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Attorneys for Plaintiffs ROVI GUIDES,
INC. and ROVI TECHNOLOGIES CORP.

**UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA
WESTERN DIVISION**

ROVI GUIDES, INC. and ROVI
TECHNOLOGIES CORP.,

Plaintiffs,

v.

COMCAST CORPORATION; COMCAST
CABLE COMMUNICATIONS, LLC;
COMCAST CABLE COMMUNICATIONS
MANAGEMENT, LLC; COMCAST
BUSINESS COMMUNICATIONS, LLC;
COMCAST HOLDINGS CORPORATION;
COMCAST SHARED SERVICES, LLC;
COMCAST OF SANTA MARIA, LLC; and
COMCAST OF LOMPOC, LLC,

Defendants.

Case No. 2:18-cv-00253-AG-FFM

Judge: Andrew J. Guilford

**FIRST AMENDED
COMPLAINT FOR PATENT
INFRINGEMENT**

DEMAND FOR JURY TRIAL

1 Plaintiffs Rovi Guides, Inc. (Rovi Guides) and Rovi Technologies Corp. (Rovi
 2 Technologies) (collectively Rovi or Plaintiffs) hereby bring this First Amended
 3 Complaint for patent infringement against Comcast Corporation; Comcast Cable
 4 Communications, LLC; Comcast Cable Communications Management, LLC;
 5 Comcast Business Communications, LLC; Comcast Holdings Corporation; Comcast
 6 Shared Services, LLC; Comcast of Santa Maria, LLC; Comcast of Lompoc, LLC (all
 7 Comcast entities, collectively, Comcast or Defendants) for infringement of U.S. Patent
 8 Nos. 7,827,585 (the '585 Patent); 9,294,799 (the '799 Patent); 9,369,741 (the '741
 9 Patent); 9,578,363 (the '363 Patent); 9,621,956 (the '956 Patent); and 9,668,014 (the
 10 '014 Patent) (collectively, Asserted Patents). Plaintiffs, on personal knowledge as to
 11 their own acts, and upon information and belief as to all others based on investigation,
 12 alleges as follows:

13 **SUMMARY OF THE ACTION**

14 1. For over a decade, Comcast has built its interactive cable business on the
 15 back of Rovi's technology. Like every other major Pay-TV provider in the United
 16 States, Comcast licensed Rovi's technology for a fixed term. But unlike every one of
 17 its competitors, Comcast has refused to renew its license on acceptable terms.
 18 Although Comcast's license has expired, it continues to make, use, lease, offer to
 19 lease, and distribute products that not only practice Rovi's patented innovations, but
 20 also compete with Rovi's own Interactive Program Guide (IPG) products. This action
 21 seeks to end Comcast's unauthorized, infringing and competitive conduct.

22 2. Thirteen years ago, when Rovi's patent portfolio was less than half the
 23 size it is today and when it did not yet include many of the innovations that consumers
 24 have come to demand, such as Video-on-Demand, whole-home DVR technology, and
 25 robust mobile access to and control of in-home set-top boxes, Comcast paid Rovi over
 26 \$250 million for a fixed-term license to Rovi's patent portfolio (License). The License
 27 also included important, non-monetary terms.

1 3. Under the License, Comcast could use Rovi's patents in connection with
2 Comcast's and its affiliates' Pay-TV systems. But the License expired on March 31,
3 2016, and since then, Comcast has not only failed to remove its infringing products
4 and services from the market, it continues to provide those infringing products and
5 services to millions of its subscribers.

6 4. As part of the parties' negotiations in an attempt to renew Comcast's
7 License, Rovi provided Comcast notice of the Asserted Patents. Rovi also explained
8 that without renewing its License, Comcast would no longer have permission to make
9 use of Rovi's patented innovations. Instead of taking a license, Comcast has decided
10 to willfully infringe the Asserted Patents.

11 5. After the License expired, Rovi brought suit against Comcast in district
12 court and in an enforcement action at the International Trade Commission (ITC) for
13 patent infringement, asserting a small number of patents in its portfolio. In November,
14 the ITC issued orders in favor of Rovi barring Comcast from importing and
15 distributing Comcast's infringing set-top boxes (STBs) in the United States. *See*
16 *generally In re Certain Digital Video Receivers & Hardware & Software Components*
17 *Thereof*, Inv. No. 337-TA-1001, Comm'n Op. (Dec. 6, 2017) (Final Public Version).¹
18 And in response, Comcast has now disabled valuable features that infringed the
19 patents asserted in that ITC action, drawing complaints from Comcast's subscribers
20 on public forums.

21 6. And yet still, notwithstanding the ITC's orders, Comcast continues to
22 refuse to renew its license to Rovi's technology. Comcast's decision to continue to
23 willfully infringe stands in stark contrast to its prior recognition of the need for a
24 license from Rovi.

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27 ¹ The district court cases are stayed in the Southern District of New York (Case
28 Nos. 1:16-cv-09278 and 1:16-cv-09826).

7. Indeed, Comcast is the lone holdout. Virtually the entire Pay-TV industry is licensed to Rovi's portfolio of IPG patents. And in 2015 and 2016, every major Pay-TV provider in the United States—*except Comcast*—renewed its license, including AT&T, Charter / Spectrum, and DISH. So, while every one of its competitors pays a fair price for Rovi's innovative technology, Comcast alone attempts to use it for free. Rovi is forced, then, to bring this additional infringement suit asserting additional patents in order to enforce its patent rights.

THE PARTIES

I. ROVI: A PIONEER IN MEDIA TECHNOLOGY

8. Plaintiff Rovi Guides, Inc. is a Delaware corporation, with a principal place of business at 2160 Gold Street, San Jose, California, 95002. Rovi Guides is a wholly-owned subsidiary of Rovi Corporation and is the owner of the '585, '799, '741, '956, and '014 Patents.

9. Plaintiff Rovi Technologies Corp. is a Delaware corporation, with a principal place of business at 2160 Gold Street, San Jose, California, 95002. Rovi Technologies is a wholly-owned subsidiary of Rovi Corporation and is the owner of the '363 Patent.

10. Rovi is a global leader in digital entertainment technology solutions. Rovi's market-leading digital entertainment solutions enable the proliferation of access to media on electronic devices; these solutions include products and services related to IPGs and other content discovery solutions, personalized search and recommendation, advertising and programming promotion optimization, and other data and analytics solutions to monetize interactions across multiple entertainment platforms. Rovi's solutions are used by companies worldwide in applications such as cable, satellite, and internet protocol television (IPTV) receivers, including digital television set-top boxes (STBs) and DVRs; PCs, mobile, and tablet devices; and other means by which consumers connect to entertainment.

1 11. Rovi is, and has been, a pioneer and recognized leader in media
2 technology, including the technology used to facilitate consumer access to and
3 discovery of television and other audiovisual media. Since introducing one of the first
4 on-screen electronic program guides in 1981, Rovi has continued to innovate to
5 develop products, services, and other solutions to connect consumers with
6 entertainment.

7 12. Thanks largely to those innovations, Rovi has amassed a portfolio of over
8 1,200 issued U.S. patents, including the Asserted Patents, and 500 pending U.S. patent
9 applications, more than 250 of which were filed after Comcast's license expired. Rovi
10 has added to its patent portfolio through strategic acquisitions of groundbreaking
11 companies, such as Veveo, and of patent portfolios from world-class innovators, such
12 as Microsoft. Rovi's patented inventions are used daily by consumers of media
13 content, and are "must-haves" for television, other media service providers, and the
14 consumer electronics industry that supports them.

15 13. In recognition of the importance and value of Rovi's patented
16 technologies and Rovi's role as an innovator, every major U.S. Pay-TV provider,
17 including Comcast in the past, has taken a license to a portfolio of Rovi's patents.

18 **II. DEFENDANTS**

19 14. Upon information and belief, Comcast Corporation is a Pennsylvania
20 corporation, with a principal place of business at One Comcast Center, 1701 John F.
21 Kennedy Blvd., Philadelphia, Pennsylvania, 19103. Through its wholly-owned
22 subsidiaries, Comcast Corporation provides "Comcast" branded services, including
23 Xfinity digital video, audio, and other content services to customers. Subscribers to
24 Comcast's Xfinity television services receive a receiver, such as a set-top box. Upon
25 information and belief, Comcast Corporation develops the infringing Xfinity services
26 and equipment and provides the infringing receivers to customers.

1 15. Upon information and belief, Comcast Cable Communications, LLC is a
2 Delaware limited liability company, with a principal place of business at One Comcast
3 Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania, 19103. Upon
4 information and belief, Comcast Cable Communications, LLC is a subsidiary of
5 Comcast Corporation. Upon information and belief, Comcast Cable Communications,
6 LLC, jointly with the other Defendants, develops the infringing Xfinity services and
7 equipment and provides infringing receivers to customers.

8 16. Upon information and belief, Comcast Cable Communications
9 Management, LLC is a Delaware limited liability company, with a principal place of
10 business at One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia,
11 Pennsylvania, 19103. Upon information and belief, Comcast Cable Communications
12 Management, LLC is a subsidiary of Comcast Corporation. Upon information and
13 belief, Comcast Cable Communications Management, LLC, jointly with the other
14 Defendants, develops the infringing Xfinity services and equipment and provides
15 infringing receivers to customers.

16 17. Upon information and belief, Comcast Business Communications, LLC
17 is a Pennsylvania limited liability company, with a principal place of business at One
18 Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania, 19103.
19 Upon information and belief, Comcast Business Communications, LLC is a subsidiary
20 of Comcast Corporation. Upon information and belief, Comcast Business
21 Communications, LLC, jointly with the other Defendants, develops the infringing
22 Xfinity services and equipment and provides infringing receivers to customers.

23 18. Upon information and belief, Comcast Holdings Corporation is a
24 Pennsylvania corporation, with a principal place of business at One Comcast Center,
25 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania, 19103. Upon information
26 and belief, Comcast Holdings Corporation is a subsidiary of Comcast Corporation.
27 Upon information and belief, Comcast Holdings Corporation, jointly with the other
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1 Defendants, develops the infringing Xfinity services and equipment and provides
2 infringing receivers to customers.

3 19. Upon information and belief, Comcast Shared Services, LLC is a
4 Delaware corporation, with a principal place of business at 330 N. Wabash Ave. 22,
5 Chicago, IL, 60611-3586. Upon information and belief, Comcast Shared Services,
6 LLC is a subsidiary of Comcast Corporation. Upon information and belief, Comcast
7 Shared Services, LLC, jointly with the other Defendants, develops the infringing
8 Xfinity services and equipment and provides infringing receivers to customers.

9 20. Upon information and belief, Comcast of Santa Maria, LLC is a
10 Delaware corporation, with a principal place of business at 685 East Betteravia Rd.,
11 Santa Maria, CA 93454. Upon information and belief, Comcast of Santa Maria, LLC
12 is a subsidiary of Comcast Corporation. Upon information and belief, Comcast of
13 Santa Maria, LLC, jointly with the other Defendants, develops the infringing Xfinity
14 services and equipment and provides infringing receivers to customers.

15 21. Upon information and belief, Comcast of Lompoc, LLC is a Delaware
16 corporation, with a principal place of business at 1145 North H Street, Suite B,
17 Lompoc, CA 93436. Upon information and belief, Comcast of Lompoc, LLC is a
18 subsidiary of Comcast Corporation. Upon information and belief, Comcast of
19 Lompoc, LLC, jointly with the other Defendants, develops the infringing Xfinity
20 services and equipment and provides infringing receivers to customers.

21 **JURISDICTION AND VENUE**

22 22. This is an action arising under the patent laws of the United States, 35
23 U.S.C. §§ 1, *et seq.* Accordingly, this Court has subject matter jurisdiction pursuant
24 to 28 U.S.C. §§ 1331 (federal question) and 1338(a) (action arising under an Act of
25 Congress relating to patents). Venue is proper in this judicial district under 28 U.S.C.
26 §§ 1391 and 1400(b).

23. More specifically, this action for patent infringement involves Comcast's manufacture, use, sale and/or lease, offer for sale and/or lease, and/or importation into the United States of infringing receivers, including STBs (and their peripheral devices, such as remote control units), having hardware and software components, including, in particular, IPG software, alone or in conjunction with Comcast servers and/or mobile applications (the Accused Products) that are used in and with Comcast's Xfinity video services.

24. This action also involves Comcast's attempts and offers to license, or otherwise provide to other service providers, products which are not licensed to the Asserted Patents, including Comcast's X1 IPG Product (an Accused Product), which is designed to practice one or more claims of the Asserted Patents, and which competes with Rovi's own IPG products.

25. The Accused Products include Comcast digital video receivers and related hardware and software, including at least the associated IPG software. Such Accused Products include at least the Comcast Xfinity receivers with the following model numbers: ARRIS XG1v1 MX011ANM, ARRIS XG1v3 AX013ANM, ARRIS XG1v1 MX011ANC, ARRIS XG1v3 AX013ANC, ARRIS XG1v4-A AX014ANM, ARRIS XG1v4-A AX014ANC, Pace RNG150 PCRNG150BNMD, Pace RNG150 PCRNG150BNCD, Pace RNG150 PR150BNM, Pace RNG150 PR150BNC, Pace XG1v1 PCX001ANMD, Pace XG1v1 PCX001ANCD, Pace XG1v3 PX013ANM, Pace XG1v3 PX013ANC, Pace XG2v2-P PX022ANC, Pace XG2v2-P PX022ANM, Pace XiD-P PXD01ANI, Pace Xi3v2 PX032ANI, Pace Xi5-P PX051AEI, Cisco RNG150N, Cisco XiD-C CXD01ANI, Humax Xi3-H HX003AN, Samsung RNG150N SR150BNM, Samsung RNG150N SR150BNC, Samsung XG2v2-S SX022ANC, and Samsung XG2v2-S SX022ANM. Accused Products also include Comcast's X1 remote and streaming TV apps.²

² See *Set up the XFINITY TV Remote App*, XFINITY,

26. Upon information and belief, Comcast operates at least two Xfinity stores physically located in the Central District of California. Upon information and belief, Comcast conducts its regular, established business at these locations. These Xfinity stores provide infringing products to customers in this District. Comcast lists these Xfinity stores on its website and holds them out as places where customers can obtain infringing products.³ Upon information and belief, Comcast owns and/or leases the premises where these Xfinity stores are located. Upon information and belief, these Xfinity stores are staffed by persons directly employed by Comcast, many of whom live in this District.

27. This Court has general and/or specific personal jurisdiction over Comcast Corporation, and venue is proper, in part because Comcast Corporation, directly and/or in combination with its subsidiaries and/or through its agents, does continuous and systematic business in this district, including by providing infringing products and services to residents of the Central District of California, by providing infringing products and services that it knew would be used within this district, and/or by participating in the solicitation of business from residents of this district.

28. In addition, upon information and belief, Comcast Corporation, directly or through its subsidiaries, places infringing products in the stream of commerce, which is directed at this district, with the knowledge and/or understanding that such products will be sold, leased, or otherwise provided to customers within this district. In addition, upon information and belief, Comcast Corporation, directly or through its subsidiaries, employs individuals within the Central District of California, including employees who provide infringing products and services to customers here, and

³ <https://www.xfinity.com/support/xfinity-apps/setting-up-the-cable-tv-app/> (last visited Dec. 28, 2017); Xfinity Stream App, XFINITY, <https://www.xfinity.com/get-stream> (last visited Dec. 28, 2017).

See, e.g., 685 East Betteravia Rd, COMCAST, <https://www.xfinity.com/local/ca/santa-maria/685-east-betteravia-rd.html> (last visited Dec. 28, 2017).

1 maintains offices and facilities here. Comcast Corporation, directly or through its
2 subsidiaries, operates highly commercial websites through which regular sales and/or
3 leases of products and/or sales of services are made to customers in this district,
4 including products and services that, upon information and belief, infringe the
5 Asserted Patents.

6 29. This Court has general and/or specific personal jurisdiction over Comcast
7 Cable Communications, LLC, and venue is proper, in part because Comcast Cable
8 Communications, LLC, directly and/or in combination with other Comcast entities
9 and/or through its agents, does continuous and systematic business in this district
10 including by providing infringing products and services to residents of the Central
11 District of California, by providing infringing products and services that it knew
12 would be used within this district, and/or by participating in the solicitation of
13 business from residents of this district. In addition, upon information and belief,
14 Comcast Cable Communications, LLC, directly or through its subsidiaries, places
15 infringing products in the stream of commerce, which is directed at this district, with
16 the knowledge and/or understanding that such products will be sold, leased, or
17 otherwise provided to customers within this district. In addition, upon information and
18 belief, Comcast Cable Communications, LLC, directly or through its subsidiaries,
19 employs individuals within the Central District of California, including employees
20 who provide infringing products and services to customers here, and maintains offices
21 and facilities here. Comcast Cable Communications, LLC, directly or through its
22 subsidiaries, operates highly commercial websites through which regular sales and/or
23 leases of products and/or sales of services are made to customers in this district,
24 including products and services that, upon information and belief, infringe the
25 Asserted Patents.

26 30. This Court has general and/or specific personal jurisdiction over Comcast
27 Cable Communications Management, LLC, and venue is proper, in part because
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Comcast Cable Communications Management, LLC, directly and/or in combination with other Comcast entities and/or through its agents, does continuous and systematic business in this district including by providing infringing products and services to residents of the Central District of California, by providing infringing products and services that it knew would be used in this district, and/or by participating in the solicitation of business from residents of this district. In addition, upon information and belief, Comcast Cable Communications Management, LLC, directly or through its subsidiaries, places infringing products in the stream of commerce, which is directed at this district, with the knowledge and/or understanding that such products will be sold, leased, or otherwise provided to customers within this district. In addition, upon information and belief, Comcast Cable Communications Management, LLC, directly or through its subsidiaries, employs individuals within the Central District of California, including employees who provide infringing products and services to customers here, and maintains offices and facilities here. Comcast Cable Communications Management, LLC, directly or through its subsidiaries, operates highly commercial websites through which regular sales and/or leases of products and/or sales of services are made to customers in this district, including products and services that, upon information and belief, infringe the Asserted Patents.

31. This Court has general and/or specific personal jurisdiction over Comcast of Santa Maria, LLC and venue is proper, in part, because Comcast of Santa Maria, LLC, directly and/or in combination with other Comcast entities and/or through its agents, does continuous and systematic business in this district including by providing infringing products and services to residents of the Central District of California, by providing infringing products and services that it knew would be used within this district, and/or by participating in the solicitation of business from residents of this district. In addition, upon information and belief, Comcast of Santa Maria, LLC, directly or through its subsidiaries, places infringing products within the stream of

1 commerce, which is directed at this district, with the knowledge and/or understanding
 2 that such products will be sold, leased, or otherwise provided to customers within this
 3 district. In addition, upon information and belief, Comcast of Santa Maria, LLC,
 4 directly or through its subsidiaries, has a regular and established business within the
 5 Central District of California, at least at the Comcast store and service center at 685
 6 East Betteravia Rd., Santa Maria, CA 93454. In addition, upon information and belief,
 7 Comcast of Santa Maria, LLC, directly or through its subsidiaries, employs
 8 individuals within the Central District of California, including employees who provide
 9 infringing products and services to customers here, and maintains offices and facilities
 10 here. Comcast of Santa Maria, LLC, directly or through its subsidiaries, operates
 11 highly commercial websites through which regular sales and/or leases of products
 12 and/or sales of services are made to customers in this district, including products and
 13 services that, upon information and belief, infringe the Asserted Patents.

14 32. This Court has general and/or specific personal jurisdiction over Comcast
 15 of Lompoc, LLC, and venue is proper, in part because Comcast of Lompoc, LLC,
 16 directly and/or in combination with other Comcast entities and/or through its agents,
 17 does continuous and systematic business in this district including by providing
 18 infringing products and services to residents of the Central District of California, by
 19 providing infringing products and services that it knew would be used in this district,
 20 and/or by participating in the solicitation of business from residents of this district. In
 21 addition, upon information and belief, Comcast of Lompoc, LLC, directly or through
 22 its subsidiaries, places infringing products in the stream of commerce, which is
 23 directed at this district, with the knowledge and/or understanding that such products
 24 will be sold, leased, or otherwise provided to customers in this district. In addition,
 25 upon information and belief, Comcast of Lompoc, LLC, directly or through its
 26 subsidiaries, has a regular and established business within the Central District of
 27 California, at least at the Comcast store and service center at 1145 North H Street,
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1 Suite B, Lompoc, CA 93436. In addition, upon information and belief, Comcast of
2 Lompoc, LLC, directly or through its subsidiaries, employs individuals in the Central
3 District of California, including employees who provide infringing products and
4 services to customers here, and maintains offices and facilities here. Comcast of
5 Lompoc, LLC, directly or through its subsidiaries, operates highly commercial
6 websites through which regular sales and/or leases of products and/or sales of services
7 are made to customers in this district, including products and services that, upon
8 information and belief, infringe the Asserted Patents.

9 33. This Court has general and/or specific personal jurisdiction over the
10 remaining Defendants, and venue is proper, in part because said Defendants, directly
11 and/or in combination with Comcast Corporation and/or other Comcast Corporation
12 subsidiaries, and/or through their agents, do continuous and systematic business in this
13 district including by providing infringing products and services to residents of the
14 Central District of California, by providing infringing products and services that it
15 knew would be used within this district, and/or by participating in the solicitation of
16 business from residents of this district.

17 34. Venue is further proper in this Court because Rovi maintains its business
18 in this District. One of Rovi's largest offices is situated at 2233 N. Ontario St.,
19 Burbank, CA 91504 and employs approximately 85 employees, including key
20 witnesses who will testify in this action.

21 35. Upon information and belief, venue is proper in the Central District of
22 California because at least four of the non-employee inventors reside in this district.
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FACTUAL BACKGROUND

I. ROVI'S HISTORY OF INNOVATION AND COMMERCIAL SUCCESS

36. Since the launch of TV Guide Magazine in 1953, the Rovi family of companies (which includes, through mergers, joint ventures, and acquisitions, United Video, TV Guide Onscreen, StarSight Telecast, Prevue, TV Guide, Video Guide, Gemstar, Aptiv Digital, Macrovision, Veveo, and FanTV) has been a pioneer and recognized leader in media technology, including the technology used to facilitate consumer access to television and other audiovisual media. Today, Rovi's market-leading digital entertainment solutions enable the proliferation of access to media on electronic devices; these solutions include products and services related to IPGs and other content discovery solutions, personalized search and recommendation, advertising and programming promotion optimization, and other data and analytics solutions to monetize interactions across multiple entertainment platforms. Rovi's solutions are used by companies worldwide in applications such as cable, satellite, and internet protocol television (IPTV) receivers (including digital television STBs and digital video recorders (DVRs)); PCs, mobile, and tablet devices; and other means by which consumers connect to entertainment.

37. In particular, Rovi has developed the substantial majority of the pioneering advances in IPG technology and related functionality for subscription-based television broadcasting.

38. In 1981, a Rovi family of companies introduced one of the first, if not the first, on-screen electronic program guide (EPG). This EPG, displayed on a dedicated cable channel, allowed Pay-TV providers to provide scrolling on-screen television listings to their customers throughout the day. Rovi's early EPG product was widely adopted by North American cable systems, and became the way in which consumers discovered the content they desired.

1 39. In the late 1980s, another one of the Rovi family of companies invented
2 the VCR Plus®, which significantly simplified programming of videocassette
3 recorders, enabling television subscribers to more easily record the content they
4 desired. VCR Plus® was a resounding success, and helped establish the Rovi family
5 of companies as the frontrunner in the program guide industry by broadly licensing its
6 VCR Plus® product and related technologies.

7 40. Around 1994, another of the Rovi family of companies launched the first
8 IPG services designed for use in Pay-TV television receivers. These early IPGs were
9 full-screen grid guides that displayed television program listings by time and channel
10 in a two-dimensional grid. Using a remote control, a user could interact with the
11 guides to see, for example, what was on television at a later time or on a different
12 channel, instead of depending on the automated scrolling of a traditional on-screen
13 guide.

14 41. Rovi's IPG technologies today allow for multi-screen entertainment
15 across a variety of user devices (e.g., seamless access to the same media from multiple
16 devices and device types, like a television and mobile device), and provide
17 customizable listings for televisions, receivers, game consoles, and mobile devices,
18 thereby allowing consumers to find, discover, and enjoy the content they want, when
19 they want it, and where they want to access it. These and other innovations help users
20 navigate an increasingly overwhelming amount of content, and discover and access
21 entertainment they desire on virtually any platform or device.

22 42. To maintain Rovi's leadership position in this industry, Rovi has invested
23 and continues to invest significant resources in the design, development and licensing
24 of its IPGs and related technologies used by television service providers (as well as
25 others in the digital entertainment industry). Since 2014 alone, Rovi has invested over
26 \$331 million in research and development. Furthermore, Rovi has over 700 U.S.-
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1 based, full-time employees supporting the development of new products and
2 platforms.

3 43. Rovi has incorporated its technological innovations resulting from its
4 significant research and development into its commercial products. For example,
5 Rovi's i-Guide® and Passport® Guide are IPGs that provide comprehensive listings,
6 intuitive search capabilities, advanced DVR and Video-on-Demand functionality, and
7 HD support. Rovi's Advanced Search and Recommendation (ASR) software is a
8 product that provides an advanced television experience through comprehensive
9 listings and intuitive search capabilities for expansive content offerings and state-of-
10 the-art DVR and VOD functionality. In addition, Rovi is investing heavily in next-
11 generation IPTV solutions.

12 44. The value of Rovi's innovative solutions has been recognized by
13 numerous leading Pay-TV service providers, who license these technologies and
14 solutions from Rovi. As of December 31, 2015, Rovi's technology was used by over
15 184 million subscribers worldwide.

16 45. In addition, Rovi's innovative IPG related technologies have been
17 recognized through numerous industry awards and accolades. For example, in 2012
18 Rovi was awarded a Technology and Engineering Emmy® Award for its "Pioneering
19 On-Screen Interactive Program Guides" that assist "viewer[s] in rapidly locating their
20 desired program." These Emmy® awards are designed to recognize "developments . .
21 . involved in engineering technologies which either represent so extensive an
22 improvement on existing methods or are so innovative in nature that they materially
23 have affected the transmission, recording, or reception of television."⁴

24 46. Rovi's history of innovation is also reflected in the extensive patent
25 coverage that Rovi has obtained for its inventions. This portfolio, which includes
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27 ⁴ *Technology & Engineering*, THE NATIONAL ACADEMY OF TELEVISION ARTS &
28 SCIENCES, <http://emmyonline.com/tech> (last visited Dec. 28, 2017).

1 more than 4,500 issued or pending patents worldwide, is a direct result of Rovi's
2 substantial and ongoing investment in research and development. The Asserted
3 Patents are reflective of this history of innovation, embodying a number of firsts in the
4 development of IPG-related technologies.

5 47. Rovi's current commercial products, including in particular its i-Guide®,
6 Passport® Guide, and TotalGuide xD IPG solutions, as well as ASR, embody Rovi's
7 patented technology, including certain of the Asserted Patents.

8 48. The strength of Rovi's patent portfolio has been recognized by the
9 entertainment industry. Every major U.S. Pay-TV provider, including AT&T (which
10 recently acquired DirecTV), Charter/Spectrum, and Dish/EchoStar, among others, has
11 acknowledged the value of Rovi's innovations by taking licenses from Rovi for its
12 patents covering these innovations—and renewing those licenses in the last two years.
13 Comcast itself once licensed Rovi's portfolio for over \$250 million for a fixed term.
14 Rovi has also licensed its patent portfolio to many leading content providers,
15 including both traditional media (cable, satellite, IPTV) and new media (online,
16 mobile) video providers, as well as manufacturers and distributors of receivers and
17 other consumer electronic devices. Yet, despite this widespread recognition of the
18 value and importance of Rovi's patent portfolio, Comcast decided to free ride,
19 refusing to renew its license and compensate Rovi.

20 49. Rovi's long-term financial success depends in part on its ability to
21 establish, maintain, and protect its proprietary technology through patents. Comcast's
22 infringement presents significant and ongoing harm to Rovi's business.

II. COMCAST HAS LONG BENEFITED FROM ITS USE OF ROVI'S PATENTED TECHNOLOGIES

50. Prior to Comcast first licensing Rovi's patents, it measured business success with reference to how many subscribers it had. Comcast did not historically measure its business success by the quality of the services it provided to its customers. Comcast touted itself in its 2002 10K as being the "largest cable operator in the United States."

51. Nonetheless, beginning in or around 2004, Comcast began attributing revenue growth to its "advanced services" including Video-on-Demand (VOD) and digital-video-recording (DVR). Comcast recognized that its future business success depended on product differentiation from both other cable operators and satellite providers—product differentiation provided by offering advanced services to its customers.

52. In 2004, to secure the growth in its "advanced services," Comcast entered into a license agreement with Gemstar (a forerunner to Rovi) (2004 Agreement) which Comcast described in SEC filings as an effort "to acquire and develop technology that will drive product differentiation and new applications and extend our nationwide fiber-optic network"⁵ and enhance Comcast's IPG platform to improve Comcast's ability to compete with its competitors. Importantly, the 2004 Agreement was not a sale of technology from Gemstar to Comcast by which Comcast "acquired" the technology from Gemstar; it was a license for a fixed term during which Comcast had permission from Gemstar to use that technology for specific purposes, but only until the license expired. The 2004 Agreement included a Joint Venture with Gemstar called GuideWorks, under which Gemstar would help Comcast develop a next generation IPG platform, as well as a license to Gemstar's guidance patent portfolio.

⁵ See Comcast Annual Report 2004 at 18, available at http://www.annualreports.com/HostedData/AnnualReportArchive/c/NASDAQ_CMC_SA_2004.pdf.

53. Comcast's use of Rovi's (then Gemstar's) technology to develop and enhance IPGs to be offered by Comcast is evidenced, among other ways, by Comcast's description of the 2004 Agreement in the Comcast 2006 10K SEC filing. Comcast stated, "This [2004 Agreement] allows us to utilize Gemstar's intellectual property and technology and the TV Guide brand and content on our interactive program guides. . . . In addition, we and Gemstar formed an entity to develop and enhance interactive programming guides."⁶

54. In order to further secure improved products and services, in 2004, "Comcast sign[ed] strategic agreements with Gemstar-TV Guide and Microsoft to develop enhancements to the user interface and the functionality of its service offerings."⁷

55. Comcast's 10K SEC filings from 2004 to date consistently evidence Comcast's recognition of the importance to its profitability and success of the technology needed to provide advanced services in connection with its digital cable and high-speed internet services, including VOD, high-definition television (HDTV) programming and DVRs. In fact, in its 2004 10K, Comcast noted that its "subscriber growth is attributable to new and improved products and advanced services in our digital cable and high-speed Internet services."⁸ Each filing thereafter provides additional evidence that Comcast recognized the importance of its advanced services. Increased competition from telecommunications providers, ISPs, and satellite companies in the provision and delivery of new and advanced services was, and since 2004 has been, one of Comcast's greatest competitive concerns.

56. Rovi is informed and believes that the technology Rovi made available to Comcast during the term of the 2004 Agreement was foundational to Comcast's

⁶ *Id.* at 48.

⁷ *See Comcast Timeline*, COMCAST, <http://corporate.comcast.com/news-information/timeline> (last visited Dec. 28, 2017).

⁸ *See Comcast Annual Report 2004* at 18.

ability from 2004 to the present to offer new and advanced services, to grow its business, and to develop its own IPG and advanced service platforms, and throughout that period Comcast personnel were aware of these facts. In 2010, Comcast and Rovi terminated their joint venture, while at the same time Comcast reaffirmed its need for Rovi technology by entering into an expanded patent license agreement with Rovi. Indeed, Rick Rioboli, SVP, Comcast Metadata Products and Search Services, remarked that “Rovi has been a very important partner of ours for many years.”

57. In 2012, during the pendency of its soon-to-expire license to Rovi’s patents, Comcast launched the X1 IPG Product, which it describes as “a cloud-enabled video platform that transformed the TV into an interactive, integrated entertainment experience.”⁹

58. In 2014, also during the pendency of its soon-to-expire License to Rovi’s patents, Comcast introduced the next generation of its X1 IPG Product, which it describes as “designed to make navigation, search and discovery of content easier and quicker than ever before. The X1 IPG Product gives customers an interactive TV experience, providing instant access to all of their Entertainment.”¹⁰

59. As set forth herein, Comcast’s X1 IPG Product is designed to and does infringe at least one claim of each of the Asserted Patents.

60. Comcast has an installed base of more than 12 million X1 users and is continuing to market that product throughout the United States in an attempt to further expand the reach of its X1 IPG Product.

61. Even today, Comcast recognizes the critical role that its infringing IPG platform has in driving product differentiation and consumer demand for its products and services. For example, Comcast recently explained to the FCC that “the interface

⁹ See *Our Story*, COMCAST, <http://corporate.comcast.com/our-company/our-story>, archived at <https://web.archive.org/web/20170519044316/http://corporate.comcast.com/our-company/our-story>.

¹⁰ *Id.*

1 is how MVPDs [multichannel video program distributors] . . . differentiate themselves
 2 in a highly competitive marketplace.”¹¹ Comcast further explained that, “[f]aced with
 3 fierce competition, providers are intent on giving consumers the flexibility they
 4 demand to access video programming on the devices of their choice, and delivering
 5 more value to customers.”¹²

6 62. On March 31, 2016 Comcast’s license to use the Rovi technology
 7 expired. Comcast has refused to execute a new license; yet continues to practice the
 8 inventions claimed in Rovi’s patents, and continues to offer, lease, and distribute the
 9 X1 product and enhanced IPG platform that not only infringes Rovi’s patents, but
 10 could not and would not ever have been lawfully developed but for the license of
 11 Rovi’s technology granted to Comcast in the 2004 Agreement, which has now
 12 expired.

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26 ¹¹ See Comments of Comcast Corporation and NBCUniversal Medica, LLC, at 34
 27 n.63 (April 22, 2016), available at [http://corporate.comcast.com/images/2016-04-22-](http://corporate.comcast.com/images/2016-04-22-AS-FILED-Comcast-DSTAC-STB-NPRM-Comments.pdf)
 28 [AS-FILED-Comcast-DSTAC-STB-NPRM-Comments.pdf](http://corporate.comcast.com/images/2016-04-22-AS-FILED-Comcast-DSTAC-STB-NPRM-Comments.pdf).

¹² *Id.* at 3.

III. COMCAST AND ROVI ARE COMPETITORS IN THE DEVELOPMENT AND PROVISION OF IPG SOLUTIONS TO CABLE PROVIDERS

63. Comcast markets and licenses its Accused Products, including the X1 IPG Product, in the United States, to other Pay-TV providers.

64. Comcast describes its Accused Products, including the X1 IPG Product, as delivering the simplest, fastest and most complete way to access all your entertainment on all your screens. Comcast explains that with its Accused Products, including the X1 IPG Product, a user experiences TV and Internet together like never before with advanced search, personalized recommendations, apps at home and on the go, and the fastest in-home WiFi for all rooms, all devices, all the time.

65. Rovi also markets innovative guide products that compete with Comcast's Accused Products, including the X1 IPG Product, in the United States.

66. Since 1981, Rovi has improved the traditional grid-based TV guide to meet consumer expectations. Today, Rovi's guides integrate program information, personalized recommendations, related Internet resources, and social media for various devices. Rovi's guides, including its new next-generation guides, offer global, multi-screen entertainment offerings for service providers and application developers. Rovi's guides provide customizable listings for TVs, set-top boxes, game consoles, mobile devices and websites, so consumers can find and discover content when and where they want.

67. Rovi's guide products compete with Comcast's Accused Products, including the X1 IPG Product, in the United States. For example, Cox Communications has, for the past several years, licensed Rovi's Passport Guide IPG platform, which Cox has deployed to millions of subscribers. Upon information and belief, Comcast marketed its X1 IPG Product to Cox, and Cox has already begun deploying the X1 platform to new subscribers as a replacement to Rovi's platform.

68. Similarly, Cequel III Programming, LLC d/b/a Suddenlink Communications (Suddenlink) has, for the past several years, licensed Rovi's i-Guide IPG platform, which Suddenlink has deployed to hundreds of thousands of subscribers. Comcast has also marketed its X1 syndication product to Suddenlink, in direct competition to Rovi.

69. In addition to marketing its X1 IPG Product to other Pay-TV providers, upon information and belief, Comcast has continued to promote its infringing products and services by announcing, on April 20, 2016, the launch of its Xfinity TV Partner Program, in order to encourage and enable television and consumer electronics companies to implement Comcast's Xfinity IPG app, which "will provide access to [Comcast's] TV cable service, . . . live and on demand programming and cloud DVR recordings, and will be available on partners' smart TVs, TV-connected devices, and other IP-enabled video devices."¹³ Comcast will "provide consumers with a capability to search through Comcast's video assets from a device's user interface with playback of a selected asset via the Xfinity TV Partner app."¹⁴ "The Xfinity TV Partner App can be easily implemented by any company whose consumer electronics device supports HTML5 and other compatibility requirements."¹⁵

70. Upon information and belief, Comcast will continue to market its X1 IPG Product to customers as well as to other Pay-TV providers (including Pay-TV providers that do not have a license to Rovi's patents)—in direct competition with Rovi's own patent-protected IPG products.

¹³ Mark Hess, *Comcast Seeks TV and Other Consumer Electronics Partners to Bring Xfinity TV Cable Service to More Retail Devices*, COMCAST (Apr. 20, 2016), available at <https://corporate.comcast.com/comcast-voices/comcast-seeks-partners-to-bring-xfinity-tv-cable-service-to-more-retail-devices>.

¹⁴ *Id.*
¹⁵ *Id.*; see also *The Xfinity TV Partner Program: Bringing the Xfinity Experience to More Consumer Devices and TV Screens*, XFINITY, <https://developer.xfinity.com/cableapp> (last visited Dec. 28, 2017).

IV. DEFENDANTS' INFRINGING PRODUCTS AND SERVICES

71. Upon information and belief, Comcast is in the business of providing digital video, audio, and other content services to customers under the name "Xfinity." Comcast provides subscribers to its subscription digital services with at least one Accused Product that is necessary for the receipt of such services.

72. Upon information and belief, Xfinity products and services are provided to consumers through the coordinated and combined participation of Defendants and/or under Defendants' instruction, direction, and/or control. Directly and/or indirectly, Comcast Corporation owns regional subsidiaries that provide telecommunications and video services to customers in a number of states. Xfinity services have been made available to consumers through at least the following regional subsidiaries owned, directly or indirectly, by Comcast Corporation: Comcast of Arkansas/Florida/Louisiana/Minnesota/Mississippi/Tennessee, Inc.; Comcast of Boston, Inc.; Comcast of California II, LLC; Comcast of California III, Inc.; Comcast of California IX, Inc.; Comcast of California/Colorado, LLC; Comcast of California/Colorado/Florida/Oregon, Inc.; Comcast of California/Colorado/Illinois/Indiana/Michigan, LP; Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC; Comcast of California/Massachusetts/Michigan/Utah, LLC; Comcast of Colorado IX, LLC; Comcast of Colorado/Florida/Michigan/New Mexico/Pennsylvania/Washington, LLC; Comcast of Colorado/Pennsylvania/West Virginia, LLC; Comcast of Connecticut, Inc.; Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC; Comcast of Florida/Georgia/Illinois/Michigan, LLC; Comcast of Florida/Georgia/Pennsylvania, L.P.; Comcast of Garden State, L.P.; Comcast of Houston, LLC; Comcast of Illinois VI, Inc.; Comcast of Illinois/Indiana/Ohio, LLC; Comcast of Lompoc, LLC; Comcast of Maine/New Hampshire, Inc.; Comcast of Maryland, LLC; Comcast Cable of

Maryland, LLC; Comcast of Massachusetts I, Inc.; Comcast of Massachusetts II, Inc.; Comcast of Massachusetts III, Inc.; Comcast of Massachusetts/New Hampshire, LLC; Comcast of New Jersey II, LLC; Comcast of Oregon II, Inc.; Comcast of Philadelphia II, LLC; Comcast of Potomac, LLC; Comcast of Santa Maria, LLC; Comcast of South Jersey, LLC; Comcast of Southeast Pennsylvania, LLC; Comcast of the South; Comcast of Utah II, Inc.; and Mile Hi Cable Partners, LP (collectively, regional subsidiaries).

73. Upon information and belief, Comcast Corporation and its regional subsidiaries hold themselves out as a single entity in providing the infringing Xfinity products and services. Comcast's various Xfinity services are centrally advertised, documented, and explained on the website, www.xfinity.com. Upon information and belief, the Comcast regional subsidiaries use identical contracts and other documents in the provision of the infringing Comcast Xfinity products and services that are generated and approved by Comcast Corporation and/or collectively by the aforementioned regional subsidiaries. For example, Comcast Xfinity TV services have the same "Residential Services Policies" for residential customers, regardless of their location.¹⁶

74. Upon information and belief, acting through one or more of its officers and/or its board of directors, Comcast Corporation has: (a) approved and authorized the development by designated Comcast Corporation subsidiaries of the technology and infrastructure necessary to offer the Xfinity service to the consuming public; (b) approved and authorized the capital expenditures by its subsidiaries necessary to provide the Xfinity service to consumers; and/or (c) authorized and directed its regional subsidiaries to provide the Xfinity service under the Comcast brand to consumers in their operating areas. Comcast Corporation further directed and

¹⁶ See *Xfinity Terms of Service*, XFINITY, <http://my.xfinity.com/terms/> (last visited Dec. 28, 2017).

1 controlled the activities of its regional subsidiaries. In doing so, Comcast Corporation
2 (together with the remaining Defendants) actively induced the infringement of such
3 subsidiaries.

4 75. Comcast markets the Xfinity service to subscribers of each of the
5 regional subsidiaries described above and actively solicits their business through
6 Comcast's website.

7 76. Upon information and belief, Comcast has been involved in the design,
8 testing, and implementation of the Xfinity service. Upon information and belief,
9 Comcast provides overall management and coordination of the elements of the
10 network used to deliver Comcast's Xfinity services, and of the regional subsidiaries
11 that own and operate those elements.

12 77. In addition, Comcast has caused and directed at least the regional
13 subsidiaries to engage in activities, including those activities described above, that
14 have resulted in the infringement of one or more claims of the Asserted Patents. In
15 performing the activities that, either individually or in combination, have infringed
16 one or more claims of the Asserted Patents, the regional subsidiaries have acted as
17 agents of at least Comcast Corporation, and their infringing activities have been
18 within the course and scope of that agency.

19 78. Upon information and belief, Comcast does not manufacture the set-top
20 boxes that it provides to Xfinity customers.

21 79. Comcast set-top boxes contain, or are designed to receive and execute,
22 software (including IPG software) enabling a Comcast subscriber to infringe the
23 Asserted Patents. Upon information and belief, the receivers are specifically
24 manufactured to be combined with such software for use in Comcast's service
25 infrastructure. Comcast leases and/or otherwise provides to its subscribers these
26 receivers along with user guides and manuals describing how to use the receivers and
27 their associated features. In addition, Comcast provides for download free of charge
28

1 mobile applications intended to be used with its Xfinity services, including for
2 controlling DVR and program guide functionality, as well as software updates for its
3 receivers.

4 80. Rovi is informed and believes that Comcast has engaged in activities
5 which promote the use and distribution of the X1 IPG Product and the Xfinity services
6 and thereby encourages the infringement of Rovi's patents so long as Comcast
7 remains unlicensed by Rovi. Those activities include, among others, its instruction of
8 X1 users on how to infringe Rovi's patents. For example, Comcast instructs its users
9 on its own webpage how to search X1 with the Remote Control Keypad including
10 overloaded key searches and search X1 with voice searches.¹⁷ As another example,
11 these activities include Comcast's development, creation, and promotion of the
12 Reference Design Kit (RDK) software by which developers are encouraged, in an
13 open source platform, to develop new applications that will run on set-top boxes and
14 other consumer premise equipment (CPE) loaded with Comcast's X1 IPG product and
15 Xfinity services technology (which infringe Rovi's patents).

16 81. Rovi is informed and believes that, in or before 2012, Comcast was
17 considering ways: (a) to promote the adoption of its X1 IPG platform, which
18 extensively utilizes Rovi's patented technology, as an industry standard; (b) to have
19 new applications and enhancements to its platform developed; and (c) to avoid the
20 research and development cost of developing such new applications and
21 enhancements. The solution to meet those three goals was for Comcast to develop the

22
23 ¹⁷ *Search X1 with the Remote Control Keypad*, XFINITY,
24 <https://www.xfinity.com/support/articles/x1-search-using-the-remote-keypad> (last
25 visited Dec. 28, 2017); *The X1 Voice Remote Overview*, XFINITY,
26 <https://www.xfinity.com/support/articles/get-to-know-xr11-remote> (last visited Dec.
27 28, 2017); *Meet Your Xfinity X1 Remote*, XFINITY,
28 <http://x1guide.xfinity.com/files/X1-XR11-Remote.pdf> (last visited Dec. 28, 2017);
Download and Set Up the Xfinity TV Remote App on a Mobile Device, XFINITY,
<https://www.xfinity.com/support/articles/downloading-cable-tv-app> (last visited Dec.
28, 2017); *Xfinity XR11 Quick Start Guide*,
[https://customer.xfinity.com/~media/support_comcast_com/Residential/Remotes/Ma
nuals/XR11_GetStartedGuide_Oct07.pdf](https://customer.xfinity.com/~media/support_comcast_com/Residential/Remotes/Manuals/XR11_GetStartedGuide_Oct07.pdf) (last visited Dec. 28, 2018).

1 RDK, which was a defined stack of software on one layer of an operating set-top box,
2 that would be open source and available to all developers and vendors to create further
3 enhancements and applications that could run on that software, and Comcast's
4 products.

5 82. Comcast is a founder and key developer of the RDK. "Comcast's RDK is
6 an integrated software package providing a common platform for managing cable
7 television equipment located at the consumers' homes, including set-top boxes, DVRs
8 and home gateways."¹⁸ The RDK enables "potential hardware partners to build their
9 own versions of [Comcast's] next generation setup."¹⁹

10 83. Through the RDK, Comcast "work[s] closely with STB manufactures
11 and silicon suppliers during their early design phase and chipset prototype production
12 in order to minimize development cycles. In fact, STB suppliers can now take a new
13 chip from RDK-integrated silicon vendors and have a working STB design in days."²⁰

14 84. Upon information and belief, Comcast also works and has worked
15 directly with System on Chip (SoC) manufacturers "to get the RDK up and running on
16 those chip platforms before they even started building the [set-top] box around th[eir]
17 chip."²¹

18 85. Upon information and belief, through the promotion of the RDK,
19 Comcast has made significant "effort[s] to get vendors such as original equipment
20

21 ¹⁸ In re Comcast Corp., Time Warner Cable Inc., Charter Commc'ns, Inc., &
22 SpinCo to Assign & Transfer Control of FCC Licenses & Other Authorization, MB
23 Dkt. No. 14-57, Comments of Broadcom Corp. at 3 (Aug. 18, 2014), available at
<http://apps.fcc.gov/ecfs/document/view?id=7521773052>.

24 ¹⁹ Richard Lawler, *Humax's take on an IP-connected TV box for Comcast passes through the FCC*, ENGADGET (Nov. 28, 2012),
<http://www.engadget.com/2012/11/28/comcast-humax-xi3-h-ip-cable-box/>.

25 ²⁰ Steve Heeb, *Looking Back At RDK In 2015: Driving Speed And Innovation*,
VIDEONET (Dec. 11, 2015), <http://www.v-net.tv/looking-back-at-rdk-in-2015-driving-speed-and-innovation>.

26 ²¹ Mike Robuck, *Built for speed: Comcast RDK*, CED MAGAZINE (July 5, 2012,
27 12:41 PM), <http://www.cedmagazine.com/article/2012/07/built-speed-comcast-rdk>
28 (quoting Comcast's Steve Reynolds, senior vice president of CPE and home networking).

1 manufacturers (OEMs), semiconductor manufacturers, software vendors, software
 2 integrators and multichannel video programming distributors to create an ecosystem
 3 for new gear for . . . Comcast's X1 service."²²

4 86. Upon information and belief, "[t]he RDK is supported by more than 200
 5 licensees including CE [consumer electronics] and SoC [System on Chip]
 6 manufactures"²³

7 87. Upon information and belief, through at least the promulgation of the
 8 RDK, Comcast is substantially involved in the design and manufacture of the
 9 receivers, including set-top boxes, onto which the infringing Comcast IPGs are
 10 loaded.

11 88. Upon information and belief, Comcast obtains significant quantities of
 12 specially designed, unlicensed receivers, including set-top boxes, from third parties.

13 89. Upon information and belief, over half of Comcast's 22 million
 14 subscribers are on the X1 platform.²⁴

15 90. Upon information and belief, "[a]ll of Comcast's X1-class [set-top] boxes
 16 are based on the Reference Design Kit (RDK)."²⁵

17 91. Upon information and belief, Comcast has had and continues to have
 18 significant involvement in the importation and distribution of these Comcast receivers,
 19

20 ²² *News and Events, Pace licenses RDK set top design kit from Comcast*, RDK
 21 CENTRAL, <http://rdkcentral.com/pace-licenses-rdk-set-top-design-kit-from-comcast/>
 22 (last visited Dec. 28, 2017); *see also* Deborah D. McAdams, *Motorola Mobility*
 23 *Licenses Comcast RDK*, TVTECHNOLOGY (Aug. 22, 2012),
 24 [http://www.tvtechnology.com/news/0002/motorola-mobility-licenses-comcast-](http://www.tvtechnology.com/news/0002/motorola-mobility-licenses-comcast-rdk/215089)
 25 [rdk/215089](http://www.tvtechnology.com/news/0002/motorola-mobility-licenses-comcast-rdk/215089) (noting Comcast's attempts to license RDK).

26 ²³ *About RDK*, RDK CENTRAL, <http://rdkcentral.com/about-rdk/> (last visited Dec.
 27 28, 2017).

28 ²⁴ David Hayes, *Comcast X1 Subscribers Can Get Epix In Early 2018 Under New*
Distribution Deal, DEADLINE (Nov. 28, 2017, 9:33 AM),
[http://deadline.com/2017/11/comcast-x1-subscribers-get-epix-in-early-2018-under-](http://deadline.com/2017/11/comcast-x1-subscribers-get-epix-in-early-2018-under-new-distribution-deal-1202215657/)
[new-distribution-deal-1202215657/](http://deadline.com/2017/11/comcast-x1-subscribers-get-epix-in-early-2018-under-new-distribution-deal-1202215657/).

²⁵ Jeff Baumgartner, *Comcast Starts To Deploy IP-Only Boxes For X1*,
 MULTICHANNEL NEWS (Oct. 28, 2014, 4:00 PM),
[http://www.multichannel.com/news/technology/comcast-starts-deploy-all-ip-boxes-](http://www.multichannel.com/news/technology/comcast-starts-deploy-all-ip-boxes-x1/385122)
[x1/385122](http://www.multichannel.com/news/technology/comcast-starts-deploy-all-ip-boxes-x1/385122).

including by causing the manufacture and importation of these Comcast receivers to occur through the promulgation of the Comcast RDK; obtaining such receivers from third party manufacturers, which receivers would not have been made otherwise; and the subsequent delivery of such receivers to its subscriber base.

92. Upon information and belief, Comcast has held itself out as the “supplier” of its receivers, including its set-top boxes that it distributes to its subscribers. For example, in connection with the FCC filing made by Comcast relating to the potential merger of Comcast and Time Warner, Comcast repeatedly referred to “Comcast-supplied set-top boxes,” and characterized set-top boxes used in connection with the X1 platform as “Comcast’s.”²⁶

93. Upon information and belief, these Comcast receivers contain, or are designed to receive and execute, software (including IPG software) enabling a Comcast subscriber to view, record, and control television broadcasts; connect to and interact with Comcast’s service infrastructure and download data, software, and content; and receive an array of digital video, audio, and other content, and therefore infringe the Asserted Patents. Comcast designs the infringing IPG software that is loaded onto such receivers (and for which purpose such receivers were designed).

94. Upon information and belief, Xfinity products and services are provided to consumers through the coordinated and combined participation of Defendants and/or under Defendants’ instruction, direction, and/or control.

V. COMCAST REFUSES TO RENEW ITS LICENSE— NOTWITHSTANDING LITIGATION AND FINDINGS OF INFRINGEMENT OF CERTAIN ROVI PATENTS

95. On April 1, 2016, Rovi sued Comcast in two district court actions for infringing various patents not asserted here. Those actions are stayed in the Southern District of New York (Case Nos. 1:16-cv-09278 and 1:16-cv-09826).

²⁶ See generally *In re Comcast Corp.*, MB Dkt. No. 14-57, Opp’n to Pets. to Deny & Resp. to Comments (Sept. 23, 2014), available at <http://apps.fcc.gov/ecfs/document/view?id=7522909787>.

1 96. On April 6, 2016, Rovi brought an enforcement action against Comcast
2 in the International Trade Commission for importing products that infringe various
3 patents—again, patents not asserted here. In November 2017, the Commission found
4 that Comcast’s X1 STBs infringed two of those patents, excluded future imports of
5 these boxes, and ordered Comcast not to import or distribute infringing products. See
6 *generally In re Certain Digital Video Receivers & Hardware & Software Components*
7 *Thereof*, Inv. No. 337-TA-1001, Comm’n Op. (Dec. 6, 2016) (Final Public Version).

8 97. And yet even after the ITC orders, Comcast has refused to renew its
9 License to Rovi’s portfolio. Comcast continues to make, use, testing, lease, offer to
10 lease, and distribute products that infringe Rovi’s patents, including the Asserted
11 Patents in this Complaint. Comcast apparently believes that it can use Rovi’s
12 technology for free, while all of Comcast’s competitors have paid a reasonable price
13 for a license to Rovi’s portfolio.

FIRST CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 7,827,585

98. Plaintiffs reallege and incorporate by reference the allegations of paragraphs 1-97 of this Complaint.

99. The '585 Patent is valid and enforceable under United States Patent Laws.

100. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '585 Patent, including the right to collect for past damages.

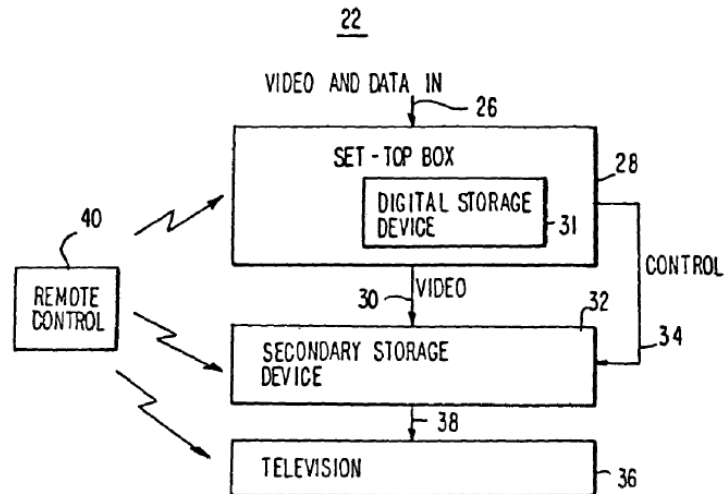
101. A certified copy of the '585 Patent is attached as Exhibit A.

102. The '585 Patent was issued from U.S. Patent Application No. 11/197,867 filed on August 4, 2005, and is a continuation of application No. 10/383,281, filed on March 5, 2003, which is a continuation of application No. 09/157,256 filed on September 17, 1998.

The '585 Patent

103. The '585 Patent describes, among other things, a local IPG implemented on interactive television program guide equipment (e.g., a receiver) that allows, for example, a user to select at least one storage option for controlling how a program to be recorded is to be stored. The patent discloses features such as the local IPG being configured to display program listings, provide a user with an opportunity to indicate a program to be recorded on a random access digital storage device, provide the user with an opportunity to select at least one storage option, and for storing the program to be recorded on the digital storage device in accordance with the storage option selected by the user. The storage options relate to at least one storage setting which controls how the program is to be digitally stored on the random access storage device.

104. Figure 2 of the '585 Patent is a schematic block diagram of an illustrative arrangement of television equipment on which the patented invention may function.

*FIG. 2*

As the '585 Patent describes:

An illustrative arrangement for user television equipment **22** is shown in FIG. 2. Television equipment **22** of FIG. 2 receives video and data from television distribution facility **16** (FIG. 1) at input **26**. During normal television viewing, the user tunes set top box **28** to a desired television channel. The signal for that television channel is then provided at video output **30**. The outputted signal is typically either a radiofrequency (RF) signal on a predefined channel (e.g., channel 3 or 4), or a demodulated video signal, but may also be a digital signal provided to television **36** on an appropriate digital bus (e.g., a bus using the IEEE 1394 standard, (not shown)). The video signal at output **30** is received by optional secondary storage device **32**. Secondary storage device **32** can be any suitable type of analog or digital program storage device (e.g., a videocassette recorder, a digital video disc (DVD) player with the ability to record DVD discs, etc.). Program recording and other features may be controlled by set top box **28** using control path **34**. If secondary storage

1 device **32** is a videocassette recorder, for example, a typical control path
2 **34** involves the use of an infrared transmitter coupled to the infrared
3 receiver in the videocassette recorder that normally accepts commands
4 from a remote control such as remote control **40**. Remote control **40** may
5 be used to control set top box **28**, secondary storage device **32**, and
6 television **36**.

7 The user may also record programs and program data in digital form on
8 digital storage device **31**. Digital storage device **31** may be a writable
9 optical storage device (such as a DVD player capable of handling
10 recordable DVD discs), a magnetic storage device (such as a disk drive
11 or digital tape), or any other digital storage device. Digital storage device
12 **31** preferably supports a directory structure containing information
13 associated with stored entries. This directory information can be stored in
14 one location, for example at the beginning or the end of the storage
15 device. The directory information can also be distributed (e.g., by storing
16 a portion of such information at the same location as each entry). For
17 removable storage media like DVDs, each storage unit may have its own
18 directory information, and the program guide may keep a global-media
19 library (discussed below).

20 Digital storage device **31** can be contained in set top box **28** or it can be
21 an external device connected to set top box **28** via an output port and
22 appropriate interface. If necessary, processing circuitry in set top box **28**
23 formats the received video, audio and data signals into a digital file
24 format. Preferably, the file format is an open file format such as the
25 Motion Pictures Expert Group (MPEG) MPEG-2 standard. The resulting
26 data is streamed to digital storage device **31** via an appropriate bus (e.g.,
27 a bus using the IEEE 1394 standard), and is stored on digital storage
28

1 device **31**. Television **36** receives video signals from secondary storage
2 device **32** via communications path **38**. The video signals on
3 communications path **38** may either be generated by secondary storage
4 device **32** when playing back a prerecorded storage medium (e.g., a
5 videocassette or a recordable digital video disc), by digital storage device
6 **31** when playing back a pre-recorded digital medium, may be passed
7 through from set top box **28**, may be provided directly to television **36**
8 from set top box **28** if secondary storage device **32** is not included in user
9 television equipment **22**, or may be received directly by television **36**.
10 During normal television viewing, the video signals provided to
11 television **36** correspond to the desired channel to which the user has
12 tuned with set top box **28**. The video signals provided to television **36**
13 may also be by set top box **28** when set top box **28** is used to play back
14 information stored on digital storage device **31**. When the user wishes to
15 access the features of the program guide, the user may use a “menu” key
16 on remote control **40** or an appropriate key corresponding to the desired
17 feature. For example, if the user wishes to view programming
18 information, a “guide” key on remote control **40** can be used. When set
19 top box **28** receives commands from remote control **40** that inform set top
20 box **28** that the menu or other feature button has been pressed, processing
21 circuitry within set top box **28** supplies information that is displayed on
22 television **36** as described further below.

23 '585 Patent 3:28-4:36.

24 105. Figure 14 of the '585 Patent is an illustrative display screen of an IPG
25 that highlights certain aspects of the patented invention.

120

SET-UP 121

ENTRY INFORMATION DISPLAY OPTIONS			
TITLE	DESCRIPTION	EPISODE	CHANNEL
RECORD DATE	RECORD TIME	DURATION	CAST MEMBERS
PARENTAL CTRL	CATEGORY(IES)	LANGUAGE(S)	VIDEO FORMAT
OTHER INFO	VIEWS		

122

STORAGE OPTIONS	
LANGUAGES	ENGLISH
VIDEO FORMAT	HDTV
ENFORCE PARENTAL CONTROL ON STORAGE	YES
AUTO-ERASE VIEWED ENTRIES	YES

AVAILABLE LANGUAGES

ENGLISH
GERMAN
FRENCH
ITALIAN
SPANISH
ALL

133

PLAYBACK OPTIONS	
DEFAULT LANGUAGE	ENGLISH
DEFAULT VIDEO	HDTV
SKIP COMMERCIALS	YES

FIG. 14

As described in the specification:

Set-up screen **120** can be organized into parts. For example, one part may be used to handle entry information display options, another may be used to handle storage options, and another may be used to handle playback options.

'585 Patent at 15:37-42. The '585 later explains that storage options may include, among other things, preferred languages and video formats of the program the user would like to store, as well as whether a parental control feature applies to the recorded program. *Id.* at 15:52-57. The '585 Patent further teaches that the user “may also choose whether the program guide automatically erases entries from digital storage device **49** once the entries are viewed.” *Id.* at 15:57-59. By adjusting these exemplary storage options a user may, among other things, ensure that storage space on the digital storage device is efficiently reserved for programs that have not yet been

viewed.

Historical Context of the '585 Patent

106. Over the years, cable, satellite, and broadcast television providers have offered an increasingly large number of television channels and television program listings. Traditionally, users would consult printed television program schedules to determine the programs being broadcast at particular times. '585 Patent at 1:20-23. In the years leading up to the '585 Patent, interactive electronic television program guides were developed, which allowed users to more easily navigate television program information. '585 Patent at 1:23-26. These IPGs frequently organized the various television program listings in a grid, wherein each row in the grid contains television program listings for a different channel, and each column in the grid corresponds to a determined broadcast time. '585 Patent at 1:31-34. Users could scroll through these listings to find their desired television programs without wasting time "channel surfing." '585 Patent at 1:35-38.

107. Later, the IPGs were further developed to allow for programs selected within the program guide to be recorded and stored on an independent storage device, such as a videocassette recorder. '585 Patent at 1:39-42. While the use of independent analog storage devices provided the benefits of basic recording, the functionality was very limited. Users could not access the more advanced features that might be implemented if a digital storage device were associated directly with an IPG. '585 Patent at 1:45-48. Therefore, the inventors of the '585 Patent disclosed novel systems and methods that provided an IPG guide with digital storage, thereby enhancing the recording options and features available to a user. '585 Patent at 1:49-50.

'585 Patent Allegations

108. Comcast has infringed and is infringing, individually and/or jointly, either literally or under the doctrine of equivalents, one or more claims of the '585 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making,

1 using, offering for lease, leasing in the United States, and/or importing into the United
 2 States without authority or license, set-top boxes, including without limitation, one or
 3 more of the Accused Products and associated software (including at least the Xfinity
 4 branded mobile IPG) that are used to infringe at the '585 Patent. Upon information
 5 and belief after reasonable investigation, each of the '585 Accused Products are
 6 designed to be and are used with Comcast supplied remote controls, the Comcast
 7 website and/or Comcast's Xfinity TV Remote App to enable a user to specify
 8 recording options. For example, Comcast users are able to "[s]chedule or delete
 9 recordings" using the Xfinity TV App.²⁷ Comcast users are also able to "change the
 10 record options" using the Comcast Xfinity Stream Portal website.²⁸ And, Comcast
 11 users are able to use their Comcast supplied remote controls to set recording options,
 12 including "the ability to extend the start or stop time of a recorded program."²⁹ On
 13 information and belief and after reasonable investigation, Comcast provides the
 14 Accused Products, which allow a user to select storage options for storing programs
 15 using an IPG implemented on user television equipment. Further, on information and
 16 belief and after reasonable investigation, Comcast performs the methods claimed in
 17 the '585 Patent by allowing a user to select storage options for storing programs using
 18 an IPG implemented on user television equipment on the Comcast X1 system.

19 109. Defendants have been, and currently are, active inducers of infringement
 20 of one or more claims of the '585 Patent under 35 U.S.C. § 271(b). Upon information
 21 and belief, one or more of the '585 Accused Products of the Defendants directly
 22
 23

24 ²⁷ *Here's How to Turn Any Device Into a Personal TV at Home*, COMCAST,
 25 <https://corporate.comcast.com/news-information/news-feed/heres-how-to-turn-any-device-into-a-personal-tv-inside-the-home> (last visited Dec. 28, 2017).

26 ²⁸ *Get Started with the XFINITY Stream Portal*, XFINITY,
 27 <https://www.xfinity.com/support/articles/getting-started-xfinity-tv-website> (last
 28 visited Dec. 28, 2017).

²⁹ *Change the Start or Stop Time of a Recording on Your X1 DVR*, XFINITY,
<https://www.xfinity.com/support/articles/x1-modify-the-recording-time-of-a-program>
 (last visited Dec. 28, 2017).

1 and/or indirectly infringe (by induced infringement) one or more claims of the '585
2 Patent, literally and/or under the doctrine of equivalents.

3 110. For example, a preliminary claim chart applying to exemplary
4 independent claims 1, 8, 15, and 22 of the '585 Patent to the '585 Accused Products
5 (as defined herein, which include related hardware and software components) with a
6 Comcast PX001ANM set-top box (Pace XG1v1) operating Comcast Xfinity X1
7 software can be found at Exhibit B. This chart is an exemplary chart representative of
8 the infringing operation of all '585 Accused Products, which operate the Comcast
9 Xfinity X1 software in the same manner.

10 111. Defendants have had actual knowledge of the '585 Patent since at least
11 September 23, 2014, when Rovi provided presentations and claim charts to Comcast
12 specifically identifying patents in Rovi's portfolio, including the '585 Patent, and
13 showing an example of Comcast's infringement of the '585 Patent. Comcast was
14 reminded of the patent on April 7, 2015 when, at Comcast's request, Rovi provided a
15 spreadsheet illustrating the breadth of Rovi's guidance portfolio, including the '585
16 Patent.

17 112. With full knowledge of the '585 Patent, then, Comcast intentionally
18 encourages and aids at least service providers and end-user subscribers to directly
19 infringe the '585 Patent.

20 113. Comcast provides the '585 Accused Products and instructions to Xfinity
21 subscribers so that such subscribers will use the '585 Accused Products in a directly
22 infringing manner. Comcast markets the Xfinity System to subscribers by touting the
23 ability to "Change the Start or Stop Time of a Recording on Your X1 DVR" by
24 "Highlight[ing] the Start time and use the left or right arrow buttons to modify - select
25 either 1 or 2 minutes early" and "Highlight[ing] the Stop time and use the left or right
26 arrow buttons to modify - select between 1, 5 or 30 minutes late (options for live
27

programming - 30, 60 or 90 minutes late).”³⁰ Comcast provides instructions to its subscribers on how to use the functionality of the ’585 Patent on this website as well. Comcast further instructs its users how to use recording options that apply to multiple television programs, rather than just the individual program selected to be recorded. For instance, a user may determine whether to store only new episodes of a selected series, whether to store only HD versions of the selected programs and series, whether to store one or more episodes of the series, whether to store the programs in the series from their start or from a time prior to their start time, or whether to store the programs in the series until their scheduled end time or until a time after their scheduled end time.

114. Comcast subscribers directly infringe by using the ’585 Accused Products in their intended manner to infringe. Comcast induces such infringement by providing the ’585 Accused Products and instructions to enable and facilitate infringement, with full knowledge of the ’585 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of the ’585 Patent or has taken deliberate actions to avoid learning of infringement.

115. This Complaint will serve as notice to Defendants of the ’585 Patent and its infringement, should Defendants contend that they did not previously have knowledge thereof.

116. Additional allegations regarding Defendants’ knowledge of the ’585 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

117. Defendants’ infringement of the ’585 Patent is willful and deliberate, entitling Rovi to enhanced damages and attorneys’ fees.

³⁰ *Change the Start or Stop Time of a Recording on Your X1 DVR*, XFINITY, <https://www.xfinity.com/support/articles/x1-modify-the-recording-time-of-a-program> (last visited Dec. 28, 2017).

118. Defendants' infringement of the '585 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

119. Rovi has been damaged by Defendants' infringement of the '585 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

120. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '585 Patent, including without limitation lost profits and not less than a reasonable royalty.

SECOND CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 9,294,799

121. Plaintiffs reallege and incorporate by reference the allegations of paragraphs 1-120 of this Complaint.

122. The '799 Patent is valid and enforceable under United States Patent Laws.

123. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '799 Patent.

124. A copy of the '799 Patent is attached as Exhibit C.

125. The '799 Patent was issued from U.S. Patent Application No. 14/926,640 filed on October 29, 2015, and is a continuation of application No. 14/559,781, filed on December 3, 2014, which is a continuation of application No. 14/048,818, filed on October 8, 2013, now U.S. Patent No. 8,973,069, which is a continuation of application No. 13/023,842, filed on February 9, 2011, now U.S. Patent No. 8,584,184, which is a continuation of application No. 12/200,593 filed on August 28, 2008, now U.S. Patent No. 7,917,933, which is a continuation of application No.

09/974,646, filed on October 9, 2001, now U.S. Patent No. 7,650,621, and claims priority to U.S. Provisional Patent Application No. 60/270,351, filed on February 21, 2001, U.S. Provisional Patent Application No. 60/252,171, filed on November 20, 2000, and U.S. Provisional Patent Application No. 60/239,407, filed on October 11, 2000.

The '799 Patent

126. The '799 Patent is directed to a system and method that allows users to view and manipulate media content stored on a server on a first user equipment and then to view and manipulate media content on a second user equipment based on the manipulation that has occurred on the first user equipment. This functionality allows a user to begin watching on-demand media content on one device, pause the program, and resume watching from the same point on a second device.

127. Figure 1 of the '799 Patent is a schematic diagram that illustrates the network topology of an on-demand media delivery system that embodies principles of the patented invention.

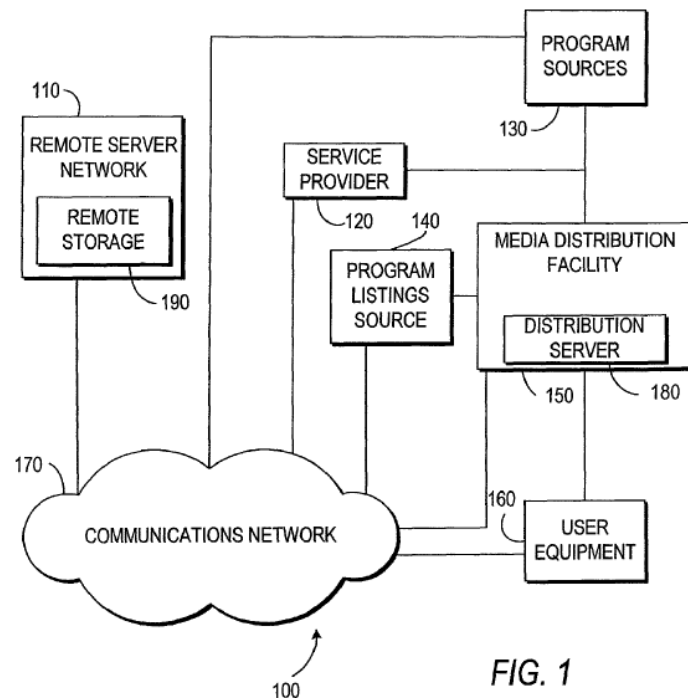
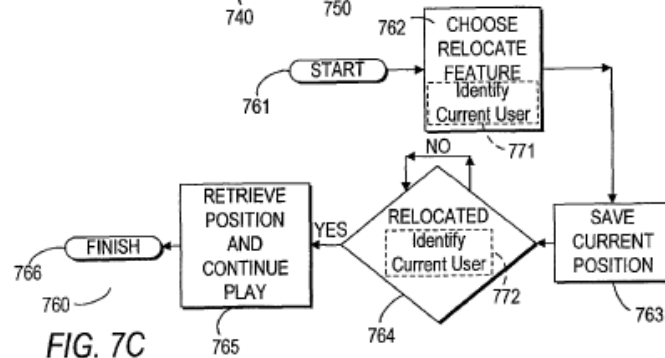
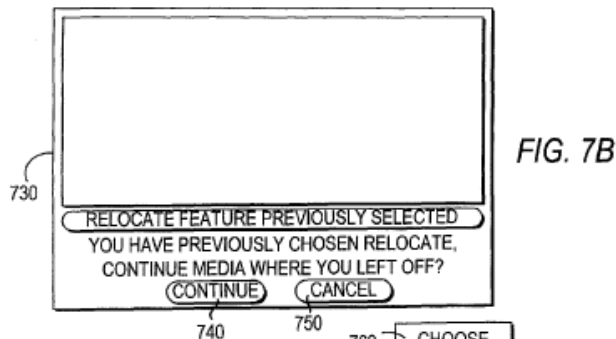
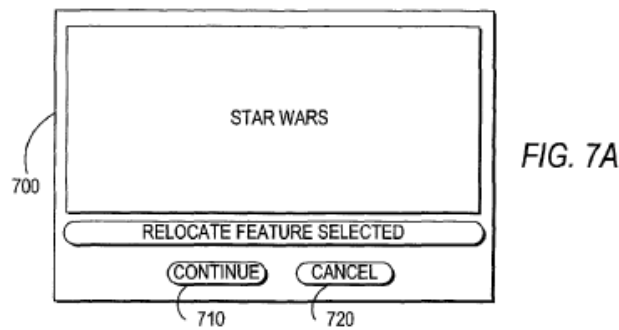


FIG. 1

As described in the '799 Patent, FIG. 1 shows one embodiment of a system architecture for an on-demand media delivery system, which may include “any number of remote server networks **110**, service providers **120**, program sources **130**, program listings sources **140**, media distribution facilities **150**, user equipment **160**, communications networks **170**, distribution servers **180**, and remote storage devices **190**.” ’799 Patent at 4:2-7. The “specialized” distribution servers are configured to support on-demand media services, and, along with other on-demand media equipment, “may be located at network nodes associated with the media distribution facility.” ’799 Patent at 4:22-28. The media distribution facility, which houses this specialized on-demand equipment, “may be a cable system headend, a satellite television distribution facility, a television broadcast facility, or any other suitable facility for distributing on-demand media content” ’799 Patent at 4:29-32. The IPGs “may be provided by a server located in remote server network **110**, in distribution server **180**, or by a server located in any element included in the network topology Remote storage **190** may be used to store software, media content, and data.” ’799 Patent at 5:4-9. This remote storage equipment “may provide a user interfacing with user equipment **160** with the capability to store, manipulate, and retrieve media content, user-specific data, and any other type of data.” ’799 Patent 5:10-13. The features that flow from this architecture “may be implemented locally on the user equipment,” or “may also be implemented using a client-server architecture in which the user equipment serves as a client processor.” ’799 Patent at 5:47-53.

128. Figures 7A, 7B, and 7C of the '799 Patent are diagrams and flow charts that illustrate the relocation process in accordance with the principles of the patented invention.



18 As the '799 Patent explains:

19 When the relocate feature is first selected by a user, remote server
20 network **110** of FIG. **1** may, for example, pause the on-demand media
21 content being viewed by the user and store a content location reference to
22 an appropriate user-specific account. After the user switches to a different
23 location and requests that the paused content be appropriately delivered,
24 remote server network **110** may retrieve the appropriate content location
25 reference and continue delivering the media content from the point at
26 which the user paused the content. Before the media content may be
27 delivered, the remote server network may require that the user be
28

identified so that the appropriate user-specific data and/or a user-specific account information, may be located and accessed.

'799 Patent at 11:21-33.

Figure 7C more fully describes a preferred embodiment of the relocation process. This process begins with a start step, which "may include almost any interaction with the media-delivery system that results in the relocation feature being presented to the user." '799 Patent at 11:45-48. In the next step, a user may be given an opportunity to choose or confirm the relocate feature. '799 Patent at 11:48-51. This step may also "allow the system to identify the current user before the relocate feature is selected by the user." '799 Patent at 11:59-61. Next, the on-demand media system saves the user's current position, i.e., "saving a pointer that identifies where the media content was 'frozen' or paused by the relocate feature." '799 Patent at 11:62-67. When that user later logs into a second user equipment connected to the system, the user has the ability to resume the media using the relocate function. '799 Patent at 12:6-9. By retrieving the stored pointer associated with the relevant on-demand media content, the system allows the user to resume the content at the same point at which it was "frozen" or paused by the user. '799 Patent at 12:20-29.

Historical Context of the '799 Patent

129. As detailed above, the '799 Patent relates to dynamic on-demand media delivery systems that allow a user to view on-demand media content across multiple devices. Prior to the filing of the '799 Patent, set-top boxes were used to receive on-demand video from cable system headends. '799 Patent at 1:32-34. These known systems were "deficient in allowing users to relocate their video-on-demand service to different locations." '799 Patent at 1:36-38. Known systems comprising client-server television program guides were similarly "deficient in providing sufficient mobility features." '799 Patent 1:55-2:3.

130. These deficiencies resulted in users being unable to seamlessly view on-demand media content across multiple devices. For example, prior to the inventions of the '799 Patent, users were unable to effectively freeze on-demand media delivery on one user equipment and resume delivery and viewing from another user equipment.

131. The inventors of the '799 Patent sought to address these deficiencies in the known systems through the methods and systems disclosed in the '799 Patent

'799 Patent Allegations

132. Defendants have infringed and are infringing, individually and/or jointly, either literally or under the doctrine of equivalents, one or more claims of the '799 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making, using, offering for sale/lease, leasing, distributing in the United States, and/or importing into the United States without authority or license, set-top boxes, including without limitation, one or more of the Accused Products ('799 Accused Products) and associated software (including at least the Xfinity branded mobile IPG) that are used to infringe one or more claims of the '799 Patent.

133. Defendants have been, and currently are, active inducers of infringement of one or more claims of the '799 Patent under 35 U.S.C. § 271(b). Upon information and belief, one or more of the Accused Products of the Defendants directly and/or indirectly infringe (by induced infringement) one or more claims of the '799 Patent, literally and/or under the doctrine of equivalents.

134. For example, a preliminary claim chart applying to exemplary independent claims 1, 10, and 28 of the '799 Patent to the '799 Accused Products (as defined herein, which include related hardware and software components) with a Comcast PX001ANM X1 set-top box (Pace XG1v1) and a Comcast PR150BNM (Pace RNG150N) operating Comcast Xfinity X1 software can be found at Exhibit D. This chart is an exemplary chart representative of the infringing operation of all '799

1 Accused Products, which operate the Comcast Xfinity X1 software in the same
2 manner.

3 135. Defendants induce infringement of the asserted claims of the '799 Patent
4 by users of the '799 Accused Products in the United States.

5 136. With full knowledge of the '799 Patent, then, Comcast intentionally
6 encourages and aids at least service providers and end-user subscribers to directly
7 infringe the '799 Patent.

8 137. Comcast provides the Accused Products and instructions to Xfinity
9 subscribers so that these subscribers will use the Accused Products in a directly
10 infringing manner. Comcast markets the Xfinity System to subscribers by touting the
11 ability to "[b]egin a recorded show on your TV and resume watching it on another
12 TV."³¹ Comcast provides instructions to its subscribers on how to use the functionality
13 of the '799 Patent on this website as well. Comcast users are able to pause and resume
14 playback of on-demand content across equipment and user devices, including set-top
15 boxes and smartphones and tablets with the Comcast Stream application installed.

16 138. Comcast subscribers directly infringe by using the Accused Products in
17 their intended manner to infringe. Comcast induces such infringement by providing
18 the Accused Products and instructions to enable and facilitate infringement, with full
19 knowledge of the '799 Patent. *Id.* Upon information and belief, Comcast specifically
20 intends that its actions will result in infringement of the '799 Patent or has taken
21 deliberate actions to avoid learning of infringement.

22 139. This Complaint will serve as notice to Defendants of the '799 Patent and
23 its infringement, should Defendants contend that they did not previously have
24 knowledge thereof.

25
26
27 ³¹ *X1 AnyRoom DVR - What it is and How it Works*, XFINITY,
28 <https://www.xfinity.com/support/articles/x1-anyroom-dvr-overview> (last visited Dec. 28, 2017)

1 140. Additional allegations regarding Defendants' knowledge of the '799
2 Patent and willful infringement will likely have evidentiary support after a reasonable
3 opportunity for discovery.

4 141. Defendants' infringement of the '799 Patent is willful and deliberate,
5 entitling Rovi to enhanced damages and attorneys' fees.

6 142. Defendants' infringement of the '799 Patent is exceptional and entitles
7 Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C.
8 § 285.

9 143. Rovi has been damaged by Defendants' infringement of the '799 Patent
10 and will continue to be damaged unless Defendants are enjoined by this Court. Rovi
11 has suffered and continues to suffer irreparable injury for which there is no adequate
12 remedy at law. The balance of hardships favors Rovi, and public interest is not
13 disserved by an injunction.

14 144. Rovi is entitled to recover from Defendants all damages that Rovi has
15 sustained as a result of Defendants' infringement of the '799 Patent, including without
16 limitation lost royalty.

THIRD CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 9,369,741

145. Plaintiffs reallege and incorporate by reference the allegations of paragraphs 1-144 of this Complaint.

146. The '741 Patent is valid and enforceable under United States Patent Laws.

147. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '741 Patent.

148. A copy of the '741 Patent is attached as Exhibit E.

149. The '741 Patent was issued from U.S. Patent Application No. 14/741,034, filed on June 16, 2015, and is a continuation of application No. 14/313,348, filed on June 24, 2014, now U.S. Patent No. 9,071,872, which is a continuation of application No. 13/866,247, filed on April 19, 2013, now U.S. Patent No. 8,806,546, which is a continuation of application No. 13/112,078, filed on May 20, 2011, now U.S. Patent No. 8,799,971 which is a continuation of application No. 12/827,046 filed on June 30, 2010, now U.S. Patent No. 7,971,222, which is a continuation of application No. 12/350,393 filed on January 8, 2009, now U.S. Patent No. 7,779,445, which is a continuation of application No. 10/357,001, filed on January 30, 2003, now U.S. Patent No. 7,493,646.

The '741 Patent

150. The '741 Patent claims systems and methods of transmitting video to a user device, detecting whether an archived copy of that same video resides on the server, displaying to the user the option to watch the archived copy, and retrieving the full archived copy upon a user's input. This feature allows a user who has tuned in late to a linear broadcast program to restart the program from the beginning by determining the existence of and accessing a non-linear (e.g., on-demand) copy of the program.

151. As the '741 Patent describes, users of IPGs with recording capabilities may schedule a recording of upcoming television program on either network equipment (e.g., a server at a cable system headend or other network location) or on local equipment (e.g., local videocassette or DVR storage) '741 Patent at 1:63-2:4. In addition to a user's personal recordings, in many instances cable providers centrally store virtual copies of television programs that may be available for on-demand viewing. '741 Patent at 2:5-13. Through use of the IPG a user may navigate a list of the archived programs that are available for on-demand viewing.

Historical Context of the '741 Patent

152. The '741 Patent relates to IPGs that are configured to operate with network-based or local DVR capabilities. In the years leading up to the invention of the '741 Patent, IPGs had been used to navigate both linear television programming (e.g., scheduled network programming) and on-demand programming, including pay-per-view television. With the advent of DVR technology, as well as the increasingly broad on-demand content offered by content providers, it became increasingly difficult for users efficiently manage archived video content. As the '741 Patent states, "It would . . . be desirable to be able to collect and use information on the desirability of retaining access to certain television programming when managing the storage of network-based or local personal video-recorder content in an interactive system." '741 Patent at 1:52-56.

'741 Patent Allegations

153. Defendants have infringed and are infringing, individually and/or jointly, either literally or under the doctrine of equivalents, one or more claims of the '741 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making, using, offering for lease, leasing, distributing in the United States, and/or importing into the United States without authority or license, set-top boxes, including without limitation, one or more of the Accused Products and associated software (including at

1 least the Xfinity branded mobile IPG) that are used to infringe at least one claim of the
 2 '741 Patent. Upon information and belief and after reasonable investigation the
 3 Accused Products contain storage circuitry for storing archived copies of videos. For
 4 instance, Comcast has a wide offering of on-demand content that is archived and
 5 available for viewing by Comcast subscribers. Further, upon information and belief
 6 and after reasonable investigation, Comcast transmits linear video programming to its
 7 subscribers, each program generally transmitted at a set start time and concluding at a
 8 set end time. Comcast's X1 system is configured to access the database of archived
 9 on-demand content and determine whether it corresponds with a live program and, if
 10 so, indicate to the user the existence of the corresponding archived copy through an
 11 on-screen notification. The Comcast user may then request to view the corresponding
 12 archived copy.

13 154. Defendants have been, and currently are, active inducers of infringement
 14 of one or more claims of the '741 Patent under 35 U.S.C. § 271(b). Upon information
 15 and belief, one or more of the Accused Products of the Defendants directly and/or
 16 indirectly infringe (by induced infringement) one or more claims of the '741 patent,
 17 literally and/or under the doctrine of equivalents.

18 155. For example, a preliminary claim chart applying to exemplary
 19 independent claims 1, 8, and 15 of the '741 Patent to the Accused Products (as defined
 20 herein, which include related hardware and software components) with a Comcast
 21 PX001ANM X1 set-top box (Pace XG1v1) operating Comcast Xfinity X1 software
 22 can be found at Exhibit F. This chart is an exemplary chart representative of the
 23 infringing operation of all Accused Products, which operate the Comcast Xfinity X1
 24 software in the same manner.

25 156. With full knowledge of the '741 Patent, then, Comcast intentionally
 26 encourages and aids at least service providers and end-user subscribers to directly
 27 infringe the '741 Patent.

1 157. Comcast provides the Accused Products and instructions to Xfinity
 2 subscribers so that such subscribers will use the Accused Products in a directly
 3 infringing manner. Comcast markets the Xfinity System to subscribers by touting the
 4 ability to “view [a program] from the beginning after tuning to a channel.”³² Comcast
 5 provides instructions to its subscribers on how to use the functionality of the ’741
 6 Patent on this website as well.³³

7 158. Comcast subscribers directly infringe by using the Accused Products in
 8 their intended manner to infringe. Comcast induces such infringement by providing
 9 the Accused Products and instructions to enable and facilitate infringement, with full
 10 knowledge of the ’741 Patent.³⁴ Upon information and belief, Comcast specifically
 11 intends that its actions will result in infringement of the ’741 Patent or has taken
 12 deliberate actions to avoid learning of infringement.

13 159. This Complaint will serve as notice to Defendants of the ’741 Patent and
 14 its infringement, should Defendants contend that they did not previously have
 15 knowledge thereof.

16 160. Additional allegations regarding Defendants’ knowledge of the ’741
 17 Patent and willful infringement will likely have evidentiary support after a reasonable
 18 opportunity for discovery.

19 161. Defendants’ infringement of the ’741 Patent is willful and deliberate,
 20 entitling Rovi to enhanced damages and attorneys’ fees.

21 162. Defendants’ infringement of the ’741 Patent is exceptional and entitles
 22 Rovi to attorneys’ fees and costs incurred in prosecuting this action under 35 U.S.C.
 23 § 285.

24 _____
 25 ³² Peter Nush, *New This Month On X1: A More Intuitive and Navigable User*
 26 *Experience*, COMCAST (May 15, 2015), <http://corporate.comcast.com/comcast-voices/new-this-month-on-x1-a-more-intuitive-and-navigable-user-experience>.

27 ³³ *Restart Show Command*, XFINITY FORUMS,
 28 <http://forums.xfinity.com/t5/X1/Restart-Show-Command/td-p/2986131> (last visited
 Dec. 28, 2017).

³⁴ *Id.*

163. Rovi has been damaged by Defendants' infringement of the '741 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

164. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '741 Patent, including without limitation lost profits and not less than a reasonable royalty.

FOURTH CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 9,578,363

165. Plaintiffs reallege and incorporate by reference the allegations of paragraphs 1-164 of this Complaint.

166. The '363 Patent is valid and enforceable under United States Patent Laws.

167. Rovi Technologies Corp. owns, by assignment, all right, title, and interest in and to the '363 Patent.

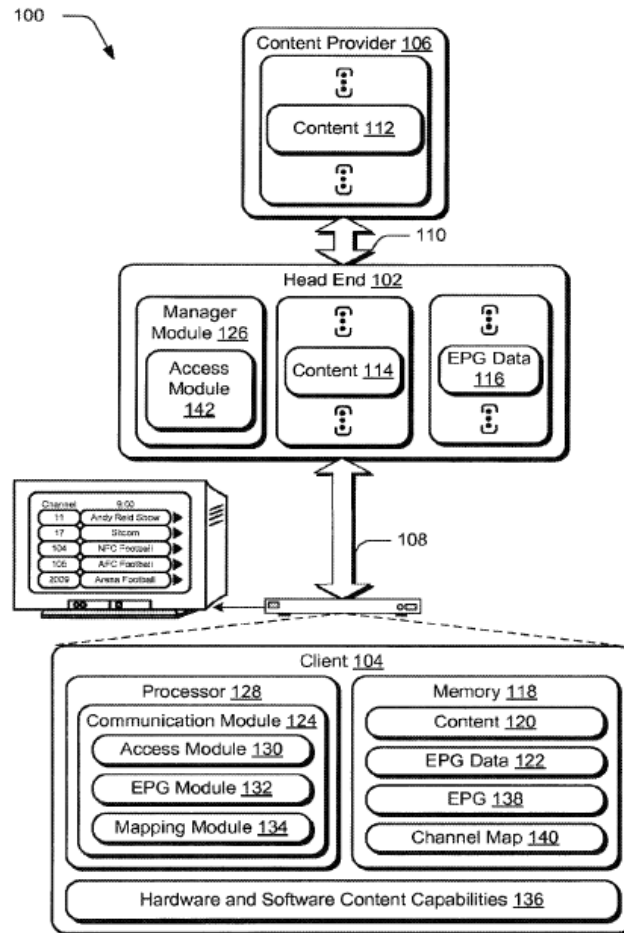
168. A copy of the '363 Patent is attached as Exhibit G.

169. The '363 Patent was issued from U.S. Patent Application No. 14/851,972, filed on September 11, 2015, and is a continuation of application No. 13/477,511, filed on May 22, 2012, now U.S. Patent No. 9,160,971, which is a continuation of application No. 12/343,235, filed on December 23, 2008, now U.S. Patent No. 8,234,668.

The '363 Patent

170. The '363 Patent covers the ability to provide a user with a superior format of a video despite the user selecting an inferior format of the video based on an automatic determination of software and hardware capabilities paired with user preferences.

171. Figure 1 of the '363 Patent is a schematic diagram of the distributed network environment in which preferred embodiments of the '363 Patent operate.



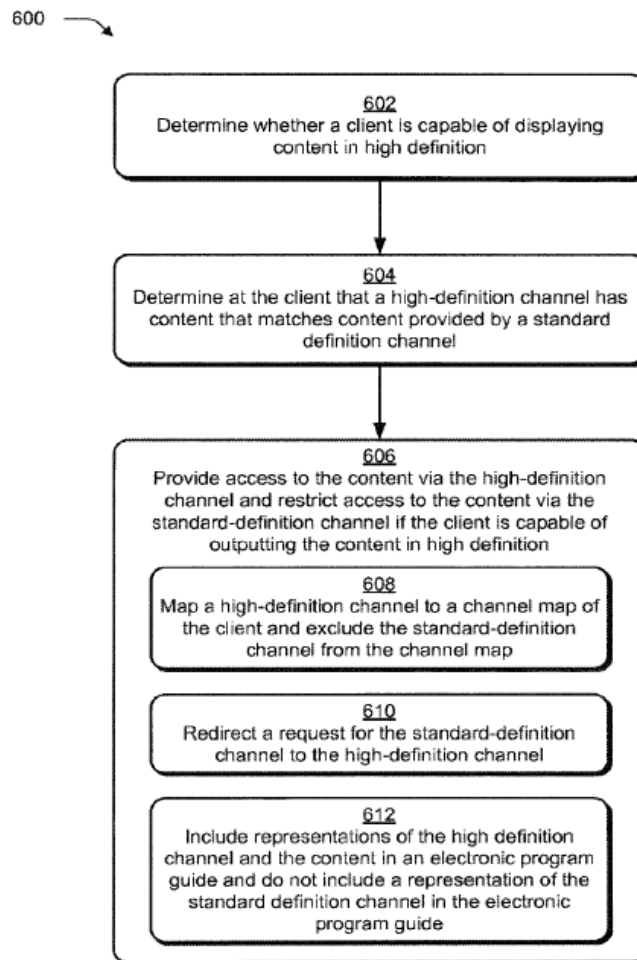
The illustrative environment includes a head end of a network operator, a client, and a content provider that are communicatively coupled via network connections. '363 Patent at 3:65-4:3. The content **112** will be associated with additional EPG Data **116**, which may include, for example, the time of the broadcast, the tile, genre, and format (e.g., high definition versus standard definition). '363 Patent at 36-47. The '363 Patent further explains:

The communication module **124** is also illustrated as including an access module **130**, an EPG module **132**, and a mapping module **134**. The access module **130** is representative of functionality to manage access to

content, in an implementation, this access may be managed at the client **104** based on hardware and software content capabilities **136** of the client **104** to output content **114**. For instance, the hardware and software content capabilities **136** may support high-definition output, e.g., video and/or audio. Accordingly, the access module **130** may grant access to the high-definition content and restrict access to standard-definition content when matching content is available to the client **104**.

'363 Patent at 5:58-6:3.

172. Figure 6 of the '363 Patent is a flow diagram depicting an exemplary embodiment of the procedure used to efficiently redirect a user request from a standard-definition channel to a corresponding high-definition channel.



1 The '363 Patent describes this diagram as follows:

2 FIG. 6 depicts a procedure **600** in an example implementation in which
3 access is manage based on capabilities of a client that is output the
4 content. A determination is made as to whether a client is capable of
5 displaying content in high definition (block **602**). For example, the access
6 module **130** of the communication module **124** may query the hardware
7 and software content capabilities **136** of the client **104**. This query may
8 be performed in a variety of ways, such as via a investigating drivers
9 stored in memory **118** of the client **104**, an identifier input by a user of
10 the client **104** (e.g., to identify a specific display device communicatively
11 coupled to the client **104**), and so on. A determination is made at the
12 client **104** that a high-definition channel **202** has content that matches
13 content provided by standard-definition channel **204** (block **604**). For
14 instance, the access module 130 may examine EPG data 116 to determine
15 that the high-definition channel 202 streams content that matches the
16 content streamed on the standard-definition channel 204 For
17 instance, the high-definition channel may be mapped to channel map of
18 the client and the standard-definition channel may be excluded from the
19 channel map (block **608**). In another instance, a request for the standard-
20 definition channel may be redirected to the high-definition channel
21 (block **610**). For example, the client **104** of FIG. 3 may support output of
22 high-definition content. Accordingly, the client **104** may redirect the
23 request for channel 4 (e.g., the standard definition content available via a
24 standard-definition channel) to channel **104**, which matches the content
25 of channel 4 but is provided in high definition.

26 '363 Patent at 10:29-11:15.

173. The systems and methods of the '363 Patent allow users to efficiently navigate the vast content of the typical IPG and ensure that a user will waste no time needlessly searching for high-definition content.

Historical Context of the '363 Patent

174. For years standard-definition programming was the norm for broadcast, cable, and satellite viewers across the country. With programming displayed in a 4:3 aspect ratio through a 480i signal, the content was far from sharp. Viewer's experienced issues of ghosting, snowy images and interference. In the late 1980s high-definition television technology was introduced and, later on, widely adopted in the United States. The first public high-definition television broadcast in the United States occurred on July 23, 1996 when a North Carolina station began broadcasting its content in HD.³⁵ In 1998, the American Advanced Television Systems Committee publicly launched its HDTV system with live coverage of famed astronaut John Glenn returning to space on board of the Space Shuttle *Discovery*.³⁶ HDTV quickly became the preferred means for viewing video content, as the high-resolution formats (720p, 1080i, and 1080p) provided enhanced clarity, as compared to standard definition.

175. In response to viewers preferring high-definition content, cable providers began offering both standard and high-definition channels for many of the most popular networks. For instance, a cable subscriber operating an IPG may be able to navigate to and view a standard definition ESPN channel or a high-definition ESPN channel. "Because of the sheer amount of content available to users and the various ways in which the content may be provided (e.g., standard definition versus high definition), however, users may find it difficult to locate particular content of interest." '363 Patent at 1:22-26. This issue was compounded by the fact that many

³⁵ See *History of WRAL Digital*, WRAL.COM (July 14, 2014), <http://www.wral.com/history-of-wral-digital/1069461>.

³⁶ See Paige Albiniak, *HDTV: Launched and Counting*, HIGHBEAM RESEARCH (November 2, 1998), <https://www.highbeam.com/doc/1G1-53190401.html>.

1 IPGs provided no means to quickly navigate between standard and high-definition
 2 content. As a result, many users would “inadvertently forgo consumption of content
 3 that may be of interest to the user due to the difficulty in finding and consuming the
 4 content.” ’363 Patent at 1:29-33.

5 **’363 Patent Allegations**

6 176. Defendants have infringed and are infringing, individually and/or jointly,
 7 either literally or under the doctrine of equivalents, one or more claims of the ’363
 8 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making,
 9 using, offering for lease, leasing, distributing in the United States, and/or importing
 10 into the United States without authority or license, set-top boxes, including without
 11 limitation, one or more of the Accused Products that infringe one or more claims of
 12 the ’363 Patent. Upon information and belief after reasonable investigation, the
 13 Comcast X1 system is configured to receive a user selection of media content, i.e., a
 14 program for viewing, in a standard-definition format, access the requested media
 15 content, determine whether a corresponding high-definition version of that same
 16 media content is available from another channel, determine whether the client device
 17 is capable of displaying the high-definition content, and automatically accessing and
 18 delivering the high-definition content to the client device. See Exhibit H.

19 177. Defendants have been, and currently are, active inducers of infringement
 20 of one or more claims of the ’363 Patent under 35 U.S.C. § 271(b). Upon information
 21 and belief, one or more of the Accused Products of the Defendants directly and/or
 22 indirectly infringe (by induced infringement) one or more claims of the ’363 Patent,
 23 literally and/or under the doctrine of equivalents.

24 178. For example, a preliminary claim chart applying to exemplary
 25 independent claims 1 and 11 of the ’363 Patent to the Accused Products (as defined
 26 herein, which include related hardware and software components) with a Comcast
 27 PX001ANM X1 set-top box (Pace XG1v1) operating Comcast Xfinity X1 software
 28

1 can be found at Exhibit H. This chart is an exemplary chart representative of the
 2 infringing operation of all Accused Products, which operate the Comcast Xfinity X1
 3 software in the same manner.

4 179. Defendants induce infringement of the asserted claims of the '363 Patent
 5 by users of the Accused Products in the United States.

6 180. With full knowledge of the '363 Patent, then, Comcast intentionally
 7 encourages and aids at least service providers and end-user subscribers to directly
 8 infringe the '363 Patent.

9 181. Comcast provides the Accused Products and instructions to Xfinity
 10 subscribers so that such subscribers will use the Accused Products in a directly
 11 infringing manner. Comcast markets the Xfinity System to subscribers provides
 12 instructions to its subscribers on how to "Skip the Zeroes When You Change the
 13 Channel" by using the functionality of the '363 Patent on this website as well.³⁷

14 182. Comcast subscribers directly infringe by using the Accused Products in
 15 their intended manner to infringe. Comcast induces such infringement by providing
 16 the Accused Products and instructions to enable and facilitate infringement, with full
 17 knowledge of the '363 Patent. *Id.* Upon information and belief, Comcast specifically
 18 intends that its actions will result in infringement of the '363 Patent or has taken
 19 deliberate actions to avoid learning of infringement.

20 183. This Complaint will serve as notice to Defendants of the '363 Patent and
 21 its infringement, should Defendants contend that they did not previously have
 22 knowledge thereof.

23 184. Additional allegations regarding Defendants' knowledge of the '363
 24 Patent and willful infringement will likely have evidentiary support after a reasonable
 25 opportunity for discovery.

26 _____
 27 ³⁷ See *Skip the Zeroes When You Change the Channel*, XFINITY,
 28 <https://www.xfinity.com/support/articles/enable-disable-autotune> (last visited Dec. 28, 2017).

185. Defendants' infringement of the '363 Patent is willful and deliberate, entitling Rovi to enhanced damages and attorneys' fees.

186. Defendants' infringement of the '363 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

187. Rovi has been damaged by Defendants' infringement of the '363 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

188. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '363 Patent, including without limitation, lost profits and not less than a reasonable royalty.

FIFTH CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 9,621,956

189. Plaintiffs reallege and incorporate by reference the allegations of paragraphs 1- 188 of this Complaint.

190. The '956 Patent is valid and enforceable under United States Patent Laws.

191. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '956 Patent.

192. A copy of the '956 Patent is attached as Exhibit I.

193. The '956 Patent was issued from U.S. Patent Application No. 14/725,875, filed on May 29, 2015, and is a continuation of application No. 12/616,309, filed on November 11, 2009, now U.S. Patent No. 9,055,325, which is a continuation of application No. 10/804,486, filed on March 18, 2004, and claims

1 priority to U.S. Provisional Patent Application No. 60/456,080, filed on March 18,
2 2003.

3 **The '956 Patent**

4 194. The '956 Patent describes, among other things, a local IPG implemented
5 on interactive television program guide equipment (e.g., a receiver) that generates for
6 display a transport control interface. The equipment records time segments of a video
7 program in response to a specific user command and automatically buffers other time
8 segments of the video program. The transport control interface indicates a time length
9 of the video program and visually distinguishes the recorded time segment of the
10 video program from the buffered time segment of the video program.

11 195. As the '956 Patent describes, a transport control interface may be
12 provided by an IPG to provide information and control for live and recorded video
13 programming. The transport control interface indicates to the user the particular time
14 duration of a live or recorded program and any segments of the program that have
15 been recorded. This feature allows a user to immediately ascertain which portions of
16 the program are stored (and therefore available to view) in the buffer memory, which
17 portions of the program are recorded on either a local or network storage circuitry, and
18 which portions of the program are neither recorded or stored in buffer memory.

19 196. Figure 32 of the '956 Patent shows an example of a transport control bar:
20
21
22
23
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26
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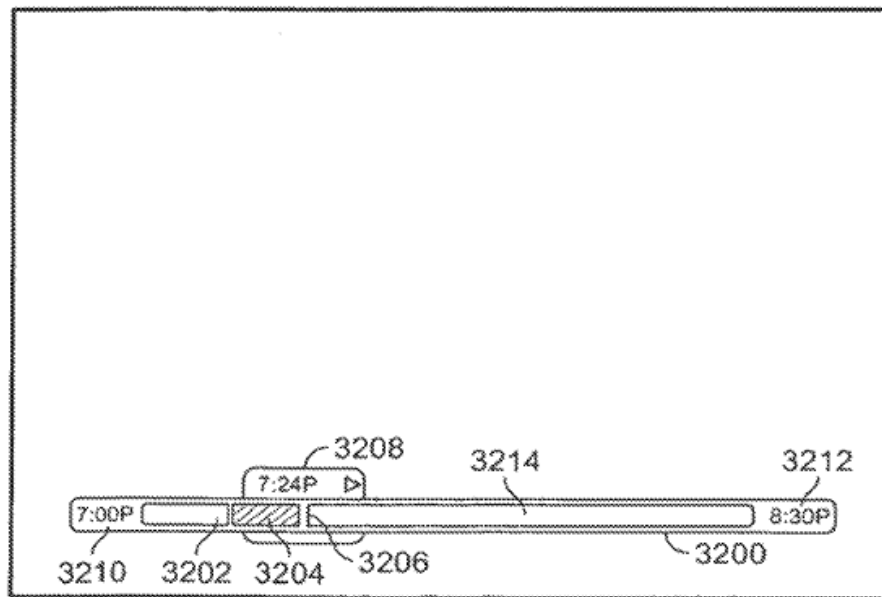


FIG. 32

The '956 Patent describes FIG. 32 as follows:

FIG. 32 shows one example of such a transport control bar **3200**. In this example, the currently viewed video may be shown, for example, in response to the user tuning to a broadcast channel. Start time **3210** on the left side of the transport control bar (e.g., 7:00p) may indicate to the user the start time of the currently broadcasting program (includes broadcast of the program that is shown at substantially the time that it is being broadcasted and delayed broadcast of the program) or any other suitable time. End time **3212** on the right side of the transport control bar may indicate to the user the end time of the current program or any other suitable time. Transport control block **3208** may, for example, indicate the current time and the relative time position in the current program or the time span between start time **3210** and end time **3212**, which may also be graphically indicated by tab **3206**, or in the time span of region **3212**. In another suitable approach, end time **3212** may always be

1 configured to be a fixed length of time from start time **3210** (e.g., two
 2 hours). In this case, start time **3210** and end time **3212** may be
 3 independent of the start and end times of the program being broadcast. In
 4 this embodiment, start time **3210** may be set to the nearest previous half
 5 hour when the user changes channels, for example 7:00pm when the user
 6 tunes at 7:14pm. End time **3212** would be set to 9:00pm in this example.
 7 When the viewer has watched the same channel long enough so that the
 8 time being viewed is no longer in the displayed span, the start and end
 9 times may be incremented by 30 minutes. For example, when the viewer
 10 watches the segment of the program that was broadcast at 9:00pm, start
 11 time **3210** may be changed to 7:30pm and end time **3212** may be changed
 12 to 9:30pm. In this embodiment, start time **3210** and end time **3212** may
 13 also be changed by a half hour at a time as the user rewinds or fast
 14 forwards through delayed content.
 15 The interactive television program guide application may also change the
 16 color or other characteristics associated with the buffer of the recorded
 17 content to indicate that it corresponds to a user requested recording.

18 '956 Patent at 30:18-67.

19 **Historical Context of the '956 Patent**

20 197. In the years leading up to the invention of the '956 Patent, DVRs—
 21 particularly those made by TiVo, had become increasingly popular. While the
 22 capabilities of those DVRs were “numerous and comprehensive,” some aspects of the
 23 interfaces fell “short of providing sufficient information about recorded content,
 24 content currently being recorded, and content to be recorded.” '956 Patent 1:33-37.

25 198. It was, therefore, necessary and beneficial to develop a more desirable
 26 interface that allowed viewers to more efficiently manage their program recordings.
 27 With that goal in mind, the inventors of the '956 Patent developed a transport control
 28

1 interface provided by an IPG to provide information and control for live and recorded
2 video programming.

3 **'956 Patent Allegations**

4 199. Defendants have infringed and are infringing, individually and/or jointly,
5 either literally or under the doctrine of equivalents, one or more claims of the '956
6 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making,
7 using, offering for lease, leasing, distributing in the United States, and/or importing
8 into the United States without authority or license, set-top boxes, including without
9 limitation, one or more of the Accused Products that infringe one or more claims of
10 the '956 Patent. Upon information and belief after reasonable investigation, each of
11 the Accused Products comprises or is designed to be used in: a system for buffering
12 programs, the system comprising: a storage device; and an interactive application
13 implemented at least partially on user equipment and configured to: upon receiving a
14 user request, from a user input device, to tune to a first channel: receive a first
15 program from the first channel; and buffer the first program to enable the user to view
16 on a display device a previously received portion of the first program; receive from
17 the user input device a user request to tune to a second channel; and upon receiving
18 the user request to tune to the second channel: receive a second program from the
19 second channel; and buffer on the storage device the second program to enable the
20 user to view a previously received portion of the second program, wherein the first
21 program and second program are buffered in parallel, wherein an indicator that
22 indicates the availability of at least one of the buffered first program and the buffered
23 second program is generated for display on the display device to the user, and wherein
24 the indicator also indicates a current play position and is interactive to enable the user
25 to access another play position associated with at least one of the first program and the
26 second program.

200. Defendants have been, and currently are, active inducers of infringement of one or more claims of the '956 Patent under 35 U.S.C. § 271(b). Upon information and belief, one or more of the Accused Products of the Defendants directly and/or indirectly infringe (by induced infringement) one or more claims of the '956 Patent, literally and/or under the doctrine of equivalents.

201. For example, a preliminary claim chart applying to exemplary independent claims 1 and 11 of the '956 Patent to the Accused Products (as defined herein, which include related hardware and software components) with a Comcast PX001ANM X1 set-top box (Pace XG1v1) operating Comcast Xfinity X1 software can be found at Exhibit J. This chart is an exemplary chart representative of the infringing operation of all Accused Products, which operate the Comcast Xfinity X1 software in the same manner.

202. Defendants induce infringement of the asserted claims of the '956 Patent by users of the Accused Products in the United States.

203. With full knowledge of the '956 Patent, then, Comcast intentionally encourages and aids at least service providers and end-user subscribers to directly infringe the '956 Patent.

204. Comcast provides the Accused Products and instructions to Xfinity subscribers so that such subscribers will use the Accused Products in a directly infringing manner. Comcast markets the Xfinity System to subscribers by touting the ability to "Provides details about the progress of the program you are watching" where "Green indicates the portion of the program stored in the buffer" and "If you press [the record button], the current program in the buffer will be recorded and the Status Bar will turn red."³⁸ Comcast provides instructions to its subscribers on how to use the functionality of the '956 Patent on this website as well.

³⁸ See *Welcome to Xfinity TV: HD DVR Brochure*, XFINITY, <https://www.xfinity.com/~media/files/welcome%20kits/dvr/moa25%20s25%20dvr%20ig.ashx> (last visited Dec. 28, 2017).

205. Comcast subscribers directly infringe by using the Accused Products in their intended manner to infringe. Comcast induces such infringement by providing the Accused Products and instructions to enable and facilitate infringement, with full knowledge of the '956 Patent.³⁹ Upon information and belief, Comcast specifically intends that its actions will result in infringement of the '956 Patent or has taken deliberate actions to avoid learning of infringement.

206. This Complaint will serve as notice to Defendants of the '956 Patent and its infringement, should the '956 Defendants contend that they did not previously have knowledge thereof.

207. Additional allegations regarding Defendants' knowledge of the '956 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

208. Defendants' infringement of the '956 Patent is willful and deliberate, entitling Rovi to enhanced damages and attorneys' fees.

209. Defendants' infringement of the '956 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

210. Rovi has been damaged by Defendants' infringement of the '956 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

211. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '956 Patent, including without limitation lost profits and not less than a reasonable royalty.

³⁹ *Id.*

SIXTH CLAIM FOR RELIEF

INFRINGEMENT OF U.S. PATENT NO. 9,668,014

212. Plaintiffs reallege and incorporate by reference the allegations of paragraphs 1- 211 of this Complaint.

213. The '014 Patent is valid and enforceable under United States Patent Laws.

214. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '014 Patent.

215. A copy of the '014 Patent is attached as Exhibit K.

216. The '014 Patent was issued from U.S. Patent Application No. 15/195,530, filed on June 28, 2016, and is a continuation of application No. 14/673,493, filed on March 30, 2015, now U.S. Patent No. 9,392,324.

The '014 Patent

217. The '014 Patent is directed to a method and system of resolving voice commands for media assets that do not expressly name the media assets. The '014 Patent discloses determining whether a media asset identifier from a voice command completely matches any known media asset identifier and, based on determining it does not, calculating a degree of similarity between the media asset identifier and known media asset identifiers. The '014 Patent further discloses providing users with an option to confirm that a suggested known media asset, which exceeds a threshold of similarity, corresponds to the media asset that was the subject of the voice command.

218. In one preferred embodiment of the patented invention, a system may determine that a user "command comprises a received media asset identifier." '014 Patent at 3:33-34. Upon receiving this identifier, the system may then access "a remote database stored on a remote server containing a list of known media asset identifiers." '014 Patent at 3:37-41. From there, the system "may cross-reference the

1 received media asset identifier against the plurality of known media asset identifiers.
 2 '014 Patent at 3:43-45. Even if the media asset identifier is not a perfect match to an
 3 identifier known in the database, the “media guidance application may then calculate a
 4 set of similarity metrics for the plurality of known media asset identifiers.” '014
 5 Patent at 3:56-58. In determining this similarity metric, the system may use a
 6 “character-wise comparison, word-by-word comparison, categorical comparison . . .
 7 or any other appropriate method of comparison. '014 Patent at 3:64-4:5. In accordance
 8 with those methods, if the similarity metrics exceeds a threshold similarity, then the
 9 system can ascertain a potential match. '014 Patent at 4:9-13. This potential match
 10 may then be displayed to the user for confirmation. For example, if a user requests
 11 “Star Wars 1,” the system may suggest “Star Wars Episode 1: The Phantom Menace.”
 12 '014 Patent at 4:16-20.

13 219. The systems and methods of the '014 Patent provide substantial
 14 technological improvements in the field of media content searching. For example, the
 15 '014 Patent allows users to more efficiently perform voice searches for media content
 16 contained in a vast library of content by increasing the likelihood of a correct response
 17 to a user request through the use of the similarity metrics described in the '014 Patent.
 18 As a result, users no longer have to perform commands with perfect accuracy and
 19 precision in order to return the desired result. This allows users to spend less time
 20 searching and more time enjoying their desired media content.

21 220. Figure 5 is an illustrative embodiment of a user device on which the
 22 media guidance application has been implemented in accordance with the principles
 23 of the '014 Patent.

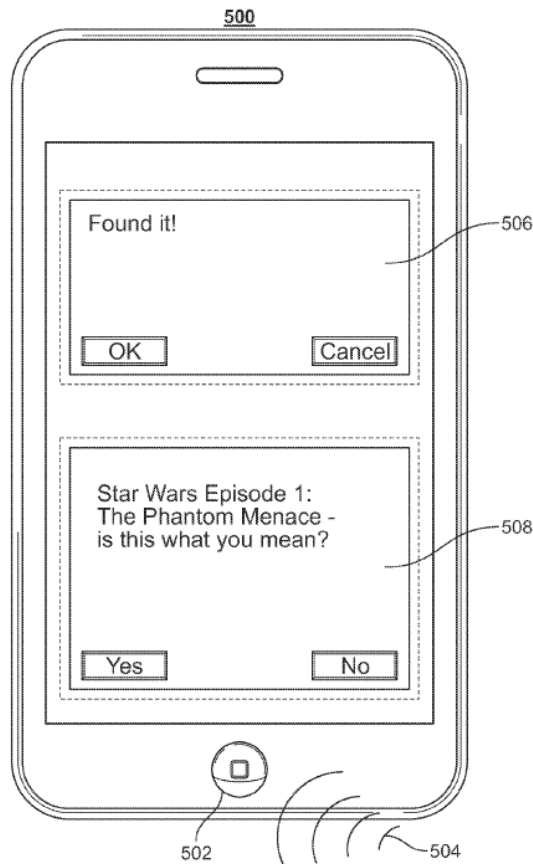


FIG. 5

As the '014 Patent describes:

FIG. 5 shows user equipment device **500** receiving, via microphone **502**, command **504**. User equipment device **500** may be any user equipment, such as user equipment device **402**, **404**, or **406**. Microphone **502** can be any user input interface **310**, and is presented in FIG. 5 as a microphone for illustrative purposes. The media guidance application may receive command **504** via user input interface **310** using audio recognition, video recognition (e.g., for a gestural command), touch recognition (e.g., for input on a touch-screen), text, or any other suitable means of communication. Command **504** may be received by microphone **502** either locally (as received through an auditory sensor such as a microphone, as depicted in FIG. 5). For example, the media guidance

1 application, implemented on user equipment device **500**, may detect that
2 command **504**, received with microphone **502**, comprises an instruction
3 to store a portion of “Star Wars Episode 1: The Phantom Menace.”
4 Alternatively, command **504** may be received by the media guidance
5 application via control circuitry **304** of user equipment **500** from a remote
6 source (e.g., from user equipment device **404** by way of communications
7 network **414**). The media guidance application may generate for display,
8 on display **312** of user equipment device **500**, an illustrative display
9 including optional storage confirmation message **506** and optional media
10 asset identifier confirmation message **508**. Optional storage confirmation
11 message **506** and optional media asset identifier confirmation message
12 **508** are depicted as visual in FIG. **5**, but the media guidance application
13 may alternatively or additionally present audio confirmation (e.g., by way
14 of speakers **314**) or tactile confirmation (e.g., a series of vibrations
15 generated using a vibration motor implemented in user equipment device
16 **500**). The media guidance application may present optional storage
17 confirmation message **506** to the user in response to the media guidance
18 application causing the portion of the media asset to be stored. For
19 example, if the media guidance application identifies a free video-on-
20 demand service as a source of the requested portion of “Star Wars
21 Episode 1: The Phantom Menace” and causes the portion to be stored, the
22 media guidance application may generate for display, on display **312**,
23 optional storage confirmation message **506** with the phrase “The
24 requested portion has been saved” (not shown).

25 '014 Patent at 21:47-22:36.

Historical Context of the '014 Patent

221. In the years leading up to the invention of the '014 Patent, cable and satellite television providers had rapidly been increasing the scope of their offerings by adding new channels to their subscription packages and building large on-demand video libraries that a user could access. While these enhanced offerings were a marked improvement over the limited amount of content previously available to cable subscribers, these vast content libraries posed new problems; namely, users found it cumbersome and time consuming to search for desired content. This problem was compounded by at least two factors. First, typical remote controls were not equipped with QWERTY-style keyboards, which forced users to either search with an overloaded key pad or waste time navigating a clumsy on-screen search interface. Second, and even more frustrating, if a user entered in a search that was not accurate, the system would likely return no results, forcing the user to start over once again.

222. The inventors of the '014 Patent addressed both of these issues by combining voice-command technology, a robust media asset identifier database, and a similarity metric analysis that allows users to quickly search a vast media catalogue receive the desired content—even if the user request was not entirely accurate.

'014 Patent Allegations

223. Defendants have infringed and are infringing, individually and/or jointly, either literally or under the doctrine of equivalents, one or more claims of the '014 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making, using, offering for lease, leasing, distributing in the United States, and/or importing into the United States without authority or license, including without limitation, one or more of the Accused Products (hereafter the '014 Accused Products) that infringe one or more claims of the '014 Patent. On information and belief after reasonable investigation, Comcast's X1 system, for users with either an X1 voice remote or the XFINITY TV remote app, practices all of the limitations of one or more claims of

1 U.S. Patent 9,668,014. Specifically, Comcast's X1 system practices a method for
 2 resolving a voice command for a media asset, where the voice command does not
 3 expressly name the media asset.

4 224. Defendants have been, and currently are, active inducers of infringement
 5 of one or more claims of the '014 Patent under 35 U.S.C. § 271(b). Upon information
 6 and belief, one or more of the Accused Products of the Defendants directly and/or
 7 indirectly infringe (by induced infringement) one or more claims of the '014 Patent,
 8 literally and/or under the doctrine of equivalents.

9 225. For example, a preliminary claim chart applying to exemplary
 10 independent claims 1 and 11 of the '014 Patent to the Accused Products (as defined
 11 herein, which include related hardware and software components) with a voice
 12 remote, mobile application, and/or Comcast PX001ANM X1 set-top box (Pace
 13 XG1v1) operating Comcast Xfinity X1 software can be found at Exhibit L. This chart
 14 is an exemplary chart representative of the infringing operation of all Accused
 15 Products, which operate the Comcast Xfinity X1 software in the same manner.

16 226. Defendants induce infringement of the asserted claims of the '014 Patent
 17 by users of the '014 Accused Products in the United States.

18 227. With full knowledge of the '014 Patent, then, Comcast intentionally
 19 encourages and aids at least service providers and end-user subscribers to directly
 20 infringe the '014 Patent.

21 228. Comcast provides the Accused Products and instructions to Xfinity
 22 subscribers so that such subscribers will use the Accused Products in a directly
 23 infringing manner. Comcast markets the Xfinity System to subscribers by touting the
 24 ability to let viewers "search for networks, shows and movies; set DVR recordings;
 25 get recommendations; navigate Xfinity On Demand and more" by speaking to their
 26 Xfinity voice remotes.⁴⁰ Comcast provides instructions to its subscribers on how to

27 _____
 28 ⁴⁰ *Comcast Introduces Voice Controlled TV Remote*, COMCAST (May 5, 2015),

1 use the functionality of the '014 Patent on its website through either the Xfinity Voice
2 Remote App or Xfinity TV Remote App.⁴¹

3 229. Comcast subscribers directly infringe by using the Accused Products in
4 their intended manner to infringe. Comcast induces such infringement by providing
5 the Accused Products and instructions to enable and facilitate infringement, with full
6 knowledge of the '014 Patent. Upon information and belief, Comcast specifically
7 intends that its actions will result in infringement of the '014 Patent or has taken
8 deliberate actions to avoid learning of infringement.

9 230. This Complaint will serve as notice to Defendants of the '014 Patent and
10 its infringement, should Defendants contend that they did not previously have
11 knowledge thereof.

12 231. Additional allegations regarding Defendants' knowledge of the '014
13 Patent and willful infringement will likely have evidentiary support after a reasonable
14 opportunity for discovery.

15 232. Defendants' infringement of the '014 Patent is willful and deliberate,
16 entitling Rovi to enhanced damages and attorneys' fees.

17 233. Defendants' infringement of the '014 Patent is exceptional and entitles
18 Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C.
19 § 285.

20 234. Rovi has been damaged by Defendants' infringement of the '014 Patent
21 and will continue to be damaged unless Defendants are enjoined by this Court. Rovi
22 has suffered and continues to suffer irreparable injury for which there is no adequate
23

24 [http://corporate.comcast.com/news-information/news-feed/comcast-introduces-voice-](http://corporate.comcast.com/news-information/news-feed/comcast-introduces-voice-controlled-tv-remote)
25 [controlled-tv-remote](http://corporate.comcast.com/news-information/news-feed/comcast-introduces-voice-controlled-tv-remote); *see also The X1 Voice Remote Overview*, XFINITY,
26 <https://www.xfinity.com/support/articles/get-to-know-xr11-remote> (last visited
27 Dec. 28, 2017).

28 ⁴¹ *The X1 Voice Remote Overview; Download and Set Up the XFINITY TV Remote App On a Mobile Device*, XFINITY,
<https://www.xfinity.com/support/articles/downloading-cable-tv-app> (last visited
Dec. 28, 2017).

1 remedy at law. The balance of hardships favors Rovi, and public interest is not
2 disserved by an injunction.

3 235. Rovi is entitled to recover from Defendants all damages that Rovi has
4 sustained as a result of Defendants' infringement of the '014 Patent, including without
5 limitation lost profits and not less than a reasonable royalty.

6 **PRAYER FOR RELIEF**

7 WHEREFORE, Rovi prays for a judgment in its favor and against Comcast and
8 respectfully requests the following relief:

9 1. A judgment declaring that Comcast has infringed one or more claims of
10 each of the Asserted Patents in this litigation pursuant to 35 U.S.C. §§ 271(a), and/or
11 271(b);

12 2. A preliminary injunction pursuant to 35 U.S.C. § 283 in accordance with
13 the principles of equity preventing Comcast, its officers, directors, attorneys, agents,
14 servants, employees, parties in privity with, and all persons in active concert or
15 participation with any of the foregoing, from continued leasing or offering for lease
16 the X1 IPG Product to any cable operator or any Pay-TV provider that is not licensed
17 by Rovi to make use, license, or sell any product offered by Comcast that practices,
18 provides, or contains any method, apparatus, or system covered by one or more of the
19 Asserted Patents;

20 3. A preliminary injunction pursuant to 35 U.S.C. § 283 in accordance with
21 the principles of equity preventing Comcast, its officers, directors, attorneys, agents,
22 servants, employees, parties in privity with, and all persons in active concert or
23 participation with any of the foregoing, from leasing, offering or providing to any of
24 its cable customers and consumer end users any IPG product solution that practices,
25 provides, or contains any method, apparatus, or system covered by one or more of the
26 Asserted Patents commencing on a date ninety (90) days following the entry of the
27 preliminary injunction;

1 4. An injunction pursuant to 35 U.S.C. § 283 permanently enjoining
2 Comcast, its officers, directors, attorneys, agents, servants, employees, parties in
3 privity with, and all persons in active concert or participation with, any of the
4 foregoing, from continued acts of infringement, contributing to infringement, or
5 inducing infringement of the Asserted Patents in this litigation;

6 5. A judgment requiring Comcast to make an accounting of damages
7 resulting from Defendants' infringement of the Asserted Patents in this litigation;

8 6. A judgment awarding Rovi its damages resulting from Comcast's
9 infringement of the Asserted Patents in this litigation, and increasing such damages
10 pursuant to 35 U.S.C. § 284 because of the willful and deliberate nature of
11 Defendants' conduct;

12 7. A judgment requiring Comcast to pay Rovi costs, expenses, and pre-
13 judgment and post-judgment interest for Defendants' infringement of each of the
14 Asserted Patents in this litigation;

15 8. A judgment finding that this is an exceptional case and awarding Rovi's
16 attorneys' fees pursuant to 35 U.S.C. § 285; and
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9. Such other relief as the Court deems just and proper.

DATED: February 8, 2018

Respectfully submitted,
MCKOOL SMITH, P.C.

BY: /s/ Roderick G. Dorman

RODERICK G. DORMAN

ATTORNEYS FOR PLAINTIFFS
ROVI GUIDES, INC. AND ROVI
TECHNOLOGIES CORP.

DEMAND FOR JURY TRIAL

In accordance with Rule 38 of the Federal Rules of Civil Procedure and Local Rule CV-38-1, Plaintiffs respectfully demand a jury trial of all issues triable to a jury.

DATED: February 8, 2018

Respectfully submitted,
MCKOOL SMITH, P.C.

BY: /s/ Roderick G. Dorman

RODERICK G. DORMAN

ATTORNEYS FOR PLAINTIFFS
ROVI GUIDES, INC. AND ROVI
TECHNOLOGIES CORP.