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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

ENTROPIC COMMUNICATIONS, LLC, Plaintiff, v. COMCAST CORPORATION; COMCAST CABLE COMMUNICATIONS, LLC; AND COMCAST CABLE COMMUNICATIONS MANAGEMENT, LLC, Defendants.	Case No. 2:23-cv-01050 **ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT**

ENTROPIC EXHIBIT 2007
Comcast v. Entropic
IPR2025-00183

Plaintiff, Entropic Communications, LLC ("Entropic"), files this complaint for patent infringement against Comcast Corporation ("Comcast Corp."); Comcast Cable Communications, LLC ("Comcast Communications"); and Comcast Cable Communications Management, LLC ("Comcast Management"), (collectively "Comcast") and in support thereof alleges as follows:

1. 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 Comcast's infringement of U.S. Patent Nos. 8,223,775 (the "'775 Patent"), 8,284,690 (the "'690 Patent"), 8,792,008 (the "'008 Patent"), 9,210,362 (the "'362 Patent"), 9,825,826 (the "'826 Patent"), 10,135,682 (the "'682 Patent"), 11,381,866 (the "'866 Patent"), and 11,399,206 (the "'206 Patent") (collectively, the "Patents-in-Suit").

THE PARTIES

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

3. 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.

4. Upon information and belief, Comcast Corp. is a corporation organized and existing under the laws of Pennsylvania, with a principal place of business at 1701 JFK Boulevard, Philadelphia, Pennsylvania, 19103.

5. Comcast Corp. has, as its registered agent in California, CT Corporation System, 330 N. Brand Blvd., Suite 700, Glendale, California, 91203.

6. Comcast Corp., along with the other defendants, develops, markets, sells, offers for sale and/or provides "Comcast" and "Xfinity" branded cable television services and equipment to customers.

7. Comcast Communications is a limited liability company organized and existing under the laws of Delaware, with a principal place of business at 1701 JFK Boulevard, Philadelphia, Pennsylvania, 19103. Upon information and belief, Comcast Communications is a subsidiary of Comcast Corp.

8. Comcast Communications has, as its registered agent in California, CT Corporation System, 330 N. Brand Blvd., Suite 700, Glendale, California, 91203.

9. Comcast Communications, along with the other defendants, develops, markets, sells, offers for sale and/or provides "Comcast" and "Xfinity" branded cable television services and equipment to customers.

10. Comcast Management is a limited liability company organized and existing under the laws of Delaware, with a principal place of business at 1701 JFK Boulevard, Philadelphia, Pennsylvania, 19103. Upon information and belief, Comcast Management is a subsidiary of Comcast Corp.

11. Comcast Management has, as its registered agent in California, CT Corporation System, 330 N. Brand Blvd., Suite 700, Glendale, California, 91203.

12. Comcast Management, along with the other defendants, develops, markets, sells, offers for sale and/or provides "Comcast" and "Xfinity" branded cable television services and equipment to customers.

13. Comcast Corp. and/or Comcast Communications owns or leases, and maintains and operates several stores in this district by and through subsidiary limited liability companies that they own, manage and control, including Comcast of Santa Maria, LLC and Comcast of Lompoc LLC. Upon information and belief Comcast Corp. and/or Comcast Communications (and/or other personnel employed by them) negotiates and signs agreements on behalf of each of these entities.

14. Upon information and belief, Comcast Corp. and/or Comcast Communications are the corporate managers of their subsidiary LLCs that own or lease property in this district, and that own, store, sell, demonstrate, and lease equipment in this district. Comcast Corp. and/or Comcast Communications have the right to exercise near total control of each entity's operations through its LLC agreements with each entity.

15. In each of those stores, Comcast Corp. and/or Comcast Communications owns and stores equipment such as modems and set top boxes ("STBs") and

demonstrates services provided via those products to Comcast customers by and through subsidiary limited liability companies that it manages and controls.

16. Upon information and belief Comcast Corp. and/or Comcast Communications employs personnel that install, service, repair and/or replace equipment, as appropriate, in this district by and through subsidiary limited liability companies that it manages and controls.

17. Upon information and belief, Comcast Corp. and/or Comcast Communications have two wholly owned subsidiaries in this Judicial District of Central California ("District") that serve as their agents.

18. Comcast of Santa Maria, LLC ("Comcast Santa Maria") is a limited liability company organized and existing under the laws of Pennsylvania, with a principal place of business at 1701 JFK Boulevard, Philadelphia, Pennsylvania, 19103. Comcast of Santa Maria, LLC is a subsidiary of Comcast Corp.

19. Comcast Santa Maria, along with the other defendants, markets, sells, offers for sale and/or provides "Comcast" and "Xfinity" branded cable television services and equipment to customers.

20. Comcast of Lompoc, LLC ("Comcast Lompoc") is a limited liability company organized and existing under the laws of Pennsylvania, with a principal place of business at 1701 JFK Boulevard, Philadelphia, Pennsylvania, 19103. Comcast of Lompoc, LLC is a subsidiary of Comcast Corp.

21. Comcast Lompoc, along with the other defendants, markets, sells, offers for sale and/or provides "Comcast" and "Xfinity" branded cable television services and equipment to customers.

22. Upon information and belief, Comcast Communications, Comcast, Management, Comcast Santa Maria, and Comcast Lompoc are the agents of Comcast Corp. Upon information and belief, Comcast Corp. has complete and total control over its agents Comcast Communications, Comcast Management, Comcast Santa Maria, and Comcast Lompoc. On information and belief, Comcast Corp. shares management,

common ownership, advertising platforms, facilities, distribution chains and platforms, stores, and accused product lines and products involving related technologies with its agents, including at least Comcast Communications, Comcast Management, Comcast Santa Maria, and Comcast Lompoc.

23. For example, Comcast Corp., Comcast Communications, Comcast Management, Comcast Santa Maria, and Comcast Lompoc all have the same principal place of business at 1701 JFK Boulevard, Philadelphia, Pennsylvania, 19103.

24. The Comcast "Xfinity Residential Services Agreement" purports to bind Comcast's customers, including those customers in this District, to an agreement with Comcast Communications for *inter alia*, the Accused Services that Comcast's customers receive through the infringing use of the Accused Cable Modem Products and the Accused Set Top Products.[1] This agreement further provides that an entity other than Comcast Communications provides the services. Upon information and belief, the entity that provides the services to Comcast's customers and subscribers is Comcast Management.

25. Comcast Management further shares a leadership team with Comcast Corp.[2] For example, Brian Roberts is the Chairman and Chief Executive Officer of both Comcast Management and Comcast Corp.; Daniel Murdock is Executive Vice President and Chief Accounting Officer of both Comcast Corp. and Comcast Management; Francis Buono is Executive Vice President of Legal Regulatory Affairs and Senior Deputy General Counsel of both Comcast Corp. and Comcast Management; and Karen

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[1] https://www.xfinity.com/Corporate/Customers/Policies/SubscriberAgreement

[2] *Compare* names found in Exhibit A to the attached https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/video-franchising-and-broadband-analysis/video-franchising-main/applications-received--by-the-puc/2022/20220926-comcast-48a/comcast-48a-application.pdf *with* the bios of the identified personnel at Comcast's corporate leadership website, https://corporate.comcast.com/company/leadership.

Buchholz is Executive Vice President, Administration of both Comcast Corp. and Comcast Management.

PRESUIT DISCUSSIONS

26. Prior to filing this Complaint, Entropic sent a communication by physical means to Comcast on August 9, 2022, in an attempt to engage Comcast and/or its agents in good faith licensing discussions regarding Entropic's patent portfolio, including the Patents-in-Suit.[3] Comcast replied to the communication on October 10, 2022, asking for additional information. On December 23, 2022, Entropic sent Comcast another communication 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 Comcast a typical non-disclosure agreement in order to share such information. Comcast has not responded to that communication.

ENTROPIC'S LEGACY AS A CABLE INNOVATOR

27. Entropic Communications Inc. ("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 Multimedia over Coax Alliance ("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.

28. 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

[3] The '206 Patent was not included in the list of issued Entropic patents sent on August 9, 2022.

RF Magic, Inc. in 2007, a company specializing in DBS ODU technology and related hardware.

29. 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.

30. 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.

31. 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.

32. 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.

33. The Patents-in-Suit are the result of years of research and development in satellite and cable technology. These innovations are utilized by Comcast to provide enhanced and expanded services to customers, which in turn has increased revenues for Comcast while at the same time reducing costs.

34. Entropic filed a patent infringement suit against Charter Communications, Inc. ("Charter") in the Eastern District of Texas, Case No. 2:22-CV-00125-JRG ("the Charter Suit"), on April 27, 2022, asserting the '775 Patent, the '690 Patent, the '008 Patent, the '362 Patent, the '826 Patent, and the '682 Patent against Charter's provision of cable television and internet services, cable modem products and STBs.

35. Upon information and belief, Comcast analyzed the causes of action in the Charter Suit and the asserted patents.

36. Upon information and belief, Comcast analyzed its products' functionality in light of the patents asserted in the Charter Suit.

37. Upon information and belief, Comcast monitored the ongoing prosecution of the '362 Patent family, and therefore was aware the '866 Patent issued on July 5, 2022, and the '206 Patent issued on July 26, 2022.

38. Upon information and belief, Comcast analyzed its products' functionality in light of the'866 Patent.

39. Upon information and belief, Comcast analyzed its products' functionality in light of the '206 Patent.

JURISDICTION AND VENUE

40. 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.

41. Venue in this District is proper pursuant to 28 U.S.C. § 1400(b), because Comcast has regular and established places of business in this District. The defendants, by themselves and/or through their agents, have committed acts of patent infringement within the State of California and within this District by using, selling, offering for sale, and/or leasing various telecommunication services products and services.

42. This Court has general personal jurisdiction over Comcast Corp. because it conducts systematic and regular business within the State of California by, *inter alia* providing cable television, internet, and phone services to businesses and residents throughout the state. Comcast Corp.'s website states that, "Comcast is deeply

committed to California, where our nearly 5,000 employees serve more than 3 million customers throughout the state."[4]

43. Upon information and belief, Comcast Management has a regular and established place of business in the State of California including at least at 3055 Comcast Place, Livermore, California 94551.

44. The Court has personal jurisdiction over Comcast Corp., Comcast Communications and Comcast Management because they have committed acts of infringement within the State of California and within this District through, for example, providing through their wholly owned subsidiaries, "Comcast" and "Xfinity" branded products and services, including, Xfinity set top boxes ("STBs") and Xfinity digital video, audio, and other content services to customers. Comcast provides cable television and internet services ("Accused Services") via the lease, sale, and/or distribution of cable modems and set top boxes both online and from Comcast stores in this District. For example, Comcast has and continues to sell, lease, and/or distribute the Technicolor TC8717 cable modem, Technicolor CGM4140 cable modem, Technicolor CGM4331 cable modem, and products that operate in a similar manner ("Accused Cable Modem Products"), as well as the Arris AX013ANC STB, Arris AX013ANM STB, Arris AX014ANC STB, Arris AX014ANM STB, Arris MX011ANC STB, Arris MX011ANM STB, Pace PX001ANC STB, Pace PX013ANC STB, Pace PX013ANM STB, Pace PX022ANC STB, Pace PX022ANM STB, Samsung SX022ANC STB, Samsung SX022ANM STB, and products that operate in a similar manner ("Accused Set Top Products").

45. Upon information and belief, Comcast Corp., Comcast Communications, and Comcast Management, by themselves and/or through their agents, offer various

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[4] https://california.comcast.com/about/#:%7E:text=Comcast%20is%20deeply%20committed%20to,smart%20home%E2%80%9D%20and%20phone%20service

telecommunication services throughout the United States. Comcast operates and maintains a nationwide television and data network through which it sells, leases, and offers for sale products and services, including the Accused Services, Accused Cable Modem Products and Accused Set Top Products, to businesses, consumers, and government agencies. Through its subsidiaries, Comcast Corp. offers to sell, sells, and provides "Comcast" and "Xfinity" branded products and services, including, set top boxes and digital video, audio, and other content services to customers. Subscribers to Comcast's television services receive one or more receivers and/or set-top boxes within this District.

46. Upon information and belief, those services are provided through and using the Accused Cable Modem Products and Accused Set Top Products.

47. Upon information and belief, Comcast Corp., Comcast Communications, and Comcast Management, by themselves and/or through their agents, Comcast Santa Maria and/or Comcast Lompoc, operate their businesses through *inter alia* offices, warehouses, storefronts, and/or other operational locations within this District, including, for example, at the Xfinity by Comcast stores located in this District at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436. Comcast holds out these locations as its own through the use of branding on the locations themselves.

48. Comcast lists these Xfinity by Comcast stores on its website and holds them out as places where customers can obtain the Accused Services, Accused Cable Modem Products and Accused Set Top Products.

49. Upon information and belief, one or more of the defendants owns and/or leases the premises where these Xfinity by Comcast stores are located.

50. Upon information and belief, these Xfinity by Comcast stores are staffed by persons directly employed by Comcast, many of whom live in this District.

51. Upon information and belief, one or more of the defendants has engaged in regular and established business at physical places within this District such as at these two Xfinity by Comcast stores.

52. Upon information and belief, Comcast employs and/or contracts with persons and directs them to install, service, repair, and/or replace equipment, as appropriate, in this District.

53. Upon information and belief, in each of these stores and/or service centers, Comcast owns and stores equipment such as cable modems and set top boxes and demonstrates services provided via those products to Comcast customers.

54. Comcast has adopted and ratified the Comcast and Xfinity-branded locations identified in this District. The Comcast website advertises Comcast service packages available from Comcast-authorized retailers in this District, and prospective employees can find Comcast job listings in this District. Furthermore, the "corporate" section of Comcast's main website has a section containing "Special Information Regarding California Residents' Privacy Rights," which demonstrates that Comcast is purposefully holding itself out as providing products and services in California.

55. Upon information and belief, Comcast Corp., and/or Comcast Communications, by themselves and/or through their agent, Comcast Management, provides the Accused Services throughout the United States and in this District.

56. Upon information and belief, Comcast Corp. and/or Comcast Management, by themselves, and/or through their agent, Comcast Communications, sells, and offers for sale, and provides the Accused Services, the Accused Cable Modem Products and the Accused Set Top Products throughout the United States and in this District.

57. The Accused Services are available for subscription from various physical stores, including those at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436.

58. The devices, including the Accused Cable Modem Products and the Accused Set Top Products provided by Comcast to supply the Accused Services, are provided to customers in this District and may be obtained by customers from physical locations in this District, including those at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436.

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

60. Comcast continues to conduct business in this District, including the acts and activities described in the preceding paragraph.

COUNT I

(Infringement of the ’775 Patent)

61. Entropic incorporates by reference each allegation of Paragraphs 1 through 60.

62. The ’775 Patent duly issued on July 17, 2012 from an application filed September 30, 2003.

63. Entropic owns all substantial rights, interest, and title in and to the ’775 Patent, including the sole and exclusive right to prosecute this action and enforce the ’775 Patent against infringers and to collect damages for all relevant times.

64. The ’775 Patent generally describes a partitioned cable modem that performs cable modem functions and data and home networking functions. Functionally partitioning a cable modem to perform cable modem functions and data and home networking functions enables a cable modem to incorporate a variety of enhanced functions. A true and accurate copy of the ’775 Patent is attached hereto as Exhibit 1.

65. The ’775 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

66. The ’775 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

67. Comcast deploys one or more of the Accused Cable Modem Products in connection with operating and providing the Accused Services.

68. The Accused Cable Modem Products deployed by Comcast to customer premises remain the property of Comcast while deployed.

69. The Accused Cable Modem Products operate while deployed in a manner controlled and intended by Comcast.

70. As set forth in the attached nonlimiting claim chart (Exhibit 2), Comcast has directly infringed and is infringing at least Claims 18 and 19 of the ’775 Patent by using, importing, selling, and/or offering for sale the Accused Cable Modem Products and/or the Accused Services.

71. Each aspect of the functioning of the Accused Cable Modem Products described in the claim chart operates while deployed to customer premises in a manner controlled and intended by Comcast.

72. Comcast provides no software, support, or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused Cable Modem Products while deployed to customer premises.

73. Comcast directly infringes at least Claims 18 and 19 of the ’775 Patent by using, importing, selling, and/or offering for sale the Accused Cable Modem Products

(for example, the Technicolor CGM4140 cable modem) and/or the Accused Services (for example, utilizing cable modem functions).

74. The use of the Accused Cable Modem Products by Comcast to, for example, demonstrate products in brick-and-mortar stores at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436, or to, for example, test those products, constitute acts of direct infringement of at least Claims 18 and 19 of the ’775 Patent.

75. Comcast had knowledge of the ’775 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

76. Comcast has been aware that it infringes the ’775 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

77. Comcast has known of or has been willfully blind to the ’775 Patent since before the August 9, 2022 communication from Entropic.

78. Comcast has been aware that it infringes the ’775 Patent since at least as early as receipt of Entropic’s August 9, 2022 communication, attached as Exhibit 17. Since obtaining knowledge of the ’775 Patent and its infringing activities, Comcast has failed to cease its infringing activities.

79. Customers and subscribers of Comcast infringe at least Claims 18 and 19 of the ’775 Patent by using the claimed system, at least during the use of the Accused Cable Modem Products (for example, the Technicolor CGM4140 cable modem).

80. Comcast actively induces customers’ direct infringement. For example, Comcast actively induces infringement of at least Claims 18 and 19 of the ’775 Patent by providing the Accused Cable Modem Products to Comcast customers with specific instructions and/or assistance (including installation) regarding the use of the Accused Cable Modem Products to infringe the ’775 Patent in accordance with the ordinary course of operation through the provision of the Accused Services. For at least the above-listed reasons, Comcast aids, instructs, supports, and otherwise acts with the

intent to cause an end user to use the Accused Cable Modem Products to infringe at least Claims 18 and 19 of the ’775 Patent.

81. Comcast contributes to the customers’ direct infringement. Comcast provides apparatuses, namely the Accused Cable Modem Products, that are used by customers to directly infringe at least Claims 18 and 19 of the ’775 Patent.

82. The Accused Cable Modem Products have no substantial noninfringing uses. When an end user uses the Accused Cable Modem Products to receive the Accused Services, the end user directly infringes at least Claims 18 and 19 of the ’775 Patent. The Accused Cable Modem Products are especially made or especially adapted for use in an infringing manner.

83. Comcast’s inducement of, and contribution to, the direct infringement of at least Claims 18 and 19 of the ’775 Patent is continuous and ongoing through acts such as providing the Accused Cable Modem Products to Comcast customers, which enables those customers to receive the Accused Services; Comcast’s provision of the Accused Services; and technical assistance provided by Comcast for equipment it provides to its customers in support of the provision of the Accused Services.

84. Comcast’s infringement of the ’775 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic’s rights under the patent.

85. Entropic has been damaged as a result of the infringing conduct alleged above. Comcast is liable to Entropic in an amount that compensates Entropic for Comcast’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.

86. Entropic is aware of no obligation to mark any instrumentality with the ’775 Patent in accordance with 35 U.S.C. § 287.

COUNT II

(Infringement of the ’690 Patent)

87. Entropic incorporates by reference each allegation of Paragraphs 1 through 86.

88. The ’690 Patent duly issued on October 9, 2012 from an application filed December 10, 2009, and, *inter alia* a provisional application filed May 19, 2009 and a provisional application filed December 15, 2008.

89. Entropic owns all substantial rights, interest, and title in and to the ’690 Patent, including the sole and exclusive right to prosecute this action and enforce the ’690 Patent against infringers and to collect damages for all relevant times.

90. The ’690 Patent generally describes the process of generating probe transmissions in response to a request from a receiving node of a network, wherein the probe request specifies a plurality of parameters that specify content payload of the probe transmission, and a second node to receive the probe transmission, which enhances flexibility and therefore, improves the receiving node’s ability to efficiently recognize the precise form of the transmitted probe. A true and accurate copy of the ’690 Patent is attached hereto as Exhibit 3.

91. The ’690 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

92. The ’690 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

93. Comcast deploys one or more of the Accused Cable Modem Products in connection with operating and providing the Accused Services.

94. The Accused Cable Modem Products deployed by Comcast to customer premises remain the property of Comcast while deployed.

95. The Accused Cable Modem Products operate while deployed in a manner controlled and intended by Comcast.

96. As set forth in the attached nonlimiting claim chart (Exhibit 4), Comcast has directly infringed and is infringing at least Claims 7, 8, 11, 15, and 16 of the ’690 Patent by using, importing, selling, and/or offering for sale the Accused Cable Modem Products and/or the Accused Services.

97. Each aspect of the functioning of the Accused Cable Modem Products described in the claim chart operates while deployed to customer premises in a manner controlled and intended by Comcast.

98. Comcast provides no software, support, or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused Cable Modem Products while deployed to customer premises.

99. Comcast directly infringes at least Claims 7, 8, 11, 15, and 16 of the ’690 Patent by using, importing, selling, and/or offering for sale the Accused Cable Modem Products (for example, the Technicolor CGM4140 cable modem) and/or the Accused Services (for example, performing bidirectional communication with cable modems).

100. The use of the Accused Services by Comcast to, for example, demonstrate products in brick-and-mortar stores at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436, or to, for example, test those products, constitute acts of direct infringement of at least Claims 7, 8, 11, 15, and 16 of the ’690 Patent.

101. Comcast had knowledge of the ’690 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

102. Comcast has been aware that it infringes the ’690 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

103. Comcast has known of or has been willfully blind to the ’690 Patent since before the August 9, 2022 communication from Entropic.

104. Comcast has been aware that it infringes the ’690 Patent since at least as early as receipt of Entropic’s August 9, 2022 communication, attached as Exhibit 17.

Since obtaining knowledge of the ’690 Patent and its infringing activities, Comcast has failed to cease its infringing activities.

105. Customers and subscribers of Comcast infringe at least Claims 7 and 8 of the ’690 Patent by using the claimed method, at least during receipt of the Accused Services utilizing, for example, the Accused Cable Modem Products (for example, the Technicolor CGM4140 cable modem).

106. Comcast actively induces customers’ direct infringement. For example, Comcast actively induces infringement of at least Claims 7 and 8 of the ’690 Patent by providing the Accused Cable Modem Products to Comcast customers with specific instructions and/or assistance (including installation) regarding the use of the Accused Cable Modem Products to infringe the ’690 Patent in accordance with the ordinary course of operation through the provision of the Accused Services. Comcast provides the cable modem functions claimed by the ’690 Patent via the Accused Services, which enable and induce its customers to directly infringe the ’690 Patent. For at least the above-listed reasons, Comcast aids, instructs, supports, and otherwise acts with the intent to cause an end user to use the Accused Cable Modem Products to infringe at least Claims 7 and 8 of the ’690 Patent.

107. Comcast contributes to the customers’ direct infringement. Comcast provides apparatuses, namely the Accused Cable Modem Products, that are used by customers to directly infringe at least Claims 7 and 8 of the ’690 Patent.

108. The Accused Cable Modem Products have no substantial noninfringing uses. When an end user uses the Accused Cable Modem Products to receive the Accused Services, the end user directly infringes at least Claims 7 and 8 of the ’690 Patent. The Accused Cable Modem Products are especially made or especially adapted for use in an infringing manner.

109. Comcast’s inducement of, and contribution to, the direct infringement of at least Claims 7 and 8 of the ’690 Patent is continuous and ongoing through acts such as providing the Accused Cable Modem Products to Comcast customers, which enables

those customers to receive the Accused Services; Comcast's provision of the Accused Services; and technical assistance provided by Comcast for equipment it provides to its customers in support of the provision of the Accused Services.

110. Comcast's infringement of the '690 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

111. Entropic has been damaged as a result of the infringing conduct alleged above. Comcast is liable to Entropic in an amount that compensates Entropic for Comcast'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.

112. No apparatus claims of the '690 Patent are presently asserted. Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

COUNT III

(Infringement of the '008 Patent)

113. Entropic incorporates by reference each allegation of Paragraphs 1 through 112.

114. The '008 Patent duly issued on July 29, 2014 from an application filed September 10, 2012, and, *inter alia* a provisional application filed September 8, 2011.

115. Entropic owns all substantial rights, interest, and title in and to the '008 Patent, including the sole and exclusive right to prosecute this action and enforce the '008 Patent against infringers and to collect damages for all relevant times.

116. The '008 Patent generally describes a system that receives a signal having a plurality of channels, digitizes the received signal, and reports certain signal characteristics to the source of the received signal. A true and accurate copy of the '008 Patent is attached hereto as Exhibit 5.

117. The '008 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

118. The ’008 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

119. Comcast deploys one or more of the Accused Set Top Products in connection with operating and providing the Accused Services.

120. The Accused Set Top Products deployed by Comcast to customer premises remain the property of Comcast while deployed.

121. The Accused Set Top Products operate while deployed in a manner controlled and intended by Comcast.

122. As set forth in the attached nonlimiting claim chart (Exhibit 6), Comcast has directly infringed and is infringing at least Claims 1 and 2 of the ’008 Patent by using, importing, selling, and/or offering for sale the Accused Set Top Products and/or the Accused Services.

123. Each aspect of the functioning of the Accused Set Top Products described in the claim chart operates while deployed to customer premises in a manner controlled and intended by Comcast.

124. Comcast provides no software, support, or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused Set Top Products while deployed to customer premises.

125. Comcast directly infringes at least Claims 1 and 2 of the ’008 Patent by using, importing, selling, and/or offering for sale the Accused Set Top Products (for example, the Arris AX013ANM STB) and/or the Accused Services (for example, monitoring signals by the Accused Set Top Products).

126. The use of the Accused Set Top Products by Comcast to, for example, demonstrate products in brick-and-mortar stores at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436, or to, for example, test those products, constitute acts of direct infringement of at least Claims 1 and 2 of the ’008 Patent.

127. Comcast had knowledge of the ’008 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

128. Comcast has been aware that it infringes the ’008 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

129. Comcast has known of or has been willfully blind to the ’008 Patent since before the August 9, 2022 communication from Entropic.

130. Comcast has been aware that it infringes the ’008 Patent since at least as early as receipt of Entropic’s August 9, 2022 communication, attached as Exhibit 17. Since obtaining knowledge of the ’008 Patent and its infringing activities, Comcast has failed to cease its infringing activities.

131. Customers and subscribers of Comcast infringe at least Claims 1 and 2 of the ’008 Patent by using the claimed system, at least during the use of the Accused Set Top Products (for example, the Arris AX013ANM STB).

132. Comcast actively induces customers’ direct infringement. For example, Comcast actively induces infringement of at least Claims 1 and 2 of the ’008 Patent by providing the Accused Set Top Products to Comcast customers with specific instructions and/or assistance (including installation) regarding the use of the Accused Set Top Products to infringe the ’008 Patent in accordance with the ordinary course of operation through the provision of the Accused Services. Comcast provides the full band digital tuning and signal monitoring functions claimed by the ’008 Patent via the Accused Services, which enable and induce its customers to directly infringe the ’008 Patent. For at least the above-listed reasons, Comcast aids, instructs, supports, and otherwise acts with the intent to cause an end user to use the Accused Set Top Products to infringe at least Claims 1 and 2 of the ’008 Patent.

133. Comcast contributes to the customers’ direct infringement. Comcast provides apparatuses, namely the Accused Set Top Products, that are used by customers to directly infringe at least Claims 1 and 2 of the ’008 Patent.

134. The Accused Set Top Products have no substantial noninfringing uses. When an end user uses the Accused Set Top Products to receive the Accused Services, the end user directly infringes at least Claims 1 and 2 of the '008 Patent. The Accused Set Top Products are especially made or especially adapted for use in an infringing manner.

135. Comcast's inducement of, and contribution to, the direct infringement of at least Claims 1 and 2 of the '008 Patent is continuous and ongoing through acts such as providing the Accused Set Top Products to Comcast customers, which enables those customers to receive the Accused Services; Comcast's provision of the Accused Services; and technical assistance provided by Comcast for equipment it provides to its customers in support of the provision of the Accused Services.

136. Comcast's infringement of the '008 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

137. Entropic has been damaged as a result of the infringing conduct alleged above. Comcast is liable to Entropic in an amount that compensates Entropic for Comcast'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.

138. Entropic is aware of no obligation to mark any instrumentality with the '008 Patent in accordance with 35 U.S.C. § 287.

COUNT IV

(Infringement of the '362 Patent)

139. Entropic incorporates by reference each allegation of Paragraphs 1 through 138.

140. The '362 Patent duly issued on December 8, 2015 from an application filed February 5, 2015, an application filed August 8, 2013, an application filed April 19, 2010, and, *inter alia* a provisional application filed April 17, 2009.

141. Entropic owns all substantial rights, interest, and title in and to the ’362 Patent, including the sole and exclusive right to prosecute this action and enforce the ’362 Patent against infringers and to collect damages for all relevant times.

142. The ’362 Patent generally describes a wideband receiver system that down converts a plurality of frequencies including desired television channels and undesired television channels, digitizes frequencies, selects desired television channels from the frequencies, and outputs the selected television channels to a demodulator as a digital data stream. A true and accurate copy of the ’362 Patent is attached hereto as Exhibit 7.

143. The ’362 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

144. The ’362 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

145. Comcast deploys one or more of the Accused Set Top Products in connection with operating and providing the Accused Services.

146. The Accused Set Top Products deployed by Comcast to customer premises remain the property of Comcast while deployed.

147. The Accused Set Top Products operate while deployed in a manner controlled and intended by Comcast.

148. As set forth in the attached nonlimiting claim chart (Exhibit 8), Comcast has directly infringed and is infringing at least Claim 11 of the ’362 Patent by using, importing, selling, and/or offering for sale the Accused Set Top Products and/or the Accused Services.

149. Each aspect of the functioning of the Accused Set Top Products described in the claim chart operates while deployed to customer premises in a manner controlled and intended by Comcast.

150. Comcast provides no software, support, or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused Set Top Products while deployed to customer premises.

151. Comcast directly infringes at least Claim 11 of the ’362 Patent by using, importing, selling, and/or offering for sale the Accused Set Top Products (for example, the Arris AX013ANM STB) and/or the Accused Services (for example, digitizing and selecting desired television channels provided by Comcast).

152. The use of the Accused Set Top Products by Comcast to, for example, demonstrate products in brick-and-mortar stores at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436, or to, for example, test those products, constitute acts of direct infringement of at least Claim 11 of the ’362 Patent.

153. Comcast had knowledge of the ’362 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

154. Comcast has been aware that it infringes the ’362 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

155. Comcast has known of or has been willfully blind to the ’362 Patent since before the August 9, 2022 communication from Entropic.

156. Comcast has been aware that it infringes the ’362 Patent since at least as early as receipt of Entropic’s August 9, 2022 communication, attached as Exhibit 17. Since obtaining knowledge of the ’362 Patent and its infringing activities, Comcast has failed to cease its infringing activities.

157. Customers and subscribers of Comcast infringe at least Claim 11 of the ’362 Patent by using the claimed system, at least during the use of the Accused Set Top Products (for example, the Arris AX013ANM STB).

158. Comcast actively induces customers’ direct infringement. For example, Comcast actively induces infringement of at least Claim 11 of the ’362 Patent by providing the Accused Set Top Products to Comcast customers with specific instructions and/or assistance (including installation) regarding the use of the Accused Set Top Products to infringe the ’362 Patent in accordance with the ordinary course of operation through the provision of the Accused Services. Comcast provides the

television channel digitization, selection, and output functions claimed by the '362 Patent via the Accused Services, which enable and induce its customers to directly infringe the '362 Patent. For at least the above-listed reasons, Comcast aids, instructs, supports, and otherwise acts with the intent to cause an end user to use the Accused Set Top Products to infringe at least Claim 11 of the '362 Patent.

159. Comcast contributes to the customers' direct infringement. Comcast provides apparatuses, namely the Accused Set Top Products, that are used by customers to directly infringe at least Claim 11 of the '362 Patent.

160. The Accused Set Top Products have no substantial noninfringing uses. When an end user uses the Accused Set Top Products to receive the Accused Services, the end user directly infringes at least Claim 11 of the '362 Patent. The Accused Set Top Products are especially made or especially adapted for use in an infringing manner.

161. Comcast's inducement of, and contribution to, the direct infringement of at least Claim 11 of the '362 Patent is continuous and ongoing through acts such as providing the Accused Set Top Products to Comcast customers, which enables those customers to receive the Accused Services; Comcast's provision of the Accused Services; and technical assistance provided by Comcast for equipment it provides to its customers in support of the provision of the Accused Services.

162. Comcast's infringement of the '362 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

163. Entropic has been damaged as a result of the infringing conduct alleged above. Comcast is liable to Entropic in an amount that compensates Entropic for Comcast'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.

164. No apparatus claims of the '362 Patent are presently asserted. Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

COUNT V

(Infringement of the ’826 Patent)

165. Entropic incorporates by reference each allegation of Paragraphs 1 through 164.

166. The ’826 Patent duly issued on November 21, 2017 from an application filed November 23, 2015, an application filed July 28, 2014, an application filed September 10, 2012, and, *inter alia* a provisional application filed September 8, 2011.

167. Entropic owns all substantial rights, interest, and title in and to the ’826 Patent, including the sole and exclusive right to prosecute this action and enforce the ’826 Patent against infringers and to collect damages for all relevant times.

168. The ’826 Patent generally describes a system that receives a signal having a plurality of channels, digitizes the received signal, and reports certain signal characteristics to the source of the received signal. A true and accurate copy of the ’826 Patent is attached hereto as Exhibit 9.

169. The ’826 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

170. The ’826 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

171. Comcast deploys one or more of the Accused Set Top Products in connection with operating and providing the Accused Services.

172. The Accused Set Top Products deployed by Comcast to customer premises remain the property of Comcast while deployed.

173. The Accused Set Top Products operate while deployed in a manner controlled and intended by Comcast.

174. As set forth in the attached nonlimiting claim chart (Exhibit 10), Comcast has directly infringed and is infringing at least Claim 1 of the ’826 Patent by using, importing, selling, and/or offering for sale the Accused Set Top Products and/or the Accused Services.

175. Each aspect of the functioning of the Accused Set Top Products described in the claim chart operates while deployed to customer premises in a manner controlled and intended by Comcast.

176. Comcast provides no software, support, or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused Set Top Products while deployed to customer premises.

177. Comcast directly infringes at least Claim 1 of the ’826 Patent by using, importing, selling, and/or offering for sale the Accused Set Top Products (for example, the Arris AX013ANM STB) and/or the Accused Services (for example, monitoring signals by the Accused Set Top Products).

178. The use of the Accused Set Top Products by Comcast to, for example, demonstrate products in brick-and-mortar stores at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436, or to, for example, test those products, constitute acts of direct infringement of at least Claim 1 of the ’826 Patent.

179. Comcast had knowledge of the ’826 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

180. Comcast has been aware that it infringes the ’826 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

181. Comcast has known of or has been willfully blind to the ’826 Patent since before the August 9, 2022 communication from Entropic.

182. Comcast has been aware that it infringes the ’826 Patent since at least as early as receipt of Entropic’s August 9, 2022 communication, attached as Exhibit 17. Since obtaining knowledge of the ’826 Patent and its infringing activities, Comcast has failed to cease its infringing activities.

183. Customers and subscribers of Comcast infringe at least Claim 1 of the ’826 Patent by using the claimed system, at least during the use of the Accused Set Top Products (for example, the Arris AX013ANM STB).

184. Comcast actively induces customers' direct infringement. For example, Comcast actively induces infringement of at least Claim 1 of the '826 Patent by providing the Accused Set Top Products to Comcast customers with specific instructions and/or assistance (including installation) regarding the use of the Accused Set Top Products to infringe the '826 Patent in accordance with the ordinary course of operation through the provision of the Accused Services. Comcast provides the signal monitoring claimed by the '826 Patent via the Accused Services, which enable and induce its customers to directly infringe the '826 Patent. For at least the above-listed reasons, Comcast aids, instructs, supports, and otherwise acts with the intent to cause an end user to use the Accused Set Top Products to infringe at least Claim 1 of the '826 Patent.

185. Comcast contributes to the customers' direct infringement. Comcast provides apparatuses, namely the Accused Set Top Products, that are used by customers to directly infringe at least Claim 1 of the '826 Patent.

186. The Accused Set Top Products have no substantial noninfringing uses. When an end user uses the Accused Set Top Products to receive the Accused Services, the end user directly infringes at least Claim 1 of the '826 Patent. The Accused Set Top Products are especially made or especially adapted for use in an infringing manner.

187. Comcast's inducement of, and contribution to, the direct infringement of at least Claim 1 of the '826 Patent is continuous and ongoing through acts such as providing the Accused Set Top Products to Comcast customers, which enables those customers to receive the Accused Services; Comcast's provision of the Accused Services; and technical assistance provided by Comcast for equipment it provides to its customers in support of the provision of the Accused Services.

188. Comcast's infringement of the '826 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

189. Entropic has been damaged as a result of the infringing conduct alleged above. Comcast is liable to Entropic in an amount that compensates Entropic for Comcast'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.

190. No apparatus claims of the '826 Patent are presently asserted. Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

COUNT VI

(Infringement of the '682 Patent)

191. Entropic incorporates by reference each allegation of Paragraphs 1 through 190.

192. The '682 Patent duly issued on November 20, 2018 from an application filed January 9, 2018, an application filed February 16, 2017, an application filed August 4, 2016, an application filed July 23, 2013, and, *inter alia* a provisional application filed July 23, 2012.

193. Entropic owns all substantial rights, interest, and title in and to the '682 Patent, including the sole and exclusive right to prosecute this action and enforce the '682 Patent against infringers and to collect damages for all relevant times.

194. The '682 Patent generally describes a method performed by a cable modem termination system and/or converged cable access platform, the method including determining a corresponding signal-to-noise-ratio ("SNR") related metric, assigning cable modems to service groups based on a respective corresponding SNR-related metric, generating a composite SNR-related metric based on a worst-case SNR profile, selecting a physical layer communication parameter to be used for communicating with a service group based on a composite SNR-related metric, and communicating with cable modems in the service group using the selected physical layer communication parameter. A true and accurate copy of the '682 Patent is attached hereto as Exhibit 11.

195. The '682 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

196. The ’682 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

197. Comcast deploys one or more of the Accused Cable Modem Products in connection with operating and providing the Accused Services.

198. The Accused Cable Modem Products deployed by Comcast to customer premises remain the property of Comcast while deployed.

199. The Accused Cable Modem Products operate while deployed in a manner controlled and intended by Comcast.

200. As set forth in the attached nonlimiting claim chart (Exhibit 12), Comcast has directly infringed and is infringing at least Claim 1 of the ’682 Patent by using, importing, selling, and/or offering for sale the Accused Services.

201. Each aspect of the functioning of the Accused Cable Modem Products described in the claim chart operates while deployed to customer premises in a manner controlled and intended by Comcast.

202. Comcast provides no software, support, or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused Cable Modem Products while deployed to customer premises.

203. Comcast directly infringes at least Claim 1 of the ’682 Patent by using, importing, selling, and/or offering for sale the Accused Services, which utilize cable modem termination systems and/or converged cable access platforms that communicate with the Accused Cable Modem Products (for example, the Technicolor CGM4140 cable modem).

204. The use of the Accused Services by Comcast to, for example, demonstrate products in brick-and-mortar stores at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436, or to, for example, test those products, constitute acts of direct infringement of at least Claim 1 of the ’682 Patent.

205. Comcast had knowledge of the '682 Patent no later than its receipt of Entropic's communication sent to Comcast on August 9, 2022.

206. Comcast has been aware that it infringes the '682 Patent no later than its receipt of Entropic's communication sent to Comcast on August 9, 2022.

207. Comcast has known of or has been willfully blind to the '682 Patent since before the August 9, 2022 communication from Entropic.

208. Comcast has been aware that it infringes the '682 Patent since at least as early as receipt of Entropic's August 9, 2022 communication, attached as Exhibit 17. Since obtaining knowledge of the '682 Patent and its infringing activities, Comcast has failed to cease its infringing activities.

209. Comcast's infringement of the '682 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights under the patent.

210. Entropic has been damaged as a result of the infringing conduct alleged above. Comcast is liable to Entropic in an amount that compensates Entropic for Comcast'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.

211. No apparatus claims of the '682 Patent are presently asserted. Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

COUNT VII

(Infringement of the '866 Patent)

212. Entropic incorporates by reference each allegation of Paragraphs 1 through 211.

213. The '866 Patent duly issued on July 5, 2022 from an application filed January 28, 2022, an application filed March 30, 2021, an application filed June 4, 2019, an application filed October 24, 2017, an application filed November 23, 2015, an application filed February 10, 2015, an application filed August 8, 2013, an application filed April 19, 2010, and, *inter alia* a provisional application filed April 17, 2009.

214. Entropic owns all substantial rights, interest, and title in and to the ’866 Patent, including the sole and exclusive right to prosecute this action and enforce the ’866 Patent against infringers and to collect damages for all relevant times.

215. The ’866 Patent generally describes a cable television device that digitizes an entire input signal, concurrently selects a plurality of desired channels from the digitized input signal without selecting any undesired channels, and provides the plurality of desired channels. A true and accurate copy of the ’866 Patent is attached hereto as Exhibit 13.

216. The ’866 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

217. The ’866 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

218. Comcast deploys one or more of the Accused Set Top Products in connection with operating and providing the Accused Services.

219. The Accused Set Top Products deployed by Comcast to customer premises remain the property of Comcast while deployed.

220. The Accused Set Top Products operate while deployed in a manner controlled and intended by Comcast.

221. As set forth in the attached nonlimiting claim chart (Exhibit 14), Comcast has directly infringed and is infringing at least Claim 27 of the ’866 Patent by using, importing, selling, and/or offering for sale the Accused Set Top Products and/or the Accused Services.

222. Each aspect of the functioning of the Accused Set Top Products described in the claim chart operates while deployed to customer premises in a manner controlled and intended by Comcast.

223. Comcast provides no software, support, or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused Set Top Products while deployed to customer premises.

224. Comcast directly infringes at least Claim 27 of the ’866 Patent by using, importing, selling, and/or offering for sale the Accused Set Top Products (for example, the Arris AX013ANM STB) and/or the Accused Services (for example, digitizing and selecting desired television channels from an input signal).

225. The use of the Accused Set Top Products by Comcast to, for example, demonstrate products in brick-and-mortar stores at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436, or to, for example, test those products, constitute acts of direct infringement of at least Claim 27 of the ’866 Patent.

226. Comcast had knowledge of the ’866 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

227. Comcast has been aware that it infringes the ’866 Patent no later than its receipt of Entropic’s communication sent to Comcast on August 9, 2022.

228. Comcast has known of or has been willfully blind to the ’866 Patent since before the August 9, 2022 communication from Entropic.

229. Comcast has been aware that it infringes the ’866 Patent since at least as early as receipt of Entropic’s August 9, 2022 communication, attached as Exhibit 17. Since obtaining knowledge of the ’866 Patent and its infringing activities, Comcast has failed to cease its infringing activities.

230. Customers and subscribers of Comcast infringe at least Claim 27 of the ’866 Patent by using the claimed system, at least during the use of the Accused Set Top Products (for example, the Arris AX013ANM STB).

231. Comcast actively induces customers’ direct infringement. For example, Comcast actively induces infringement of at least Claim 27 of the ’866 Patent by providing the Accused Set Top Products to Comcast customers with specific instructions and/or assistance (including installation) regarding the use of the Accused Set Top Products to infringe the ’866 Patent in accordance with the ordinary course of operation through the provision of the Accused Services. For at least the above-listed

reasons, Comcast aids, instructs, supports, and otherwise acts with the intent to cause an end user to use the Accused Set Top Products to infringe at least Claim 27 of the ’866 Patent.

232. Comcast contributes to the customers’ direct infringement. Comcast provides apparatuses, namely the Accused Set Top Products, that are used by customers to directly infringe at least Claim 27 of the ’866 Patent.

233. The Accused Set Top Products have no substantial noninfringing uses. When an end user uses the Accused Set Top Products to receive the Accused Services, the end user directly infringes at least Claim 27 of the ’866 Patent. The Accused Set Top Products are especially made or especially adapted for use in an infringing manner.

234. Comcast’s inducement of, and contribution to, the direct infringement of at least Claim 27 of the ’866 Patent is continuous and ongoing through acts such as providing the Accused Set Top Products to Comcast customers, which enables those customers to receive the Accused Services; Comcast’s provision of the Accused Services; and technical assistance provided by Comcast for equipment it provides to its customers in support of the provision of the Accused Services.

235. Comcast’s infringement of the ’866 Patent is, has been, and continues to be willful, intentional, deliberate, and/or in conscious disregard for Entropic’s rights under the patent.

236. Entropic has been damaged as a result of the infringing conduct alleged above. Comcast is liable to Entropic in an amount that compensates Entropic for Comcast’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.

237. Entropic is aware of no obligation to mark any instrumentality with the ’866 Patent in accordance with 35 U.S.C. § 287.

COUNT VIII

(Infringement of the ’206 Patent)

238. Entropic incorporates by reference each allegation of Paragraphs 1 through 237.

239. The ’206 Patent duly issued on July 26, 2022 from an application filed January 28, 2022, an application filed March 30, 2021, an application filed June 4, 2019, an application filed October 24, 2017, an application filed November 23, 2015, an application filed February 10, 2015, an application filed August 8, 2013, an application filed April 19, 2010, and, *inter alia* a provisional application filed April 17, 2009.

240. Entropic owns all substantial rights, interest, and title in and to the ’206 Patent, including the sole and exclusive right to prosecute this action and enforce the ’206 Patent against infringers and to collect damages for all relevant times.

241. The ’206 Patent generally describes a receiver system that receives an input signal from a cable network, digitizes the entire input signal, concurrently selects a plurality of desired channels from the digitized input signal without selecting any undesired channels, and provides the plurality of desired channels. A true and accurate copy of the ’206 Patent is attached hereto as Exhibit 15.

242. The ’206 Patent is directed to patent-eligible subject matter pursuant to 35 U.S.C. § 101.

243. The ’206 Patent is valid and enforceable, and presumed as such, pursuant to 35 U.S.C. § 282.

244. Comcast deploys one or more of the Accused Set Top Products in connection with operating and providing the Accused Services.

245. The Accused Set Top Products deployed by Comcast to customer premises remain the property of Comcast while deployed.

246. The Accused Set Top Products operate while deployed in a manner controlled and intended by Comcast.

247. As set forth in the attached nonlimiting claim chart (Exhibit 16), Comcast has directly infringed and is infringing at least Claim 25 of the ’206 Patent by using, selling, and/or offering for sale the Accused Services through the Accused Set Top Products.

248. Each aspect of the functioning of the Accused Set Top Products described in the claim chart operates while deployed to customer premises in a manner controlled and intended by Comcast.

249. Comcast provides no software, support, or other facility to customers to modify any aspect of the functioning described in the claim chart of the Accused Set Top Products while deployed to customer premises.

250. Comcast directly infringes at least Claim 25 of the ’206 Patent by using, importing, selling, and/or offering for sale the Accused Set Top Products (for example, the Arris AX013ANM STB) and/or the Accused Services (for example, digitizing and selecting desired television channels from an input signal).

251. The use of the Accused Services through the Accused Set Top Products by Comcast to, for example, demonstrate products in brick-and-mortar stores at 685 East Betteravia Rd., Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436, or to, for example, test those products, constitute acts of direct infringement of at least Claim 25 of the ’206 Patent.

252. Customers and subscribers of Comcast infringe at least Claim 25 of the ’206 Patent by using the claimed method, at least during receipt of the Accused Services utilizing, for example, the Accused Set Top Products (for example, the Arris AX013ANM STB).

253. The Accused Set Top Products have no substantial noninfringing uses. When an end user uses the Accused Set Top Products to receive the Accused Services, the end user directly infringes at least Claim 25 of the ’206 Patent. The Accused Set Top Products are especially made or especially adapted for use in an infringing manner.

254. Entropic has been damaged as a result of the infringing conduct alleged above. Comcast is liable to Entropic in an amount that compensates Entropic for Comcast'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.

255. No apparatus claims of the '206 Patent are presently asserted. Accordingly, there is no duty to mark pursuant to 35 U.S.C. § 287.

PRAYER FOR RELIEF

WHEREFORE, Entropic requests that:

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

B. The Court find that Comcast has indirectly infringed the Patents-in-Suit by inducing its customers to directly infringe the Patents-in-Suit and hold Comcast liable for such infringement;

C. The Court find that Comcast has indirectly infringed the Patents-in-Suit by contributing to its customers' direct infringement of the Patents-in-Suit and hold Comcast liable for such infringement;

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

E. The Court increase the damages to be awarded to Entropic by three times the amount found by the jury or assessed by the Court;

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

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

JURY TRIAL DEMANDED

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Entropic hereby requests a trial by jury on all issues raised by this Complaint.

Dated: February 10, 2023

Respectfully submitted,

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