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13 **UNITED STATES DISTRICT COURT**
14 **CENTRAL DISTRICT OF CALIFORNIA**

15 ENTROPIC COMMUNICATIONS, LLC,

16 Plaintiff,

17 v.

18 COMCAST CORPORATION; COMCAST
19 CABLE COMMUNICATIONS, LLC;
20 AND COMCAST CABLE
21 COMMUNICATIONS MANAGEMENT,
22 LLC,

23 Defendants.

Case No. 2:23-cv-01050

**ORIGINAL COMPLAINT FOR
PATENT INFRINGEMENT**

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ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

ENTROPIC EXHIBIT 2007

Comcast v. Entropic

IPR2025-00184

1 Plaintiff, Entropic Communications, LLC (“Entropic”), files this complaint for
2 patent infringement against Comcast Corporation (“Comcast Corp.”); Comcast Cable
3 Communications, LLC (“Comcast Communications”); and Comcast Cable
4 Communications Management, LLC (“Comcast Management”), (collectively
5 “Comcast”) and in support thereof alleges as follows:

6 1. This is a civil action arising under the patent laws of the United States,
7 35 U.S.C. § 1 *et seq.*, including specifically 35 U.S.C. § 271, based on Comcast’s
8 infringement of U.S. Patent Nos. 8,223,775 (the “’775 Patent”), 8,284,690 (the
9 “’690 Patent”), 8,792,008 (the “’008 Patent”), 9,210,362 (the “’362 Patent”), 9,825,826
10 (the “’826 Patent”), 10,135,682 (the “’682 Patent”), 11,381,866 (the “’866 Patent”), and
11 11,399,206 (the “’206 Patent”) (collectively, the “Patents-in-Suit”).

12 **THE PARTIES**

13 2. Entropic is a Delaware limited liability company with an office at
14 7150 Preston Road, Suite 300, Plano, Texas 75024.

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

17 4. Upon information and belief, Comcast Corp. is a corporation organized
18 and existing under the laws of Pennsylvania, with a principal place of business at
19 1701 JFK Boulevard, Philadelphia, Pennsylvania, 19103.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

8 24. The Comcast “Xfinity Residential Services Agreement” purports to bind
9 Comcast’s customers, including those customers in this District, to an agreement with
10 Comcast Communications for *inter alia*, the Accused Services that Comcast’s
11 customers receive through the infringing use of the Accused Cable Modem Products
12 and the Accused Set Top Products.¹ This agreement further provides that an entity other
13 than Comcast Communications provides the services. Upon information and belief, the
14 entity that provides the services to Comcast’s customers and subscribers is Comcast
15 Management.

16 25. Comcast Management further shares a leadership team with Comcast
17 Corp.² For example, Brian Roberts is the Chairman and Chief Executive Officer of both
18 Comcast Management and Comcast Corp.; Daniel Murdock is Executive Vice President
19 and Chief Accounting Officer of both Comcast Corp. and Comcast Management;
20 Francis Buono is Executive Vice President of Legal Regulatory Affairs and Senior
21 Deputy General Counsel of both Comcast Corp. and Comcast Management; and Karen
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23 ¹ <https://www.xfinity.com/Corporate/Customers/Policies/SubscriberAgreement>

24 ² Compare names found in Exhibit A to the attached [https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/video-](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)
25 [franchising-and-broadband-analysis/video-franchising-main/applications-received--](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)
26 [by-the-puc/2022/20220926-comcast-48a/comcast-48a-application.pdf](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
27 the identified personnel at Comcast’s corporate leadership website,
28 <https://corporate.comcast.com/company/leadership>.

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

3 **PRESUIT DISCUSSIONS**

4 26. Prior to filing this Complaint, Entropic sent a communication by physical
5 means to Comcast on August 9, 2022, in an attempt to engage Comcast and/or its agents
6 in good faith licensing discussions regarding Entropic's patent portfolio, including the
7 Patents-in-Suit.³ Comcast replied to the communication on October 10, 2022, asking
8 for additional information. On December 23, 2022, Entropic sent Comcast another
9 communication regarding a separate license to Entropic's patents for the field of the
10 standardized networking technology commonly called MoCA, and also seeking to
11 discuss with Comcast a typical non-disclosure agreement in order to share such
12 information. Comcast has not responded to that communication.

13 **ENTROPIC'S LEGACY AS A CABLE INNOVATOR**

14 27. Entropic Communications Inc. ("Entropic Inc."), the predecessor-in-
15 interest to Entropic as to the Patents-in-Suit, was founded in San Diego, California in
16 2001 by Dr. Anton Monk, Itzhak Gurantz, Ladd El Wardani and others. Entropic Inc.
17 was exclusively responsible for the development of the initial versions of the
18 Multimedia over Coax Alliance ("MoCA") standards, including MoCA 1.0, ratified in
19 2006, MoCA 1.1, ratified in 2007, and was instrumental in the development of MoCA
20 2.0, ratified in 2010. It also developed Direct Broadcast Satellite ("DBS") Outdoor Unit
21 ("ODU") single wire technology, and System-on-Chip ("SoC") solutions for set-top
22 boxes (STBs) in the home television and home video markets.

23 28. Under the technical guidance of Dr. Monk, Entropic Inc. grew to be
24 publicly listed on the NASDAQ in 2007. After the public listing, the company acquired
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26 _____
27 ³ The '206 Patent was not included in the list of issued Entropic patents sent on August
28 9, 2022.

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

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

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

13 31. In 2015, MaxLinear, Inc. (“MaxLinear”)—a leading provider of radio-
14 frequency, analog, digital, and mixed-signal semiconductor solutions—acquired
15 Entropic Inc., and the pioneering intellectual property developed by Dr. Monk and his
16 team.

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

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

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

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

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

5 37. Upon information and belief, Comcast monitored the ongoing prosecution
6 of the '362 Patent family, and therefore was aware the '866 Patent issued on July 5,
7 2022, and the '206 Patent issued on July 26, 2022.

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

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

12 **JURISDICTION AND VENUE**

13 40. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331
14 and 1338(a) because the claims herein arise under the patent laws of the United States,
15 35 U.S.C. § 1 et seq., including 35 U.S.C. § 271.

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

21 42. This Court has general personal jurisdiction over Comcast Corp. because
22 it conducts systematic and regular business within the State of California by, *inter alia*
23 providing cable television, internet, and phone services to businesses and residents
24 throughout the state. Comcast Corp.'s website states that, "Comcast is deeply
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1 committed to California, where our nearly 5,000 employees serve more than 3 million
2 customers throughout the state.”⁴

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

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

23 45. Upon information and belief, Comcast Corp., Comcast Communications,
24 and Comcast Management, by themselves and/or through their agents, offer various
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27 <https://california.comcast.com/about/#:%7E:text=Comcast%20is%20deeply%20com>
28 [mitted%20to,smart%20home%E2%80%9D%20and%20phone%20service](https://california.comcast.com/about/#:%7E:text=Comcast%20is%20deeply%20committed%20to,smart%20home%E2%80%9D%20and%20phone%20service)

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

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

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

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

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

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

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

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

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

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

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

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

25 57. The Accused Services are available for subscription from various physical
26 stores, including those at 685 East Betteravia Rd., Santa Maria, California, 93454; and
27 1145 N. H Street, Suite B, Lompoc, California 93436.

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

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

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

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

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

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

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

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

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

26 73. Comcast directly infringes at least Claims 18 and 19 of the '775 Patent by
27 using, importing, selling, and/or offering for sale the Accused Cable Modem Products
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1 (for example, the Technicolor CGM4140 cable modem) and/or the Accused Services
2 (for example, utilizing cable modem functions).

3 74. The use of the Accused Cable Modem Products by Comcast to, for
4 example, demonstrate products in brick-and-mortar stores at 685 East Betteravia Rd.,
5 Santa Maria, California, 93454; and 1145 N. H Street, Suite B, Lompoc, California
6 93436, or to, for example, test those products, constitute acts of direct infringement of
7 at least Claims 18 and 19 of the '775 Patent.

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

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

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

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

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

21 80. Comcast actively induces customers' direct infringement. For example,
22 Comcast actively induces infringement of at least Claims 18 and 19 of the '775 Patent
23 by providing the Accused Cable Modem Products to Comcast customers with specific
24 instructions and/or assistance (including installation) regarding the use of the Accused
25 Cable Modem Products to infringe the '775 Patent in accordance with the ordinary
26 course of operation through the provision of the Accused Services. For at least the
27 above-listed reasons, Comcast aids, instructs, supports, and otherwise acts with the
28

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

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

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

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

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

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

24 86. Entropic is aware of no obligation to mark any instrumentality with the
25 '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.

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

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

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

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

15 100. The use of the Accused Services by Comcast to, for example, demonstrate
16 products in brick-and-mortar stores at 685 East Betteravia Rd., Santa Maria, California,
17 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436, or to, for example,
18 test those products, constitute acts of direct infringement of at least Claims 7, 8, 11, 15,
19 and 16 of the '690 Patent.

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

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

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

26 104. Comcast has been aware that it infringes the '690 Patent since at least as
27 early as receipt of Entropic's August 9, 2022 communication, attached as Exhibit 17.
28

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

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

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

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

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

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

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

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

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

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

13 **COUNT III**

14 **(Infringement of the '008 Patent)**

15 113. Entropic incorporates by reference each allegation of Paragraphs 1 through
16 112.

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

19 115. Entropic owns all substantial rights, interest, and title in and to the '008
20 Patent, including the sole and exclusive right to prosecute this action and enforce the
21 '008 Patent against infringers and to collect damages for all relevant times.

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

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

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

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

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

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

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

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

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

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

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

28

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

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

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

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

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

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

25 133. Comcast contributes to the customers' direct infringement. Comcast
26 provides apparatuses, namely the Accused Set Top Products, that are used by customers
27 to directly infringe at least Claims 1 and 2 of the '008 Patent.
28

1 141. Entropic owns all substantial rights, interest, and title in and to the '362
2 Patent, including the sole and exclusive right to prosecute this action and enforce the
3 '362 Patent against infringers and to collect damages for all relevant times.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

20 157. Customers and subscribers of Comcast infringe at least Claim 11 of the
21 '362 Patent by using the claimed system, at least during the use of the Accused Set Top
22 Products (for example, the Arris AX013ANM STB).

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

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

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

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

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

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

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

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

28

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.

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

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

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

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

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

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

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

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

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

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

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

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

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

25 188. Comcast's infringement of the '826 Patent is, has been, and continues to
26 be willful, intentional, deliberate, and/or in conscious disregard for Entropic's rights
27 under the patent.
28

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

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

7 **COUNT VI**

8 **(Infringement of the '682 Patent)**

9 191. Entropic incorporates by reference each allegation of Paragraphs 1 through
10 190.

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

15 193. Entropic owns all substantial rights, interest, and title in and to the '682
16 Patent, including the sole and exclusive right to prosecute this action and enforce the
17 '682 Patent against infringers and to collect damages for all relevant times.

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

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

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

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

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

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

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

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

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

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

23 204. The use of the Accused Services by Comcast to, for example, demonstrate
24 products in brick-and-mortar stores at 685 East Betteravia Rd., Santa Maria, California,
25 93454; and 1145 N. H Street, Suite B, Lompoc, California 93436, or to, for example,
26 test those products, constitute acts of direct infringement of at least Claim 1 of the '682
27 Patent.

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

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

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

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

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

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

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

20 **COUNT VII**

21 **(Infringement of the '866 Patent)**

22 212. Entropic incorporates by reference each allegation of Paragraphs 1 through
23 211.

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

1 214. Entropic owns all substantial rights, interest, and title in and to the '866
2 Patent, including the sole and exclusive right to prosecute this action and enforce the
3 '866 Patent against infringers and to collect damages for all relevant times.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

20 230. Customers and subscribers of Comcast infringe at least Claim 27 of the
21 '866 Patent by using the claimed system, at least during the use of the Accused Set Top
22 Products (for example, the Arris AX013ANM STB).

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

1 reasons, Comcast aids, instructs, supports, and otherwise acts with the intent to cause
2 an end user to use the Accused Set Top Products to infringe at least Claim 27 of the
3 '866 Patent.

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

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

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

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

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

24 237. Entropic is aware of no obligation to mark any instrumentality with the
25 '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.

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

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

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

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

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

20 252. Customers and subscribers of Comcast infringe at least Claim 25 of the
21 '206 Patent by using the claimed method, at least during receipt of the Accused Services
22 utilizing, for example, the Accused Set Top Products (for example, the Arris
23 AX013ANM STB).

24 253. The Accused Set Top Products have no substantial noninfringing uses.
25 When an end user uses the Accused Set Top Products to receive the Accused Services,
26 the end user directly infringes at least Claim 25 of the '206 Patent. The Accused Set
27 Top Products are especially made or especially adapted for use in an infringing manner.
28

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

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

7 **PRAYER FOR RELIEF**

8 WHEREFORE, Entropic requests that:

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

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

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

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

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

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

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

25 **JURY TRIAL DEMANDED**

26 Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Entropic hereby
27 requests a trial by jury on all issues raised by this Complaint.
28

1 Dated: February 10, 2023

Respectfully submitted,

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