of at least claim 3 of the ’910 Patent, in connection with providing the Accused Services over an on-premises coaxial cable network.

394. DISH had knowledge of the ’910 Patent no later than its receipt of Entropic’s communications sent to DISH on March 9, 2022.

395. DISH has been aware that it infringes the ’910 Patent no later than its receipt of Entropic’s communication sent to DISH on March 9, 2022.

396. DISH has known of or has been willfully blind to the ’910 Patent since before the March 9, 2022 communications from Entropic.

397. The ’910 Patent issued while or before DISH was a member of MoCA.

398. Because of DISH’s knowledge of Entropic Inc.’s work and contributions related to MoCA technology, DISH had knowledge of the ’910 Patent before March 9, 2022 or was willfully blind to its existence.

399. The claims of the ’910 Patent are essential to practicing at least MoCA standards versions 1.1, and/or 2.0.

400. DISH knew, or was willfully blind to the fact that the technology of the ’910 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the ’910 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the ’910 Patent.

401. Since learning of the ’910 Patent and its infringing activities, DISH has failed to cease its infringing activities.

402. DISH's customers and subscribers directly infringe at least claim 3 of the '910 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

403. DISH actively induces its customers' and subscribers' direct infringement by providing the Accused Services through the Accused MoCA Instrumentalities, and associated support.

404. For example, DISH actively induces infringement of at least claim 3 of the '910 Patent by providing the Accused MoCA Instrumentalities to DISH customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities to infringe the '910 Patent.

405. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities to infringe every element of at least claim 3 of the '910 Patent.

406. Additionally, DISH contributes to the customers' and subscribers' direct infringement. DISH provides, *inter alia*, the Accused MoCA Instrumentalities designed and configured to create a MoCA network and operate as nodes in the network, the use of which infringes at least claim 3 of the '910 Patent.

407. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user directly infringes at least claim 3 of the '910 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

408. DISH's inducement of, and contribution to, the direct infringement of at least claim 3 of the '910 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH's provision of the Accused Services.

409. DISH's infringement of the '910 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

410. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

411. Entropic is aware of no obligation to mark any instrumentality with the '910 Patent in accordance with 35 U.S.C. § 287.

COUNT XI

(Infringement of the '0,566 Patent)

412. Entropic incorporates by reference each allegation of Paragraphs 1 through 411.

413. The '0,566 Patent duly issued on November 27, 2012 from an application filed October 15, 2009, and, *inter alia*, a provisional application filed October 16, 2008.

414. Entropic owns all substantial rights, interest, and title in and to the '0,566 Patent, including the sole and exclusive right to prosecute this action and enforce the '0,566 Patent against infringers, and to collect damages for all relevant times.

415. The '0,566 Patent is the OFDMA Patent, and is generally directed to, *inter alia,* "allow[ing] multiple transmitting network devices to transmit under an orthogonal frequency divisional multiple access (OFDMA) mode to a receiving network device." '0,566 Patent, Abstract. The '0,566 Patent has 18 claims, of which claims 1, 7, 13, and 16 are independent. At least these claims of the '0,566 Patent are directed to a variety of techniques for assigning communication resources to one or more nodes in the MoCA network. A true and accurate copy of the '0,566 Patent is attached hereto as Exhibit U.

416. The ’0,566 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

417. The ’0,566 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

418. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

419. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

420. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

421. As set forth in the attached non-limiting claim chart (Exhibit V), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 2.0 necessarily infringes at least claim 1 of the ’0,566 Patent.

422. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

423. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

424. The Accused MoCA Instrumentalities are compliant with MoCA 2.0, as described in the ’0,566 Patent claim chart, Exhibit V.

425. DISH therefore directly infringes at least claim 1 of the ’0,566 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers.

426. DISH sells the Accused Services to its customers and subscribers for a fee. Pursuant to the sale of these services, DISH uses the method recited in at least

claim 1 of the ’0,566 Patent to provide the Accused Services to DISH’s customers and subscribers through the Accused MoCA Instrumentalities. DISH is therefore engaging in the infringing use of at least claim 1 of the ’0,566 Patent in order to generate revenue from its customers and subscribers.

427. DISH directly infringes at least claim 1 of the ’0,566 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services.

428. DISH had knowledge of the ’0,566 Patent no later than its receipt of Entropic’s communications sent to DISH on March 9, 2022.

429. DISH has been aware that it infringes the ’0,566 Patent no later than its receipt of Entropic’s communication sent to DISH on March 9, 2022.

430. DISH has known of or has been willfully blind to the ’0,566 Patent since before the March 9, 2022 communications from Entropic.

431. The ’0,566 Patent issued while or before DISH was a member of MoCA.

432. Because of DISH’s knowledge of Entropic Inc.’s work and contributions related to MoCA technology, DISH had knowledge of the ’0,566 Patent before March 9, 2022 or was willfully blind to its existence.

433. The claims of the ’0,566 Patent are essential to practicing at least MoCA standards versions 1.1, and/or 2.0.

434. DISH knew, or was willfully blind to the fact that the technology of the ’0,566 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the ’0,566 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the ’0,566 Patent.

435. Since learning of the ’0,566 Patent and its infringing activities, DISH has failed to cease its infringing activities.

436. DISH's customers and subscribers directly infringe at least claim 1 of the '0,566 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

437. DISH actively induces its customers' and subscribers' direct infringement by providing the Accused Services and associated support.

438. For example, DISH actively induces infringement of at least claim 1 of the '0,566 Patent by providing the Accused MoCA Instrumentalities to DISH customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities to infringe the '0,566 Patent.

439. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities to infringe every element of at least claim 1 of the '0,566 Patent.

440. Additionally, DISH contributes to the customers' and subscribers' direct infringement. DISH provides at least the Accused MoCA Instrumentalities that create and are at least substantially all of a MoCA network to be used to infringe at least claim 1 of the '0,566 Patent.

441. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user directly infringes at least claim 1 of the '0,566 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

442. DISH's inducement of, and contribution to, the direct infringement of at least claim 1 of the '0,566 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH's provision of the Accused Services.

443. DISH's infringement of the '0,566 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

444. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

445. Upon information and belief, there is no duty to mark any instrumentality with the '0,566 Patent in accordance with 35 U.S.C. § 287(a).

COUNT XII

(Infringement of the '681 Patent)

446. Entropic incorporates by reference each allegation of Paragraphs 1 through 445.

447. The '681 Patent duly issued on January 29, 2013 from an application filed October 15, 2009 and, *inter alia*, a provisional application filed October 16, 2008.

448. Entropic owns all substantial rights, interest, and title in and to the '681 Patent, including the sole and exclusive right to prosecute this action and enforce the '681 Patent against infringers, and to collect damages for all relevant times.

449. The '681 Patent is the Clock Sync Patent, and is generally directed to, *inter alia,* improving local clock time synchronization between a plurality of nodes in a communication network. '681 Patent, Abstract. The '681 Patent has 40 claims, of which claims 1, 11, 21, and 31 are independent. At least these claims of the '681 Patent are directed to a variety of techniques for clock synchronization for nodes in the MoCA network. A true and accurate copy of the '681 Patent is attached hereto as Exhibit W.

450. The '681 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

451. The ’681 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

452. DISH deploys one or more of the Accused MoCA Instrumentalities (e.g., DISH Hopper, DISH Hopper with Sling, DISH Hopper DUO, DISH Joey, DISH Joey 2, and DISH Super Joey, the DISH Hopper 3, the DISH 4K Joey, and/or the DISH Joey 3) in connection with operating and providing the Accused Services.

453. The Accused MoCA Instrumentalities deployed by DISH to customer premises remain the property of DISH while deployed.

454. The Accused MoCA Instrumentalities operate while deployed in a manner controlled and intended by DISH.

455. As set forth in the attached non-limiting claim chart (Exhibit X), any product or system operating in a MoCA network compliant with the charted provisions of MoCA 2.0 necessarily infringes at least claim 1 of the ’681 Patent.

456. Each aspect of the functioning of the Accused MoCA Instrumentalities described in the claim chart operates while deployed to customer premises in a manner controlled and intended by DISH.

457. DISH provides no software, support or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused MoCA Instrumentalities while deployed to customer premises.

458. The Accused MoCA Instrumentalities are compliant with MoCA 2.0 described in the ’681 Patent claim chart, Exhibit X.

459. DISH therefore directly infringes at least claim 1 of the ’681 Patent by using the Accused MoCA Instrumentalities to provide Accused Services to customers

460. DISH sells the Accused Services to its customers and subscribers for a fee. Pursuant to the sale of these services, DISH uses the method recited in at least claim 1 of the ’681 Patent to provide the Accused Services to DISH’s customers and subscribers through the Accused MoCA Instrumentalities. DISH is therefore

engaging in the infringing use of at least claim 1 of the '681 Patent in order to generate revenue from its customers and subscribers.

461. DISH directly infringes at least claim 1 of the '681 Patent when it, for example, uses the Accused MoCA Instrumentalities to test, demonstrate or otherwise provide Accused Services.

462. DISH had knowledge of the '681 Patent no later than its receipt of Entropic's communications sent to DISH on August 9, 2022.

463. DISH has been aware that it infringes the '681 Patent no later than its receipt of Entropic's communication sent to DISH on August 9, 2022.

464. DISH has known of or has been willfully blind to the '681 Patent since before the August 9, 2022 communications from Entropic.

465. The '681 Patent issued while or before DISH was a member of MoCA.

466. Because of DISH's knowledge of Entropic Inc.'s work and contributions related to MoCA technology, DISH had knowledge of the '681 Patent before August 9, 2022 or was willfully blind to its existence.

467. The claims of the '681 Patent are essential to practicing at least MoCA standards versions 1.1, and/or 2.0.

468. DISH knew, or was willfully blind to the fact that the technology of the '681 Patent directly relates to networking over coaxial cable, including MoCA, at least as early as DISH became aware of the existence of the '681 Patent. Because of its familiarity with, and access to, the MoCA standards, DISH knew, or was willfully blind to the fact, that use (by DISH or its customers) of instrumentalities compliant with MoCA 1.1, and/or 2.0 to deliver DISH services would necessarily infringe one or more claims of the '681 Patent.

469. Since learning of the '681 Patent and its infringing activities, DISH has failed to cease its infringing activities.

470. DISH's customers and subscribers directly infringe at least claim 1 of the '681 Patent by using the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH.

471. DISH actively induces its customers' and subscribers' direct infringement by providing the Accused Services and associated support.

472. For example, DISH actively induces infringement of at least claim 1 of the '681 Patent by providing the Accused MoCA Instrumentalities to DISH customers with specific instructions and/or assistance (including installation and maintenance) regarding the instantiation of a MoCA network and the use of the Accused MoCA Instrumentalities to infringe the '681 Patent.

473. DISH aids, instructs, supports, and otherwise acts with the intent to cause an end user to make and/or use the MoCA network and/or use the Accused MoCA Instrumentalities to infringe every element of at least claim 1 of the '681 Patent.

474. Additionally, DISH contributes to the customers' and subscribers' direct infringement. DISH provides at least the Accused MoCA Instrumentalities that create and are at least substantially all of a MoCA network to be used to infringe at least claim 1 of the '681 Patent.

475. The Accused MoCA Instrumentalities have no substantial noninfringing uses. When an end user uses the Accused MoCA Instrumentalities in connection with the Accused Services provided by DISH, the end user directly infringes at least claim 1 of the '681 Patent. The Accused MoCA Instrumentalities are therefore especially made or especially adapted for use in an infringing manner.

476. DISH's inducement of, and contribution to, the direct infringement of at least claim 1 of the '681 Patent has been, and is, continuous and ongoing through the acts described above in connection with DISH's provision of the Accused Services.

477. DISH's infringement of the '681 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

478. Entropic has been damaged as a result of the infringing conduct alleged above. DISH is liable to Entropic in an amount that compensates Entropic for DISH's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

479. Upon information and belief, there is no duty to mark any instrumentality with the '681 Patent in accordance with 35 U.S.C. § 287(a).

JURY DEMAND

Entropic hereby requests a trial by jury on all issues so triable by right.

PRAYER FOR RELIEF

WHEREFORE, Entropic requests that:

A. The Court find that Defendants have directly infringed the Patents-in-Suit and hold Defendants liable for such infringement;

B. The Court award damages pursuant to 35 U.S.C. § 284 adequate to compensate Entropic for Defendants' past and future infringement of the Patents-in-Suit, including both pre- and post-judgment interest and costs as fixed by the Court;

C. The Court increase any award to Entropic by a judicially appropriate amount;

D. The Court declare that this is an exceptional case entitling Entropic to its reasonable attorneys' fees under 35 U.S.C. § 285; and

E. The Court award such other relief as the Court may deem just and proper.

Dated: February 10, 2023

Respectfully submitted,

By: */s/ Christina Goodrich*

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