

In the Matter of

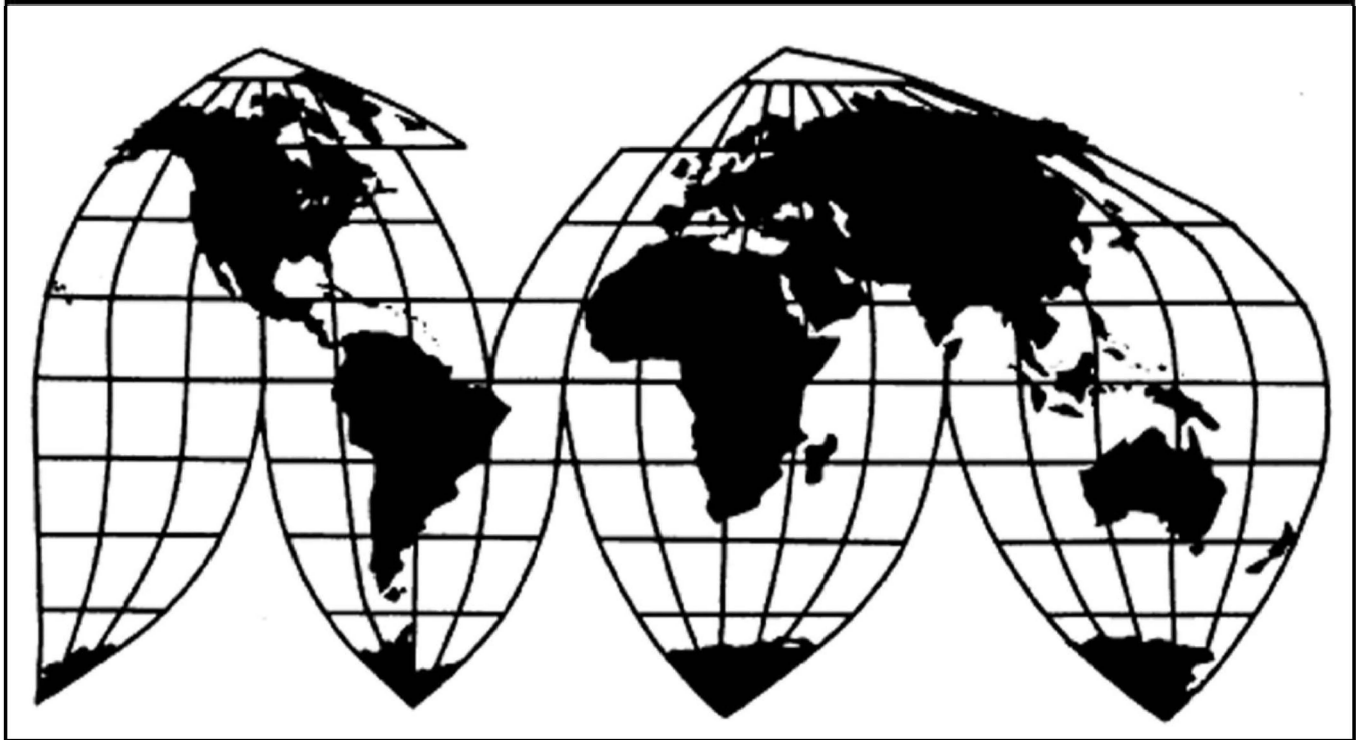
**CERTAIN DIGITAL VIDEO RECEIVERS AND
RELATED HARDWARE AND SOFTWARE
COMPONENTS**

Investigation No. 337-TA-1103

Publication 5251

February 2022

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

COMMISSIONERS

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Randolph J. Stayin, Commissioner
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**Address all communications to
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Washington, DC 20436**

U.S. International Trade Commission

Washington, DC 20436
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In the Matter of

CERTAIN DIGITAL VIDEO RECEIVERS AND RELATED HARDWARE AND SOFTWARE COMPONENTS

Investigation No. 337-TA-1103



**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

**CERTAIN DIGITAL VIDEO
RECEIVERS AND RELATED
HARDWARE AND SOFTWARE
COMPONENTS**

**Investigation No. 337-TA-1103
(Rescission)**

**NOTICE OF COMMISSION DECISION TO INSTITUTE A RESCISSION
PROCEEDING; RESCISSION OF A LIMITED EXCLUSION ORDER AND CEASE
AND DESIST ORDERS; TERMINATION OF RESCISSION PROCEEDING**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission (“Commission”) has determined to institute a rescission proceeding in the above-captioned investigation and to grant a joint motion for rescission of a limited exclusion order (“LEO”) and cease and desist orders (“CDOs”) previously issued in the investigation. The LEO and CDOs are rescinded, and the rescission proceeding is terminated.

FOR FURTHER INFORMATION CONTACT: Sidney A. Rosenzweig, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street S.W., Washington, D.C. 20436, telephone (202) 708-2532. Copies of non-confidential documents filed in connection with this investigation may be viewed on the Commission’s electronic docket (EDIS) at <https://edis.usitc.gov>. For help accessing EDIS, please email EDIS3Help@usitc.gov. General information concerning the Commission may also be obtained by accessing its Internet server at <https://www.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission’s TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: On March 16, 2018, the Commission instituted this investigation based on a supplemented complaint filed on behalf of, *inter alia*, Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts (collectively, “Rovi”). The supplemented complaint alleged violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337 (“section 337”), based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain digital video receivers and related hardware and software components by reason of infringement of certain claims of, *inter alia*, U.S. Patent No. 7,779,011

("the '011 patent"). 83 FR 11792 (Mar. 16, 2018). The Commission's notice of investigation named as respondents Comcast Corporation of Philadelphia, Pennsylvania; Comcast Cable Communications, LLC of Philadelphia, Pennsylvania; Comcast Cable Communications Management, LLC of Philadelphia, Pennsylvania; Comcast Business Communications, LLC of Philadelphia, Pennsylvania; Comcast Holdings Corporation of Philadelphia, Pennsylvania; and Comcast Shared Services, LLC of Chicago, Illinois (collectively, "Comcast"). *Id.* The Office of Unfair Import Investigations was also named as a party in this investigation. *Id.*

On April 23, 2020, the Commission terminated the investigation with a finding of violation of section 337 based on the infringement of claim 9 of the '011 patent. The Commission issued an LEO and six CDOs (one for each respondent).

On November 13, 2020, Rovi and Comcast jointly filed confidential and public versions of a petition to rescind the remedial orders based on a settlement agreement.

Having reviewed the petition and determined that it complies with Commission rules, *see* 19 CFR 210.76(a)(3), the Commission has determined to institute a rescission proceeding and to grant the petition. The LEO and the CDOs are hereby rescinded.

The rescission proceeding is terminated.

The Commission vote for this determination took place on November 19, 2020.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and in Part 210 of the Commission's Rules of Practice and Procedure (19 CFR Part 210).

By order of the Commission.

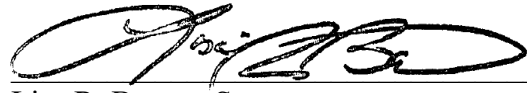


Lisa R. Barton
Secretary to the Commission

Issued: November 19, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **November 19, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

**On Behalf of Requesters Rovi Corporation, Rovi Guides, Inc.,
and Veveo, Inc.:**

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- Via Express Delivery
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**On Behalf of Requesters Comcast Corporation, Comcast
Cable Communications, LLC, Comcast Cable
Communications Management, LLC, Comcast Business
Communications, LLC, Comcast Holdings Corporation, and
Comcast Shared Services, LLC:**

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**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

**CERTAIN DIGITAL VIDEO
RECEIVERS AND RELATED
HARDWARE AND SOFTWARE
COMPONENTS**

**Investigation No. 337-TA-1103
(Rescission)**

RESCISSION OF REMEDIAL ORDERS

On March 16, 2018, the Commission instituted this investigation based on a supplemented complaint filed on behalf of, *inter alia*, Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts (collectively, “Rovi”). The supplemented complaint alleged violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337 (“section 337”), based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain digital video receivers and related hardware and software components by reason of infringement of certain claims of, *inter alia*, U.S. Patent No. 7,779,011 (“the ’011 patent”). 83 FR 11792 (Mar. 16, 2018). The Commission’s notice of investigation named as respondents Comcast Corporation of Philadelphia, Pennsylvania; Comcast Cable Communications, LLC of Philadelphia, Pennsylvania; Comcast Cable Communications Management, LLC of Philadelphia, Pennsylvania; Comcast Business Communications, LLC of Philadelphia, Pennsylvania; Comcast Holdings Corporation of Philadelphia, Pennsylvania; and Comcast Shared Services, LLC of

Chicago, Illinois (collectively, “Comcast”). *Id.* The Office of Unfair Import Investigations was also named as a party in this investigation. *Id.*

On April 23, 2020, the Commission terminated the investigation with a finding of violation of section 337 based on the infringement of claim 9 of the ’011 patent. The Commission issued a limited exclusion order (“LEO”) and six cease and desist orders (“CDOs”) (one for each respondent).

On November 13, 2020, Rovi and Comcast jointly filed confidential and public versions of a petition to rescind the remedial orders based on a settlement agreement.

Having reviewed the petition and determined that it complies with Commission rules (*see* 19 C.F.R. § 210.76(a)(3)), the Commission has determined to institute a rescission proceeding and to grant the petition.

Accordingly, it is hereby ORDERED that:

1. The LEO and CDOs issued in the above-captioned investigation are hereby rescinded.
2. The Secretary shall serve a copy of this order on the Secretary of the Treasury and all parties of record and publish notice thereof in the *Federal Register*.

By order of the Commission.

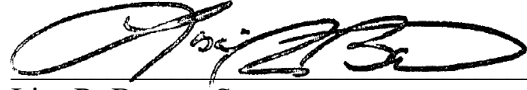


Lisa R. Barton
Secretary to the Commission

Issued: November 19, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER, COMMISSION** has been served by hand upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **November 19, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

**On Behalf of Requesters Rovi Corporation, Rovi Guides, Inc.,
and Veveo, Inc.:**

Douglas A. Cawley, Esq.
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**On Behalf of Requesters Comcast Corporation, Comcast
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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN DIGITAL VIDEO
RECEIVERS AND RELATED
HARDWARE AND SOFTWARE
COMPONENTS**

Investigation No. 337-TA-1103

**NOTICE OF THE COMMISSION'S FINAL DETERMINATION FINDING A
VIOLATION OF SECTION 337; ISSUANCE OF A LIMITED
EXCLUSION ORDER AND CEASE AND DESIST ORDERS;
TERMINATION OF THE INVESTIGATION**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has found a violation of section 337 of the Tariff Act of 1930, as amended, in this investigation and has issued a limited exclusion order and cease and desist orders prohibiting importation of infringing digital video receivers and related hardware and software components.

FOR FURTHER INFORMATION CONTACT: Sidney A. Rosenzweig, Esq., Office of the General Counsel, U.S. International Trade Commission, 500 E Street, SW, Washington, D.C. 20436, telephone (202) 708-2532. Copies of non-confidential documents filed in connection with this investigation may be viewed on the Commission's electronic docket (EDIS) at <https://edis.usitc.gov>. For help accessing EDIS, please email EDIS3Help@usitc.gov. General information concerning the Commission may also be obtained by accessing its Internet server at <http://www.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal, telephone (202) 205-1810.

SUPPLEMENTARY INFORMATION: On March 16, 2018, the Commission instituted this investigation based on a supplemented complaint filed on behalf of Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts (collectively, "Rovi"); as well as Rovi Technologies Corporation of San Jose, CA. The supplemented complaint alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337 ("section 337"), based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain digital video receivers and related hardware and software components by reason of infringement of one or more claims of U.S. Patent Nos. U.S. Patent No. 7,779,011 ("the '011 patent"); 7,937,394 ("the '394 patent"); 7,827,585 ("the '585 patent"); 9,294,799 ("the '799 patent"); 9,396,741 ("the

'741 patent"); 9,578,363 ("the '363 patent"); 9,621,956 ("the '956 patent"); and 9,668,014 ("the '014 patent"). 83 FR 11792 (Mar. 16, 2018). The Commission's notice of investigation named as respondents Comcast Corporation of Philadelphia, Pennsylvania; Comcast Cable Communications, LLC of Philadelphia, Pennsylvania; Comcast Cable Communications Management, LLC of Philadelphia, Pennsylvania; Comcast Business Communications, LLC of Philadelphia, Pennsylvania; Comcast Holdings Corporation of Philadelphia, Pennsylvania; and Comcast Shared Services, LLC of Chicago, Illinois (collectively, "Comcast"). *Id.* The Office of Unfair Import Investigations was also named as a party in this investigation. *Id.*

The Commission previously terminated the investigation as to complainant Rovi Technologies Corporation; as to the '956, '394, '014, '799, and '363 patents in their entirety; and as to certain claims of the '011, '585, and '741 patents. Order No. 12, *unreviewed*, Notice (July 24, 2018); Order No. 33, *unreviewed*, Notice (Sept. 19, 2018); Order 39, *unreviewed*, Notice (Oct. 25, 2018).

On June 3, 2019, the presiding ALJ issued Order No. 47, a summary determination ("SD"), which, *inter alia*, granted Rovi's motions for summary determination as to importation and sale after importation. On June 11, 2019, Comcast filed a petition for review of the SD. On June 18, 2019, Rovi responded to Comcast's petition. On June 25, 2019, the Commission investigative attorney ("IA") responded to Comcast's petition.

On June 4, 2019, the ALJ issued the final initial determination ("final ID"). On June 17, 2019, Comcast and Rovi each filed a petition for review of the final ID. On June 25, 2019, Comcast and Rovi responded to each other's petition, and the IA responded to both.

In addition, the Commission received comments from Rovi on the public interest pursuant to Commission Rule 210.50(a)(4). The Commission also received comments from the following organizations in response to the Commission's notice soliciting public interest comments, 84 FR 27804 (June 14, 2019): Tea Party Patriots Action; Americans for Limited Government; Frontiers of Freedom Institute; Market Institute; and Conservatives for Property Rights (joined by 60 Plus Association, and Americans for Limited Government). The Commission also received correspondence from Rep. Peter King (R-N.Y.) (Sept. 19, 2019), Rep. Jackie Speier (D-Cal.) (Sept. 6, 2019), and Rep. Steve Stivers (R-Ohio) (Aug. 27, 2019).

On August 15, 2019, the Commission determined to review in part the SD as to reimportation, and not to review the remainder of the SD. Notice at 3 (Aug. 15, 2019) ("Notice of Review"). As to the final ID, in relevant part the Commission terminated the investigation with a finding of no violation as to the '585 and '741 patents, but determined to review infringement of the '011 patent. *Id.* The Commission solicited briefing on certain questions pertaining to infringement of the '011 patent. *Id.* at 4.

On August 29, 2019, the parties filed responses to the Commission notice, and on September 10, 2019, Comcast and Rovi filed replies.

Having examined the record of this investigation, including the final ID and the parties' submissions, the Commission has determined that Comcast's X1 set-top boxes are used by Comcast's users to directly infringe claim 9 of the '011 patent at Comcast's inducement. Thus,

Comcast violated section 337 with regard to claim 9 of the '011 patent. The Commission declines to reach the issue of whether there has been a section 337 violation as to claim 1 of the '011 patent because of the delay and burden associated with deciding the issue and because such a finding would not afford any additional relief to Rovi. Thus, the Commission need not decide the issue. See *Yingbin-Nature (Guangdong) Wood Indus. Co. v. Int'l Trade Comm'n*, 535 F.3d 1322, 1331-32 (Fed. Cir. 2008).

The Commission has further determined that the appropriate remedy is: (1) a limited exclusion order prohibiting the entry of infringing digital video receivers and related hardware and software components; and (2) cease and desist orders directed to respondents. The Commission has determined that the public interest factors enumerated in section 337(d) and (f), 19 U.S.C. 1337(d), (f), do not preclude the issuance of the limited exclusion order or the cease and desist orders. The Commission has determined that a bond in the amount of zero percent of entered value is required during the period of Presidential review. 19 U.S.C. 1337(j)(3).

The investigation is terminated. The Commission's reasoning in support of its determinations is set forth more fully in its opinion. The Commission's orders and opinion were delivered to the President and the United States Trade Representative on the day of their issuance.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and in Part 210 of the Commission's Rules of Practice and Procedure (19 CFR part 210).

By order of the Commission.

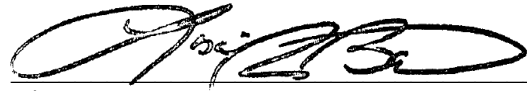


Lisa R. Barton
Secretary to the Commission

Issued: April 23, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served via EDIS upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **April 23, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

**On Behalf of Complainants Rovi Corporation, Rovi Guides,
Inc., and Veveo, Inc.:**

Douglas A. Cawley, Esq.
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**On Behalf of Respondents Comcast Corporation, Comcast
Cable Communications, LLC, Comcast Cable
Communications Management, LLC, Comcast Business
Communications, LLC, Comcast Holdings Corporation, and
Comcast Shared Services, LLC:**

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**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.**

In the Matter of

**CERTAIN DIGITAL VIDEO RECEIVERS
AND RELATED HARDWARE AND
SOFTWARE COMPONENTS**

Investigation No. 337-TA-1103

LIMITED EXCLUSION ORDER

The Commission has determined that there is a violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337), in the unlawful importation, sale for importation, and/or sale after importation by respondents Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; and Comcast Shared Services, LLC (collectively "Respondents") of certain digital video receivers and related hardware and software components that infringe claim 9 of U.S. Patent No. 7,779,011.

Having reviewed the record of this investigation, including the written submissions of the parties, the Commission has made its determination on the issues of remedy, the public interest, and bonding. The Commission has determined that the appropriate form of relief is a limited exclusion order prohibiting the unlicensed entry into the United States of infringing digital video receivers and related hardware and software components manufactured by or on behalf of the Respondents or any of their affiliated companies, parents, subsidiaries, or other related business entities, or their successors or assigns.

The Commission has also determined that the public interest factors enumerated in 19 U.S.C. § 1337(d) do not preclude the issuance of the limited exclusion order, and that the bond during the Presidential review period shall be in the amount of zero percent of the entered value of the infringing goods.

Accordingly, the Commission hereby **ORDERS** that:

1. Digital video receivers and related hardware and software components that infringe claim 9 of U.S. Patent No. 7,779,011 that are manufactured by, or on behalf of, or are imported by or on behalf of the Respondents or any of their affiliated companies, parents, subsidiaries, agents, or other related business entities, or their successors or assigns, including ARRIS and Technicolor to the extent they import such products on behalf of Respondents,¹ are excluded from entry for consumption into the United States, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption, for the remaining term of U.S. Patent No. 7,779,011, except under license of the patent owner or as provided by law, and except for service or repair of digital video receivers that were imported before the effective date of this order. Digital video receivers for use in a system that has been adjudicated as noninfringing are not subject to exclusion.
2. Notwithstanding paragraph 1 of this Order, the aforesaid digital video receivers

¹ ARRIS and Technicolor refer to Technicolor SA; Technicolor USA, Inc.; Technicolor Connected Home USA LLC; ARRIS International plc; ARRIS Group Inc.; ARRIS Technology, Inc.; ARRIS Enterprises LLC; ARRIS Solutions, Inc.; ARRIS Global Ltd.; and Pace Americas; or any of their affiliated companies, parents, subsidiaries, agents, or other related business entities, or their successors or assigns. *See Limited Exclusion Order, Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-1001.

and related hardware and software components are entitled to entry into the United States for consumption, entry for consumption from a foreign-trade zone, or withdrawal from a warehouse for consumption, under bond in the amount of zero percent of the entered value of the imported digital video receivers and related hardware and software components pursuant to subsection (j) of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337(j)), and the Presidential Memorandum for the United States Trade Representative of July 21, 2005 (70 FR 43251), from the day after this Order is received by the United States Trade Representative, and until such time as the United States Trade Representative notifies the Commission that this Order is approved, disapproved, or no action is taken but, in any event, not later than sixty (60) days after the issuance of receipt of this action.

3. At the discretion of U.S. Customs and Border Protection (“CBP”) and pursuant to the procedures it establishes, persons seeking to import digital video receivers and hardware and software components thereof that are potentially subject to this Order may be required to certify that they are familiar with the terms of this Order, that they have made appropriate inquiry, and thereupon state that, to the best of their knowledge and belief, the products being imported are not excluded from entry under paragraph 1 of this Order, including because the products will be used as part of a redesign adjudicated by the Commission in the violation investigation not to infringe, and thus the products cannot be used in a manner that infringes the claim of the patent that is the subject of this Order. At its discretion, CBP may require persons who have provided the certification

described in this paragraph to furnish such records or analyses as are necessary to substantiate this certification.

4. In accordance with 19 U.S.C. § 1337(1), the provisions of this Order shall not apply to infringing digital video receivers and related hardware and software components that are imported by or for the use of the United States, or imported for and to be used for, the United States with the authorization or consent of the Government.
5. The Commission may modify this Order in accordance with the procedures described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).
6. The Secretary shall serve copies of this Order upon each party of record in this investigation and upon CBP.
7. Notice of this Order shall be published in the *Federal Register*.

By order of the Commission.

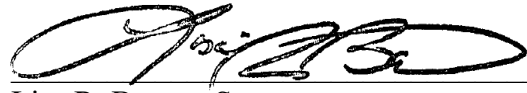


Lisa R. Barton
Secretary to the Commission

Issued: April 23, 2020

PUBLIC CERTIFICATE OF SERVICE

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U.S. International Trade Commission
500 E Street, SW, Room 112
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**On Behalf of Complainants Rovi Corporation, Rovi Guides,
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**On Behalf of Respondents Comcast Corporation, Comcast
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**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC**

In the Matter of

**CERTAIN DIGITAL VIDEO RECEIVERS
AND RELATED HARDWARE AND
SOFTWARE COMPONENTS**

Investigation No. 337-TA-1103

CEASE AND DESIST ORDER

IT IS HEREBY ORDERED THAT Comcast Shared Services, LLC, of Chicago, Illinois cease and desist from conducting any of the following activities in the United States: importing, selling, offering for sale, leasing, offering for lease, renting, offering for rent, marketing, advertising, distributing, transferring (except for exportation), and soliciting U.S. agents or distributors for, certain digital video receivers and related hardware and software components covered by claim 9 of U.S. Patent No. 7,779,011 in violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337).

I. Definitions

As used in this order:

- (A) “Commission” shall mean the United States International Trade Commission.
- (B) “Complainants” shall mean Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts.
- (C) “Respondent” shall mean Comcast Shared Services, LLC, 30 N Wabash

Avenue 22, Chicago, Illinois 60611-3586.

- (D) “Person” shall mean an individual, or any non-governmental partnership, firm, association, corporation, or other legal or business entity other than Respondent or its majority-owned or controlled subsidiaries, successors, or assigns.
- (E) “United States” shall mean the fifty States, the District of Columbia, and Puerto Rico.
- (F) The terms “import” and “importation” refer to importation for entry for consumption under the Customs laws of the United States.
- (G) The term “covered products” shall mean digital video receivers and related hardware and software components that infringe claim 9 of U.S. Patent No. 7,779,011. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of claim 9 of U.S. Patent No. 7,779,011. The term does not include digital video receivers for use in a system that has been adjudicated as noninfringing.

II. Applicability

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, licensees, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them insofar as they are engaging in conduct prohibited by section III, *infra*, for, with, or otherwise on behalf of, Respondent.

III. Conduct Prohibited

The following conduct of Respondent in the United States is prohibited by this Order. For the remaining term of U.S. Patent No. 7,779,011, Respondent shall not:

- (A) import or sell for importation into the United States covered products;
- (B) market, distribute, sell, offer to sell, lease, offer to lease, rent, offer to rent, or otherwise transfer (except for exportation), in the United States imported covered products;
- (C) advertise imported covered products;
- (D) solicit U.S. agents or distributors for imported covered products; or
- (E) aid or abet other entities in the importation, sale for importation, sale after importation, lease after importation, rent after importation, transfer, or distribution of covered products.

IV. Conduct Permitted

- (A) Notwithstanding any other provision of this Order, Respondent shall be permitted to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of U.S. Patent No. 7,779,011 licenses or authorizes such specific conduct, including but not limited to conduct involving covered products that the Commission found were previously imported into the United States under license;
- (B) to engage in specific conduct otherwise prohibited by the terms of this Order if such specific conduct is related to the importation or sale of covered products by or for the United States; or
- (C) to engage in such specific conduct related to service or repair articles imported for use in servicing or repairing digital video receivers that were imported before the effective date of this Order. Exception (C) does not permit the importation of digital video receivers to replace digital video

receivers that were imported before the effective date of this Order.

V. Reporting

For purposes of this requirement, the reporting periods shall commence on January 1 of each year and shall end on the subsequent December 31. The first report required under this section shall cover the period from the date of issuance of this order through December 31, 2019. This reporting requirement shall continue in force until such time as Respondent has truthfully reported, in two consecutive timely filed reports, that it has no inventory (whether held in warehouses or at customer sites) of covered products in the United States.

Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission: (a) the quantity in units and the value in dollars of covered products that it has (i) imported and/or (ii) sold in the United States after importation during the reporting period, and (b) the quantity in units and value in dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

When filing written submissions, Respondent must file the original document electronically on or before the deadlines stated above and submit eight (8) true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1103") in a prominent place on the cover pages and/or the first page. (*See Handbook for Electronic Filing Procedures*, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000). If Respondent desires to submit a document to the Commission in confidence, it must file the original and a public version of the original with the Office of the Secretary and must serve a copy of the confidential version on

Complainant's counsel.¹

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. The Commission's paper filing requirements in 19 C.F.R. § 210.4(f) are currently waived, pending resolution of the COVID-19 crisis. 85 Fed. Reg. 15798 (March 19, 2020).

VI. Record-Keeping and Inspection

- (A) For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, offer for sale, lease, offer to lease, rent, offer to rent, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.
- (B) For the purposes of determining or securing compliance with this Order and for no other purpose, subject to any privilege recognized by the federal courts of the United States, and upon reasonable written notice by the Commission or its staff, duly authorized representatives of the Commission shall be permitted access and the right to inspect and copy, in Respondent's principal office during office hours, and in the presence of counsel or other representatives if Respondent so chooses, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, in detail and in summary form, that must be retained under subparagraph VI(A) of

¹ Complainant must file a letter with the Secretary identifying the attorney to receive reports and bond information associated with this Order. The designated attorney must be on the protective order entered in the investigation.

this Order.

VII. Service of Cease and Desist Order

Respondent is ordered and directed to:

- (A) Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, sale, lease, or rent of imported covered products in the United States;
- (B) Serve, within fifteen (15) days after the succession of any persons referred to in subparagraph VII(A) of this Order, a copy of the Order upon each successor; and
- (C) Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this Order, together with the date on which service was made.

The obligations set forth in subparagraphs VII(B) and VII(C) shall remain in effect until U.S. Patent No. 7,779,011 expires.

VIII. Confidentiality

Any request for confidential treatment of information obtained by the Commission pursuant to section V-VI of this Order should be made in accordance with section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 201.6). For all reports for which confidential treatment is sought, Respondent must provide a public version of such report with

confidential information redacted.

IX. Enforcement

Violation of this order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.75), including an action for civil penalties under section 337(f) of the Tariff Act of 1930 (19 U.S.C. § 1337(f)), as well as any other action that the Commission deems appropriate. In determining whether Respondent is in violation of this order, the Commission may infer facts adverse to Respondent if it fails to provide adequate or timely information.

X. Modification

The Commission may amend this Order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

XI. Bonding

The conduct prohibited by section III of this Order may be continued during the sixty-day period in which this Order is under review by the United States Trade Representative, as delegated by the President (70 *Fed. Reg.* 43,251 (Jul. 21, 2005)) subject to the Respondent's posting of a bond in the amount of zero percent of the entered value of the covered products. This bond provision does not apply to conduct that is otherwise permitted by section IV of this Order. Covered products imported on or after the date of issuance of this Order are subject to the entry bond as set forth in the exclusion order issued by the Commission, and are not subject to this bond provision.

The bond is to be posted in accordance with the procedures established by the Commission for the posting of bonds by complainants in connection with the issuance of

temporary exclusion orders. *See* 19 C.F.R. § 210.68. The bond and any accompanying documentation are to be provided to and approved by the Commission prior to the commencement of conduct that is otherwise prohibited by section III of this Order. Upon the Secretary's acceptance of the bond, (a) the Secretary will serve an acceptance letter on all parties, and (b) Respondent must serve a copy of the bond and accompanying documentation on Complainants' counsel.²

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it or takes no action within the review period), unless the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or unless Respondent exports or destroys the products subject to this bond and provides certification to that effect that is satisfactory to the Commission.

The bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved (or not disapproved) by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

² *See* Footnote 1.

By order of the Commission.

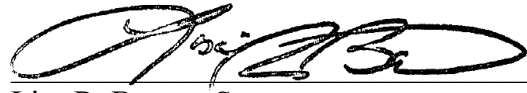
A handwritten signature in black ink, appearing to read 'Lisa R. Barton', written in a cursive style.

Lisa R. Barton
Secretary to the Commission

Issued: April 23, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served via EDIS upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **April 23, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

**On Behalf of Complainants Rovi Corporation, Rovi Guides,
Inc., and Veveo, Inc.:**

Douglas A. Cawley, Esq.
MCKOOL SMITH P.C.
300 Crescent Court, Suite 1500
Dallas, TX 75201
Email: dcawley@mckoolsmith.com

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

**On Behalf of Respondents Comcast Corporation, Comcast
Cable Communications, LLC, Comcast Cable
Communications Management, LLC, Comcast Business
Communications, LLC, Comcast Holdings Corporation, and
Comcast Shared Services, LLC:**

Bert C. Reiser, Esq.
LATHAM & WATKINS, LLP
555 Eleventh Street, NW, Suite 100
Washington, DC 20004
Email: bert.reiser@lw.com

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC**

In the Matter of

**CERTAIN DIGITAL VIDEO RECEIVERS
AND RELATED HARDWARE AND
SOFTWARE COMPONENTS**

Investigation No. 337-TA-1103

CEASE AND DESIST ORDER

IT IS HEREBY ORDERED THAT Comcast Holdings Corporation, of Philadelphia, Pennsylvania cease and desist from conducting any of the following activities in the United States: importing, selling, offering for sale, leasing, offering for lease, renting, offering for rent, marketing, advertising, distributing, transferring (except for exportation), and soliciting U.S. agents or distributors for, certain digital video receivers and related hardware and software components covered by claim 9 of U.S. Patent No. 7,779,011 in violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337).

I. Definitions

As used in this order:

- (A) “Commission” shall mean the United States International Trade Commission.
- (B) “Complainants” shall mean Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts.
- (C) “Respondent” shall mean Comcast Holdings Corporation, One Comcast Center,

1701 John F. Kennedy Boulevard, Philadelphia, Pennsylvania 19103.

- (D) “Person” shall mean an individual, or any non-governmental partnership, firm, association, corporation, or other legal or business entity other than Respondent or its majority-owned or controlled subsidiaries, successors, or assigns.
- (E) “United States” shall mean the fifty States, the District of Columbia, and Puerto Rico.
- (F) The terms “import” and “importation” refer to importation for entry for consumption under the Customs laws of the United States.
- (G) The term “covered products” shall mean digital video receivers and related hardware and software components that infringe claim 9 of U.S. Patent No. 7,779,011. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of claim 9 of U.S. Patent No. 7,779,011. The term does not include digital video receivers for use in a system that has been adjudicated as noninfringing.

II. Applicability

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, licensees, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them insofar as they are engaging in conduct prohibited by section III, *infra*, for, with, or otherwise on behalf of, Respondent.

III. Conduct Prohibited

The following conduct of Respondent in the United States is prohibited by this Order. For the remaining term of U.S. Patent No. 7,779,011, Respondent shall not:

- (A) import or sell for importation into the United States covered products;
- (B) market, distribute, sell, offer to sell, lease, offer to lease, rent, offer to rent, or otherwise transfer (except for exportation), in the United States imported covered products;
- (C) advertise imported covered products;
- (D) solicit U.S. agents or distributors for imported covered products; or
- (E) aid or abet other entities in the importation, sale for importation, sale after importation, lease after importation, rent after importation, transfer, or distribution of covered products.

IV. Conduct Permitted

- (A) Notwithstanding any other provision of this Order, Respondent shall be permitted to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of U.S. Patent No. 7,779,011 licenses or authorizes such specific conduct, including but not limited to conduct involving covered products that the Commission found were previously imported into the United States under license;
- (B) to engage in specific conduct otherwise prohibited by the terms of this Order if such specific conduct is related to the importation or sale of covered products by or for the United States; or
- (C) to engage in such specific conduct related to service or repair articles imported for use in servicing or repairing digital video receivers that were imported before the effective date of this Order. Exception (C) does not permit the importation of digital video receivers to replace digital video

receivers that were imported before the effective date of this Order.

V. Reporting

For purposes of this requirement, the reporting periods shall commence on January 1 of each year and shall end on the subsequent December 31. The first report required under this section shall cover the period from the date of issuance of this order through December 31, 2019. This reporting requirement shall continue in force until such time as Respondent has truthfully reported, in two consecutive timely filed reports, that it has no inventory (whether held in warehouses or at customer sites) of covered products in the United States.

Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission: (a) the quantity in units and the value in dollars of covered products that it has (i) imported and/or (ii) sold in the United States after importation during the reporting period, and (b) the quantity in units and value in dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

When filing written submissions, Respondent must file the original document electronically on or before the deadlines stated above and submit eight (8) true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1103") in a prominent place on the cover pages and/or the first page. (*See Handbook for Electronic Filing Procedures*, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000). If Respondent desires to submit a document to the Commission in confidence, it must file the original and a public version of the original with the Office of the Secretary and must serve a copy of the confidential version on

Complainant's counsel.¹

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. The Commission's paper filing requirements in 19 C.F.R. § 210.4(f) are currently waived, pending resolution of the COVID-19 crisis. 85 Fed. Reg. 15798 (March 19, 2020).

VI. Record-Keeping and Inspection

- (A) For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, offer for sale, lease, offer to lease, rent, offer to rent, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.
- (B) For the purposes of determining or securing compliance with this Order and for no other purpose, subject to any privilege recognized by the federal courts of the United States, and upon reasonable written notice by the Commission or its staff, duly authorized representatives of the Commission shall be permitted access and the right to inspect and copy, in Respondent's principal office during office hours, and in the presence of counsel or other representatives if Respondent so chooses, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, in detail and in summary form, that must be retained under subparagraph VI(A) of

¹ Complainant must file a letter with the Secretary identifying the attorney to receive reports and bond information associated with this Order. The designated attorney must be on the protective order entered in the investigation.

this Order.

VII. Service of Cease and Desist Order

Respondent is ordered and directed to:

- (A) Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, sale, lease, or rent of imported covered products in the United States;
- (B) Serve, within fifteen (15) days after the succession of any persons referred to in subparagraph VII(A) of this Order, a copy of the Order upon each successor; and
- (C) Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this Order, together with the date on which service was made.

The obligations set forth in subparagraphs VII(B) and VII(C) shall remain in effect until U.S. Patent No. 7,779,011 expires.

VIII. Confidentiality

Any request for confidential treatment of information obtained by the Commission pursuant to section V-VI of this Order should be made in accordance with section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 201.6). For all reports for which confidential treatment is sought, Respondent must provide a public version of such report with

confidential information redacted.

IX. Enforcement

Violation of this order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.75), including an action for civil penalties under section 337(f) of the Tariff Act of 1930 (19 U.S.C. § 1337(f)), as well as any other action that the Commission deems appropriate. In determining whether Respondent is in violation of this order, the Commission may infer facts adverse to Respondent if it fails to provide adequate or timely information.

X. Modification

The Commission may amend this Order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

XI. Bonding

The conduct prohibited by section III of this Order may be continued during the sixty-day period in which this Order is under review by the United States Trade Representative, as delegated by the President (70 *Fed. Reg.* 43,251 (Jul. 21, 2005)) subject to the Respondent's posting of a bond in the amount of zero percent of the entered value of the covered products. This bond provision does not apply to conduct that is otherwise permitted by section IV of this Order. Covered products imported on or after the date of issuance of this Order are subject to the entry bond as set forth in the exclusion order issued by the Commission, and are not subject to this bond provision.

The bond is to be posted in accordance with the procedures established by the Commission for the posting of bonds by complainants in connection with the issuance of

temporary exclusion orders. *See* 19 C.F.R. § 210.68. The bond and any accompanying documentation are to be provided to and approved by the Commission prior to the commencement of conduct that is otherwise prohibited by section III of this Order. Upon the Secretary's acceptance of the bond, (a) the Secretary will serve an acceptance letter on all parties, and (b) Respondent must serve a copy of the bond and accompanying documentation on Complainants' counsel.²

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it or takes no action within the review period), unless the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or unless Respondent exports or destroys the products subject to this bond and provides certification to that effect that is satisfactory to the Commission.

The bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved (or not disapproved) by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

² *See* Footnote 1.

By order of the Commission.

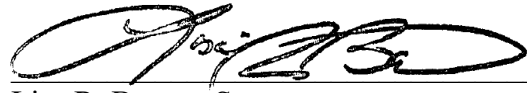
A handwritten signature in black ink, appearing to read 'Lisa R. Barton', with a stylized flourish at the end.

Lisa R. Barton
Secretary to the Commission

Issued: April 23, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served via EDIS upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **April 23, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

**On Behalf of Complainants Rovi Corporation, Rovi Guides,
Inc., and Veveo, Inc.:**

Douglas A. Cawley, Esq.
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300 Crescent Court, Suite 1500
Dallas, TX 75201
Email: dcawley@mckoolsmith.com

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

**On Behalf of Respondents Comcast Corporation, Comcast
Cable Communications, LLC, Comcast Cable
Communications Management, LLC, Comcast Business
Communications, LLC, Comcast Holdings Corporation, and
Comcast Shared Services, LLC:**

Bert C. Reiser, Esq.
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Washington, DC 20004
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- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC**

In the Matter of

**CERTAIN DIGITAL VIDEO RECEIVERS
AND RELATED HARDWARE AND
SOFTWARE COMPONENTS**

Investigation No. 337-TA-1103

CEASE AND DESIST ORDER

IT IS HEREBY ORDERED THAT Comcast Cable Communications Management, LLC, of Philadelphia, Pennsylvania cease and desist from conducting any of the following activities in the United States: importing, selling, offering for sale, leasing, offering for lease, renting, offering for rent, marketing, advertising, distributing, transferring (except for exportation), and soliciting U.S. agents or distributors for, certain digital video receivers and related hardware and software components covered by claim 9 of U.S. Patent No. 7,779,011 in violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337).

I. Definitions

As used in this order:

- (A) “Commission” shall mean the United States International Trade Commission.
- (B) “Complainants” shall mean Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts.
- (C) “Respondent” shall mean Comcast Cable Communications Management, LLC,

One Comcast Center, 1701 John F. Kennedy Boulevard, Philadelphia,
Pennsylvania 19103.

- (D) “Person” shall mean an individual, or any non-governmental partnership, firm, association, corporation, or other legal or business entity other than Respondent or its majority-owned or controlled subsidiaries, successors, or assigns.
- (E) “United States” shall mean the fifty States, the District of Columbia, and Puerto Rico.
- (F) The terms “import” and “importation” refer to importation for entry for consumption under the Customs laws of the United States.
- (G) The term “covered products” shall mean digital video receivers and related hardware and software components that infringe claim 9 of U.S. Patent No. 7,779,011. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of claim 9 of U.S. Patent No. 7,779,011. The term does not include digital video receivers for use in a system that has been adjudicated as noninfringing.

II. Applicability

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, licensees, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them insofar as they are engaging in conduct prohibited by section III, *infra*, for, with, or otherwise on behalf of, Respondent.

III. Conduct Prohibited

The following conduct of Respondent in the United States is prohibited by this Order.

For the remaining term of U.S. Patent No. 7,779,011, Respondent shall not:

- (A) import or sell for importation into the United States covered products;
- (B) market, distribute, sell, offer to sell, lease, offer to lease, rent, offer to rent, or otherwise transfer (except for exportation), in the United States imported covered products;
- (C) advertise imported covered products;
- (D) solicit U.S. agents or distributors for imported covered products; or
- (E) aid or abet other entities in the importation, sale for importation, sale after importation, lease after importation, rent after importation, transfer, or distribution of covered products.

IV. Conduct Permitted

- (A) Notwithstanding any other provision of this Order, Respondent shall be permitted to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of U.S. Patent No. 7,779,011 licenses or authorizes such specific conduct, including but not limited to conduct involving covered products that the Commission found were previously imported into the United States under license;
- (B) to engage in specific conduct otherwise prohibited by the terms of this Order if such specific conduct is related to the importation or sale of covered products by or for the United States; or
- (C) to engage in such specific conduct related to service or repair articles imported for use in servicing or repairing digital video receivers that were imported before the effective date of this Order. Exception (C) does not

permit the importation of digital video receivers to replace digital video receivers that were imported before the effective date of this Order.

V. Reporting

For purposes of this requirement, the reporting periods shall commence on January 1 of each year and shall end on the subsequent December 31. The first report required under this section shall cover the period from the date of issuance of this order through December 31, 2019. This reporting requirement shall continue in force until such time as Respondent has truthfully reported, in two consecutive timely filed reports, that it has no inventory (whether held in warehouses or at customer sites) of covered products in the United States.

Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission: (a) the quantity in units and the value in dollars of covered products that it has (i) imported and/or (ii) sold in the United States after importation during the reporting period, and (b) the quantity in units and value in dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

When filing written submissions, Respondent must file the original document electronically on or before the deadlines stated above and submit eight (8) true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1103") in a prominent place on the cover pages and/or the first page. (*See Handbook for Electronic Filing Procedures*, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000). If Respondent desires to submit a document to the Commission in confidence, it must file the original and a public version of the

original with the Office of the Secretary and must serve a copy of the confidential version on Complainant's counsel.¹

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. The Commission's paper filing requirements in 19 C.F.R. § 210.4(f) are currently waived, pending resolution of the COVID-19 crisis. 85 Fed. Reg. 15798 (March 19, 2020).

VI. Record-Keeping and Inspection

- (A) For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, offer for sale, lease, offer to lease, rent, offer to rent, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.
- (B) For the purposes of determining or securing compliance with this Order and for no other purpose, subject to any privilege recognized by the federal courts of the United States, and upon reasonable written notice by the Commission or its staff, duly authorized representatives of the Commission shall be permitted access and the right to inspect and copy, in Respondent's principal office during office hours, and in the presence of counsel or other representatives if Respondent so chooses, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, in detail

¹ Complainant must file a letter with the Secretary identifying the attorney to receive reports and bond information associated with this Order. The designated attorney must be on the protective order entered in the investigation.

and in summary form, that must be retained under subparagraph VI(A) of this Order.

VII. Service of Cease and Desist Order

Respondent is ordered and directed to:

- (A) Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, sale, lease, or rent of imported covered products in the United States;
- (B) Serve, within fifteen (15) days after the succession of any persons referred to in subparagraph VII(A) of this Order, a copy of the Order upon each successor; and
- (C) Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this Order, together with the date on which service was made.

The obligations set forth in subparagraphs VII(B) and VII(C) shall remain in effect until U.S. Patent No. 7,779,011 expires.

VIII. Confidentiality

Any request for confidential treatment of information obtained by the Commission pursuant to section V-VI of this Order should be made in accordance with section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 201.6). For all reports for which

confidential treatment is sought, Respondent must provide a public version of such report with confidential information redacted.

IX. Enforcement

Violation of this order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.75), including an action for civil penalties under section 337(f) of the Tariff Act of 1930 (19 U.S.C. § 1337(f)), as well as any other action that the Commission deems appropriate. In determining whether Respondent is in violation of this order, the Commission may infer facts adverse to Respondent if it fails to provide adequate or timely information.

X. Modification

The Commission may amend this Order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

XI. Bonding

The conduct prohibited by section III of this Order may be continued during the sixty-day period in which this Order is under review by the United States Trade Representative, as delegated by the President (70 *Fed. Reg.* 43,251 (Jul. 21, 2005)) subject to the Respondent's posting of a bond in the amount of zero percent of the entered value of the covered products. This bond provision does not apply to conduct that is otherwise permitted by section IV of this Order. Covered products imported on or after the date of issuance of this Order are subject to the entry bond as set forth in the exclusion order issued by the Commission, and are not subject to this bond provision.

The bond is to be posted in accordance with the procedures established by the

Commission for the posting of bonds by complainants in connection with the issuance of temporary exclusion orders. *See* 19 C.F.R. § 210.68. The bond and any accompanying documentation are to be provided to and approved by the Commission prior to the commencement of conduct that is otherwise prohibited by section III of this Order. Upon the Secretary's acceptance of the bond, (a) the Secretary will serve an acceptance letter on all parties, and (b) Respondent must serve a copy of the bond and accompanying documentation on Complainants' counsel.²

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it or takes no action within the review period), unless the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or unless Respondent exports or destroys the products subject to this bond and provides certification to that effect that is satisfactory to the Commission.

The bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved (or not disapproved) by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

² *See* Footnote 1.

By order of the Commission.

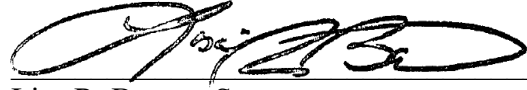
A handwritten signature in black ink, appearing to read "Lisa R. Barton". The signature is stylized and cursive.

Lisa R. Barton
Secretary to the Commission

Issued: April 23, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served via EDIS upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **April 23, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

**On Behalf of Complainants Rovi Corporation, Rovi Guides,
Inc., and Veveo, Inc.:**

Douglas A. Cawley, Esq.
MCKOOL SMITH P.C.
300 Crescent Court, Suite 1500
Dallas, TX 75201
Email: dcawley@mckoolsmith.com

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

**On Behalf of Respondents Comcast Corporation, Comcast
Cable Communications, LLC, Comcast Cable
Communications Management, LLC, Comcast Business
Communications, LLC, Comcast Holdings Corporation, and
Comcast Shared Services, LLC:**

Bert C. Reiser, Esq.
LATHAM & WATKINS, LLP
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Washington, DC 20004
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- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC**

In the Matter of

**CERTAIN DIGITAL VIDEO RECEIVERS
AND RELATED HARDWARE AND
SOFTWARE COMPONENTS**

Investigation No. 337-TA-1103

CEASE AND DESIST ORDER

IT IS HEREBY ORDERED THAT Comcast Corporation of Philadelphia, Pennsylvania cease and desist from conducting any of the following activities in the United States: importing, selling, offering for sale, leasing, offering for lease, renting, offering for rent, marketing, advertising, distributing, transferring (except for exportation), and soliciting U.S. agents or distributors for, certain digital video receivers and related hardware and software components covered by claim 9 of U.S. Patent No. 7,779,011 in violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337).

I. Definitions

As used in this order:

- (A) “Commission” shall mean the United States International Trade Commission.
- (B) “Complainants” shall mean Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts.
- (C) “Respondent” shall mean Comcast Corporation, One Comcast Center, 1701

John F. Kennedy Boulevard, Philadelphia, Pennsylvania 19103.

- (D) “Person” shall mean an individual, or any non-governmental partnership, firm, association, corporation, or other legal or business entity other than Respondent or its majority-owned or controlled subsidiaries, successors, or assigns.
- (E) “United States” shall mean the fifty States, the District of Columbia, and Puerto Rico.
- (F) The terms “import” and “importation” refer to importation for entry for consumption under the Customs laws of the United States.
- (G) The term “covered products” shall mean digital video receivers and related hardware and software components that infringe claim 9 of U.S. Patent No. 7,779,011. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of claim 9 of U.S. Patent No. 7,779,011. The term does not include digital video receivers for use in a system that has been adjudicated as noninfringing.

II. Applicability

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, licensees, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them insofar as they are engaging in conduct prohibited by section III, *infra*, for, with, or otherwise on behalf of, Respondent.

III. Conduct Prohibited

The following conduct of Respondent in the United States is prohibited by this Order. For the remaining term of U.S. Patent No. 7,779,011, Respondent shall not:

- (A) import or sell for importation into the United States covered products;
- (B) market, distribute, sell, offer to sell, lease, offer to lease, rent, offer to rent, or otherwise transfer (except for exportation), in the United States imported covered products;
- (C) advertise imported covered products;
- (D) solicit U.S. agents or distributors for imported covered products; or
- (E) aid or abet other entities in the importation, sale for importation, sale after importation, lease after importation, rent after importation, transfer, or distribution of covered products.

IV. Conduct Permitted

- (A) Notwithstanding any other provision of this Order, Respondent shall be permitted to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of U.S. Patent No. 7,779,011 licenses or authorizes such specific conduct, including but not limited to conduct involving covered products that the Commission found were previously imported into the United States under license;
- (B) to engage in specific conduct otherwise prohibited by the terms of this Order if such specific conduct is related to the importation or sale of covered products by or for the United States; or
- (C) to engage in such specific conduct related to service or repair articles imported for use in servicing or repairing digital video receivers that were imported before the effective date of this Order. Exception (C) does not permit the importation of digital video receivers to replace digital video

receivers that were imported before the effective date of this Order.

V. Reporting

For purposes of this requirement, the reporting periods shall commence on January 1 of each year and shall end on the subsequent December 31. The first report required under this section shall cover the period from the date of issuance of this order through December 31, 2019. This reporting requirement shall continue in force until such time as Respondent has truthfully reported, in two consecutive timely filed reports, that it has no inventory (whether held in warehouses or at customer sites) of covered products in the United States.

Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission: (a) the quantity in units and the value in dollars of covered products that it has (i) imported and/or (ii) sold in the United States after importation during the reporting period, and (b) the quantity in units and value in dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

When filing written submissions, Respondent must file the original document electronically on or before the deadlines stated above and submit eight (8) true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1103") in a prominent place on the cover pages and/or the first page. (*See Handbook for Electronic Filing Procedures*, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000). If Respondent desires to submit a document to the Commission in confidence, it must file the original and a public version of the original with the Office of the Secretary and must serve a copy of the confidential version on

Complainant's counsel.¹

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. The Commission's paper filing requirements in 19 C.F.R. § 210.4(f) are currently waived, pending resolution of the COVID-19 crisis. 85 Fed. Reg. 15798 (March 19, 2020).

VI. Record-Keeping and Inspection

- (A) For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, offer for sale, lease, offer to lease, rent, offer to rent, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.
- (B) For the purposes of determining or securing compliance with this Order and for no other purpose, subject to any privilege recognized by the federal courts of the United States, and upon reasonable written notice by the Commission or its staff, duly authorized representatives of the Commission shall be permitted access and the right to inspect and copy, in Respondent's principal office during office hours, and in the presence of counsel or other representatives if Respondent so chooses, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, in detail and in summary form, that must be retained under subparagraph VI(A) of

¹ Complainant must file a letter with the Secretary identifying the attorney to receive reports and bond information associated with this Order. The designated attorney must be on the protective order entered in the investigation.

this Order.

VII. Service of Cease and Desist Order

Respondent is ordered and directed to:

- (A) Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, sale, lease, or rent of imported covered products in the United States;
- (B) Serve, within fifteen (15) days after the succession of any persons referred to in subparagraph VII(A) of this Order, a copy of the Order upon each successor; and
- (C) Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this Order, together with the date on which service was made.

The obligations set forth in subparagraphs VII(B) and VII(C) shall remain in effect until U.S. Patent No. 7,779,011 expires.

VIII. Confidentiality

Any request for confidential treatment of information obtained by the Commission pursuant to section V-VI of this Order should be made in accordance with section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 201.6). For all reports for which confidential treatment is sought, Respondent must provide a public version of such report with

confidential information redacted.

IX. Enforcement

Violation of this order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.75), including an action for civil penalties under section 337(f) of the Tariff Act of 1930 (19 U.S.C. § 1337(f)), as well as any other action that the Commission deems appropriate. In determining whether Respondent is in violation of this order, the Commission may infer facts adverse to Respondent if it fails to provide adequate or timely information.

X. Modification

The Commission may amend this Order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

XI. Bonding

The conduct prohibited by section III of this Order may be continued during the sixty-day period in which this Order is under review by the United States Trade Representative, as delegated by the President (70 *Fed. Reg.* 43,251 (Jul. 21, 2005)) subject to the Respondent's posting of a bond in the amount of zero percent of the entered value of the covered products. This bond provision does not apply to conduct that is otherwise permitted by section IV of this Order. Covered products imported on or after the date of issuance of this Order are subject to the entry bond as set forth in the exclusion order issued by the Commission, and are not subject to this bond provision.

The bond is to be posted in accordance with the procedures established by the Commission for the posting of bonds by complainants in connection with the issuance of

temporary exclusion orders. *See* 19 C.F.R. § 210.68. The bond and any accompanying documentation are to be provided to and approved by the Commission prior to the commencement of conduct that is otherwise prohibited by section III of this Order. Upon the Secretary's acceptance of the bond, (a) the Secretary will serve an acceptance letter on all parties, and (b) Respondent must serve a copy of the bond and accompanying documentation on Complainants' counsel.²

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it or takes no action within the review period), unless the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or unless Respondent exports or destroys the products subject to this bond and provides certification to that effect that is satisfactory to the Commission.

The bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved (or not disapproved) by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

² *See* Footnote 1.

By order of the Commission.

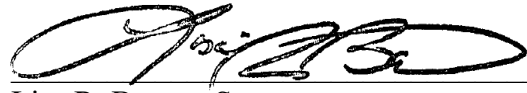
A handwritten signature in black ink, appearing to read 'Lisa R. Barton' with a stylized flourish at the end.

Lisa R. Barton
Secretary to the Commission

Issued: April 23, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served via EDIS upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **April 23, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

**On Behalf of Complainants Rovi Corporation, Rovi Guides,
Inc., and Veveo, Inc.:**

Douglas A. Cawley, Esq.
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Dallas, TX 75201
Email: dcawley@mckoolsmith.com

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

**On Behalf of Respondents Comcast Corporation, Comcast
Cable Communications, LLC, Comcast Cable
Communications Management, LLC, Comcast Business
Communications, LLC, Comcast Holdings Corporation, and
Comcast Shared Services, LLC:**

Bert C. Reiser, Esq.
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Washington, DC 20004
Email: bert.reiser@lw.com

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC**

In the Matter of

**CERTAIN DIGITAL VIDEO RECEIVERS
AND RELATED HARDWARE AND
SOFTWARE COMPONENTS**

Investigation No. 337-TA-1103

CEASE AND DESIST ORDER

IT IS HEREBY ORDERED THAT Comcast Cable Communications, LLC, of Philadelphia, Pennsylvania cease and desist from conducting any of the following activities in the United States: importing, selling, offering for sale, leasing, offering for lease, renting, offering for rent, marketing, advertising, distributing, transferring (except for exportation), and soliciting U.S. agents or distributors for, certain digital video receivers and related hardware and software components covered by claim 9 of U.S. Patent No. 7,779,011 in violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337).

I. Definitions

As used in this order:

- (A) “Commission” shall mean the United States International Trade Commission.
- (B) “Complainants” shall mean Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts.
- (C) “Respondent” shall mean Comcast Cable Communications, LLC, One Comcast

Center, 1701 John F. Kennedy Boulevard, Philadelphia, Pennsylvania 19103.

- (D) “Person” shall mean an individual, or any non-governmental partnership, firm, association, corporation, or other legal or business entity other than Respondent or its majority-owned or controlled subsidiaries, successors, or assigns.
- (E) “United States” shall mean the fifty States, the District of Columbia, and Puerto Rico.
- (F) The terms “import” and “importation” refer to importation for entry for consumption under the Customs laws of the United States.
- (G) The term “covered products” shall mean digital video receivers and related hardware and software components that infringe claim 9 of U.S. Patent No. 7,779,011. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of claim 9 of U.S. Patent No. 7,779,011. The term does not include digital video receivers for use in a system that has been adjudicated as noninfringing.

II. Applicability

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, licensees, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them insofar as they are engaging in conduct prohibited by section III, *infra*, for, with, or otherwise on behalf of, Respondent.

III. Conduct Prohibited

The following conduct of Respondent in the United States is prohibited by this Order. For the remaining term of U.S. Patent No. 7,779,011, Respondent shall not:

- (A) import or sell for importation into the United States covered products;
- (B) market, distribute, sell, offer to sell, lease, offer to lease, rent, offer to rent, or otherwise transfer (except for exportation), in the United States imported covered products;
- (C) advertise imported covered products;
- (D) solicit U.S. agents or distributors for imported covered products; or
- (E) aid or abet other entities in the importation, sale for importation, sale after importation, lease after importation, rent after importation, transfer, or distribution of covered products.

IV. Conduct Permitted

- (A) Notwithstanding any other provision of this Order, Respondent shall be permitted to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of U.S. Patent No. 7,779,011 licenses or authorizes such specific conduct, including but not limited to conduct involving covered products that the Commission found were previously imported into the United States under license;
- (B) to engage in specific conduct otherwise prohibited by the terms of this Order if such specific conduct is related to the importation or sale of covered products by or for the United States; or
- (C) to engage in such specific conduct related to service or repair articles imported for use in servicing or repairing digital video receivers that were imported before the effective date of this Order. Exception (C) does not permit the importation of digital video receivers to replace digital video

receivers that were imported before the effective date of this Order.

V. Reporting

For purposes of this requirement, the reporting periods shall commence on January 1 of each year and shall end on the subsequent December 31. The first report required under this section shall cover the period from the date of issuance of this order through December 31, 2019. This reporting requirement shall continue in force until such time as Respondent has truthfully reported, in two consecutive timely filed reports, that it has no inventory (whether held in warehouses or at customer sites) of covered products in the United States.

Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission: (a) the quantity in units and the value in dollars of covered products that it has (i) imported and/or (ii) sold in the United States after importation during the reporting period, and (b) the quantity in units and value in dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

When filing written submissions, Respondent must file the original document electronically on or before the deadlines stated above and submit eight (8) true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1103") in a prominent place on the cover pages and/or the first page. (*See Handbook for Electronic Filing Procedures*, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000). If Respondent desires to submit a document to the Commission in confidence, it must file the original and a public version of the original with the Office of the Secretary and must serve a copy of the confidential version on

Complainant's counsel.¹

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. The Commission's paper filing requirements in 19 C.F.R. § 210.4(f) are currently waived, pending resolution of the COVID-19 crisis. 85 Fed. Reg. 15798 (March 19, 2020).

VI. Record-Keeping and Inspection

- (A) For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, offer for sale, lease, offer to lease, rent, offer to rent, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.
- (B) For the purposes of determining or securing compliance with this Order and for no other purpose, subject to any privilege recognized by the federal courts of the United States, and upon reasonable written notice by the Commission or its staff, duly authorized representatives of the Commission shall be permitted access and the right to inspect and copy, in Respondent's principal office during office hours, and in the presence of counsel or other representatives if Respondent so chooses, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, in detail and in summary form, that must be retained under subparagraph VI(A) of

¹ Complainant must file a letter with the Secretary identifying the attorney to receive reports and bond information associated with this Order. The designated attorney must be on the protective order entered in the investigation.

this Order.

VII. Service of Cease and Desist Order

Respondent is ordered and directed to:

- (A) Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, sale, lease, or rent of imported covered products in the United States;
- (B) Serve, within fifteen (15) days after the succession of any persons referred to in subparagraph VII(A) of this Order, a copy of the Order upon each successor; and
- (C) Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this Order, together with the date on which service was made.

The obligations set forth in subparagraphs VII(B) and VII(C) shall remain in effect until U.S. Patent No. 7,779,011 expires.

VIII. Confidentiality

Any request for confidential treatment of information obtained by the Commission pursuant to section V-VI of this Order should be made in accordance with section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 201.6). For all reports for which confidential treatment is sought, Respondent must provide a public version of such report with

confidential information redacted.

IX. Enforcement

Violation of this order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.75), including an action for civil penalties under section 337(f) of the Tariff Act of 1930 (19 U.S.C. § 1337(f)), as well as any other action that the Commission deems appropriate. In determining whether Respondent is in violation of this order, the Commission may infer facts adverse to Respondent if it fails to provide adequate or timely information.

X. Modification

The Commission may amend this Order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

XI. Bonding

The conduct prohibited by section III of this Order may be continued during the sixty-day period in which this Order is under review by the United States Trade Representative, as delegated by the President (70 *Fed. Reg.* 43,251 (Jul. 21, 2005)) subject to the Respondent's posting of a bond in the amount of zero percent of the entered value of the covered products. This bond provision does not apply to conduct that is otherwise permitted by section IV of this Order. Covered products imported on or after the date of issuance of this Order are subject to the entry bond as set forth in the exclusion order issued by the Commission, and are not subject to this bond provision.

The bond is to be posted in accordance with the procedures established by the Commission for the posting of bonds by complainants in connection with the issuance of

temporary exclusion orders. *See* 19 C.F.R. § 210.68. The bond and any accompanying documentation are to be provided to and approved by the Commission prior to the commencement of conduct that is otherwise prohibited by section III of this Order. Upon the Secretary's acceptance of the bond, (a) the Secretary will serve an acceptance letter on all parties, and (b) Respondent must serve a copy of the bond and accompanying documentation on Complainants' counsel.²

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it or takes no action within the review period), unless the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or unless Respondent exports or destroys the products subject to this bond and provides certification to that effect that is satisfactory to the Commission.

The bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved (or not disapproved) by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

² *See* Footnote 1.

By order of the Commission.

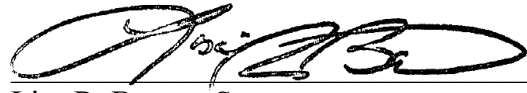
A handwritten signature in black ink, appearing to read "Apr 23" with a stylized flourish.

Lisa R. Barton
Secretary to the Commission

Issued: April 23, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served via EDIS upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **April 23, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

**On Behalf of Complainants Rovi Corporation, Rovi Guides,
Inc., and Veveo, Inc.:**

Douglas A. Cawley, Esq.
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300 Crescent Court, Suite 1500
Dallas, TX 75201
Email: dcawley@mckoolsmith.com

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

**On Behalf of Respondents Comcast Corporation, Comcast
Cable Communications, LLC, Comcast Cable
Communications Management, LLC, Comcast Business
Communications, LLC, Comcast Holdings Corporation, and
Comcast Shared Services, LLC:**

Bert C. Reiser, Esq.
LATHAM & WATKINS, LLP
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- Via First Class Mail
- Other: Email Notification
of Availability for Download

**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC**

In the Matter of

**CERTAIN DIGITAL VIDEO RECEIVERS
AND RELATED HARDWARE AND
SOFTWARE COMPONENTS**

Investigation No. 337-TA-1103

CEASE AND DESIST ORDER

IT IS HEREBY ORDERED THAT Comcast Business Communications, LLC, of Philadelphia, Pennsylvania cease and desist from conducting any of the following activities in the United States: importing, selling, offering for sale, leasing, offering for lease, renting, offering for rent, marketing, advertising, distributing, transferring (except for exportation), and soliciting U.S. agents or distributors for, certain digital video receivers and related hardware and software components covered by claim 9 of U.S. Patent No. 7,779,011 in violation of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. § 1337).

I. Definitions

As used in this order:

- (A) “Commission” shall mean the United States International Trade Commission.
- (B) “Complainants” shall mean Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts.
- (C) “Respondent” shall mean Comcast Business Communications, LLC, One

Comcast Center, 1701 John F. Kennedy Boulevard, Philadelphia, Pennsylvania 19103.

- (D) “Person” shall mean an individual, or any non-governmental partnership, firm, association, corporation, or other legal or business entity other than Respondent or its majority-owned or controlled subsidiaries, successors, or assigns.
- (E) “United States” shall mean the fifty States, the District of Columbia, and Puerto Rico.
- (F) The terms “import” and “importation” refer to importation for entry for consumption under the Customs laws of the United States.
- (G) The term “covered products” shall mean digital video receivers and related hardware and software components that infringe claim 9 of U.S. Patent No. 7,779,011. Covered products shall not include articles for which a provision of law or license avoids liability for infringement of claim 9 of U.S. Patent No. 7,779,011. The term does not include digital video receivers for use in a system that has been adjudicated as noninfringing.

II. Applicability

The provisions of this Cease and Desist Order shall apply to Respondent and to any of its principals, stockholders, officers, directors, employees, agents, licensees, distributors, controlled (whether by stock ownership or otherwise) and majority-owned business entities, successors, and assigns, and to each of them insofar as they are engaging in conduct prohibited by section III, *infra*, for, with, or otherwise on behalf of, Respondent.

III. Conduct Prohibited

The following conduct of Respondent in the United States is prohibited by this Order.

For the remaining term of U.S. Patent No. 7,779,011, Respondent shall not:

- (A) import or sell for importation into the United States covered products;
- (B) market, distribute, sell, offer to sell, lease, offer to lease, rent, offer to rent, or otherwise transfer (except for exportation), in the United States imported covered products;
- (C) advertise imported covered products;
- (D) solicit U.S. agents or distributors for imported covered products; or
- (E) aid or abet other entities in the importation, sale for importation, sale after importation, lease after importation, rent after importation, transfer, or distribution of covered products.

IV. Conduct Permitted

- (A) Notwithstanding any other provision of this Order, Respondent shall be permitted to engage in specific conduct otherwise prohibited by the terms of this Order if, in a written instrument, the owner of U.S. Patent No. 7,779,011 licenses or authorizes such specific conduct, including but not limited to conduct involving covered products that the Commission found were previously imported into the United States under license;
- (B) to engage in specific conduct otherwise prohibited by the terms of this Order if such specific conduct is related to the importation or sale of covered products by or for the United States; or
- (C) to engage in such specific conduct related to service or repair articles imported for use in servicing or repairing digital video receivers that were imported before the effective date of this Order. Exception (C) does not

permit the importation of digital video receivers to replace digital video receivers that were imported before the effective date of this Order.

V. Reporting

For purposes of this requirement, the reporting periods shall commence on January 1 of each year and shall end on the subsequent December 31. The first report required under this section shall cover the period from the date of issuance of this order through December 31, 2019. This reporting requirement shall continue in force until such time as Respondent has truthfully reported, in two consecutive timely filed reports, that it has no inventory (whether held in warehouses or at customer sites) of covered products in the United States.

Within thirty (30) days of the last day of the reporting period, Respondent shall report to the Commission: (a) the quantity in units and the value in dollars of covered products that it has (i) imported and/or (ii) sold in the United States after importation during the reporting period, and (b) the quantity in units and value in dollars of reported covered products that remain in inventory in the United States at the end of the reporting period.

When filing written submissions, Respondent must file the original document electronically on or before the deadlines stated above and submit eight (8) true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.4(f)). Submissions should refer to the investigation number ("Inv. No. 337-TA-1103") in a prominent place on the cover pages and/or the first page. (*See Handbook for Electronic Filing Procedures*, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary (202-205-2000). If Respondent desires to submit a document to the Commission in confidence, it must file the original and a public version of the

original with the Office of the Secretary and must serve a copy of the confidential version on Complainant's counsel.¹

Persons filing written submissions must file the original document electronically on or before the deadlines stated above. The Commission's paper filing requirements in 19 C.F.R. § 210.4(f) are currently waived, pending resolution of the COVID-19 crisis. 85 Fed. Reg. 15798 (March 19, 2020).

VI. Record-Keeping and Inspection

- (A) For the purpose of securing compliance with this Order, Respondent shall retain any and all records relating to the sale, offer for sale, lease, offer to lease, rent, offer to rent, marketing, or distribution in the United States of covered products, made and received in the usual and ordinary course of business, whether in detail or in summary form, for a period of three (3) years from the close of the fiscal year to which they pertain.
- (B) For the purposes of determining or securing compliance with this Order and for no other purpose, subject to any privilege recognized by the federal courts of the United States, and upon reasonable written notice by the Commission or its staff, duly authorized representatives of the Commission shall be permitted access and the right to inspect and copy, in Respondent's principal office during office hours, and in the presence of counsel or other representatives if Respondent so chooses, all books, ledgers, accounts, correspondence, memoranda, and other records and documents, in detail

¹ Complainant must file a letter with the Secretary identifying the attorney to receive reports and bond information associated with this Order. The designated attorney must be on the protective order entered in the investigation.

and in summary form, that must be retained under subparagraph VI(A) of this Order.

VII. Service of Cease and Desist Order

Respondent is ordered and directed to:

- (A) Serve, within fifteen (15) days after the effective date of this Order, a copy of this Order upon each of its respective officers, directors, managing agents, agents, and employees who have any responsibility for the importation, marketing, distribution, sale, lease, or rent of imported covered products in the United States;
- (B) Serve, within fifteen (15) days after the succession of any persons referred to in subparagraph VII(A) of this Order, a copy of the Order upon each successor; and
- (C) Maintain such records as will show the name, title, and address of each person upon whom the Order has been served, as described in subparagraphs VII(A) and VII(B) of this Order, together with the date on which service was made.

The obligations set forth in subparagraphs VII(B) and VII(C) shall remain in effect until U.S. Patent No. 7,779,011 expires.

VIII. Confidentiality

Any request for confidential treatment of information obtained by the Commission pursuant to section V-VI of this Order should be made in accordance with section 201.6 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 201.6). For all reports for which

confidential treatment is sought, Respondent must provide a public version of such report with confidential information redacted.

IX. Enforcement

Violation of this order may result in any of the actions specified in section 210.75 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.75), including an action for civil penalties under section 337(f) of the Tariff Act of 1930 (19 U.S.C. § 1337(f)), as well as any other action that the Commission deems appropriate. In determining whether Respondent is in violation of this order, the Commission may infer facts adverse to Respondent if it fails to provide adequate or timely information.

X. Modification

The Commission may amend this Order on its own motion or in accordance with the procedure described in section 210.76 of the Commission's Rules of Practice and Procedure (19 C.F.R. § 210.76).

XI. Bonding

The conduct prohibited by section III of this Order may be continued during the sixty-day period in which this Order is under review by the United States Trade Representative, as delegated by the President (70 *Fed. Reg.* 43,251 (Jul. 21, 2005)) subject to the Respondent's posting of a bond in the amount of zero percent of the entered value of the covered products. This bond provision does not apply to conduct that is otherwise permitted by section IV of this Order. Covered products imported on or after the date of issuance of this Order are subject to the entry bond as set forth in the exclusion order issued by the Commission, and are not subject to this bond provision.

The bond is to be posted in accordance with the procedures established by the Commission for the posting of bonds by complainants in connection with the issuance of temporary exclusion orders. *See* 19 C.F.R. § 210.68. The bond and any accompanying documentation are to be provided to and approved by the Commission prior to the commencement of conduct that is otherwise prohibited by section III of this Order. Upon the Secretary's acceptance of the bond, (a) the Secretary will serve an acceptance letter on all parties, and (b) Respondent must serve a copy of the bond and accompanying documentation on Complainants' counsel.²

The bond is to be forfeited in the event that the United States Trade Representative approves this Order (or does not disapprove it or takes no action within the review period), unless the U.S. Court of Appeals for the Federal Circuit, in a final judgment, reverses any Commission final determination and order as to Respondent on appeal, or unless Respondent exports or destroys the products subject to this bond and provides certification to that effect that is satisfactory to the Commission.

The bond is to be released in the event the United States Trade Representative disapproves this Order and no subsequent order is issued by the Commission and approved (or not disapproved) by the United States Trade Representative, upon service on Respondent of an order issued by the Commission based upon application therefore made by Respondent to the Commission.

² *See* Footnote 1.

By order of the Commission.

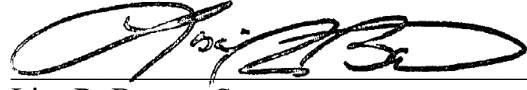
A handwritten signature in black ink, appearing to read "Lisa R. Barton". The signature is stylized and cursive.

Lisa R. Barton
Secretary to the Commission

Issued: April 23, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **ORDER** has been served via EDIS upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **April 23, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

**On Behalf of Complainants Rovi Corporation, Rovi Guides,
Inc., and Veveo, Inc.:**

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- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

**On Behalf of Respondents Comcast Corporation, Comcast
Cable Communications, LLC, Comcast Cable
Communications Management, LLC, Comcast Business
Communications, LLC, Comcast Holdings Corporation, and
Comcast Shared Services, LLC:**

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- Via Express Delivery
- Via First Class Mail
- Other: Email Notification
of Availability for Download

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**UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC**

In the Matter of

**CERTAIN DIGITAL VIDEO
RECEIVERS AND RELATED
HARDWARE AND SOFTWARE
COMPONENTS**

Inv. No. 337-TA-1103

COMMISSION OPINION

The Commission has determined that there has been a violation of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to claim 9 of U.S. Patent No. 7,779,011 (“the ’011 patent”) on review of the final initial determination (“final ID”) of the presiding administrative law judge’s (“ALJ”). The Commission has determined to issue a limited exclusion order (“LEO”) and cease and desist orders (“CDOs”) directed to infringing digital video receivers and related hardware and software and to set the bond during the period of Presidential review in the amount of zero percent of entered value. This opinion sets forth the Commission’s reasoning in support of that determination. In addition, the Commission adopts the findings in the final ID that are not inconsistent with this opinion.

I. BACKGROUND

A. Procedural History

On March 16, 2018, the Commission instituted this investigation based on a supplemented complaint filed on behalf of Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts (collectively, “Rovi”); as well as Rovi Technologies Corporation of San Jose, CA. The supplemented complaint alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C.

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§ 1337 (“section 337”), based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain digital video receivers and related hardware and software components by reason of infringement of one or more claims of the ’011 patent; U.S. Patent No. 7,937,394 (“the ’394 patent”); U.S. Patent No. 7,827,585 (“the ’585 patent”); U.S. Patent No. 9,294,799 (“the ’799 patent”); U.S. Patent No. 9,396,741 (“the ’741 patent”); U.S. Patent No. 9,578,363 (“the ’363 patent”); U.S. Patent No. 9,621,956 (“the ’956 patent”); and U.S. Patent No. 9,668,014 (“the ’014 patent”). 83 Fed. Reg. 11791-2 (Mar. 16, 2018). The Commission’s notice of investigation named as respondents Comcast Corporation of Philadelphia, Pennsylvania; Comcast Cable Communications, LLC of Philadelphia, Pennsylvania; Comcast Cable Communications Management, LLC of Philadelphia, Pennsylvania; Comcast Business Communications, LLC of Philadelphia, Pennsylvania; Comcast Holdings Corporation of Philadelphia, Pennsylvania; and Comcast Shared Services, LLC of Chicago, Illinois (collectively, “Comcast”). *Id.* at 11792. The Office of Unfair Import Investigations (“OUII”) was also named as a party in this investigation. *Id.*

The Commission previously terminated the investigation as to (1) complainant Rovi Technologies Corporation; (2) the ’956, ’394, ’014, ’799, and ’363 patents in their entirety; and (3) certain claims of the ’011, ’585, and ’741 patents. Order No. 12, *unreviewed*, Notice (July 24, 2018); Order No. 33, *unreviewed*, Notice (Sept. 19, 2018); Order 39, *unreviewed*, Notice (Oct. 25, 2018). At the time of the hearing, only the following claims were pending: claims 1 and 9 of the ’011 patent, claims 1, 8, 11, 15, and 22 of the ’585 patent, and claims 1, 8, and 14 of the ’741 patent.

On June 3, 2019, the ALJ issued an ID, *inter alia*, granting Rovi’s motions for summary determination as to importation and sale after importation. Order No. 47 at 15-24 (June 3, 2019)

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(“SD”). The SD relied on the Commission’s determination in a companion case, *Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-1001 (“the 1001 Investigation”), that Comcast is an importer within the meaning of section 337. SD at 16. The SD found that the same types of control and importation activity were conducted in both the 1001 Investigation and in the present investigation. *Id.* In addition, the SD found that the same Supply Agreements were at issue. *Id.* Thus, the SD found that the Commission’s determination that Comcast is an importer governs the issue in the present investigation. *Id.* On June 11, 2019, Comcast filed a petition for review of the SD. On June 18, 2019, Rovi responded to Comcast’s petition. On June 25, 2019, OUII responded to Comcast’s petition. On August 15, 2019, the Commission determined to review in part the SD as to reimportation by Comcast and to take no position on that issue, but the Commission determined not to review the remainder of the SD. Notice at 3 (Aug. 15, 2019) (“Notice of Review”), *published at* 84 Fed. Reg. 43611 (Aug. 21, 2019).

On June 4, 2019, the ALJ issued the final ID on violation of section 337. On June 17, 2019, Comcast and Rovi each filed a petition for review of the final ID. On June 25, 2019, Comcast and Rovi responded to each other’s petition, and OUII responded to both.

In addition, the Commission received comments from Rovi on the public interest pursuant to Commission Rule 210.50(a)(4). The Commission also received comments from the following organizations in response to the Commission’s notice soliciting public interest comments, 84 Fed. Reg. 27804 (June 14, 2019): Tea Party Patriots Action; Americans for Limited Government; Frontiers of Freedom Institute; Market Institute; and Conservatives for Property Rights (joined by 60 Plus Association, and Americans for Limited Government). The

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Commission also received correspondence from Representatives Peter King (R-N.Y.); Jackie Speier (D-Cal.); and Steve Stivers (R-Ohio).

On August 15, 2019, the Commission determined not to review the final ID's findings that the asserted claims of the '585 patent are invalid in view of the prior art; and that Rovi failed to demonstrate infringement of the asserted claims of the '741 patent. Notice of Review at 3. The Commission thereby terminated the investigation as to the '585 and '741 patents with a finding of no violation of section 337. The Commission determined to review the final ID's findings of infringement of the asserted claims of the '011 patent by Comcast's non-redesigned¹ system. *Id.* The Commission solicited briefing on certain questions pertaining to infringement of the '011 patent, as follows:

1. Please explain, with attention to the statutory language of 35 U.S.C. 271(a) and any differences in claim language between claims 1 and 9 of the '011 patent, the circumstances in which each act of direct infringement by Comcast occurs for each claim. (For example, is there direct infringement by Comcast's testing or other use of its system, by a Comcast user's own searching, or both.)
2. Please explain, with attention to the statutory language of 35 U.S.C. 271(a) and any differences in claim language between claims 1 and 9 of the '011 patent, the circumstances in which Comcast's users directly infringe either claim. In connection with your response to this question please explain whether and how Comcast's users can directly infringe claim 9 but not claim 1, or vice versa.
3. Based on your answers to questions 1 and 2, please explain for claims 1 and 9 of the '011 patent whether and how the "single entity" test of *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, 797 F.3d 1020, 1022 (Fed. Cir. 2015) should be applied and whether the final ID's application of that test to claim 1 of the '011 patent, *see* Final ID at 271, is correct.

¹ During the investigation, Comcast submitted evidence regarding two redesigns that the ID found do not infringe claims 1 and 9 of the '011 patent: (1) the [[]] Design Alternative and (2) the [[]] Design Alternative. ID at 80-2. Both of those redesigns modify Comcast's servers to prevent the display of highlighted search results to users. ID at 80-83. The Commission determined not to review this finding. Notice of Review at 3.

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Id. at 4. In connection with this briefing, the Commission stated that “the parties are to take as true: all of the final ID’s findings as to the structure, function, and operation of Comcast’s X1 system; and Comcast’s inducement of its users’ conduct.” *Id.* The Commission further explained that “Comcast’s petition for review of the final ID questioned the final ID’s findings as to whether the accused products are ‘articles that—infringe’ the asserted patents, 19 U.S.C. § 1337(a)(1)(B) & (a)(1)(B)(i), and the scope of the Commission’s authority to find an unfair trade act based upon Comcast’s direct infringement.” Notice of Review at 3. The Commission explained that “[s]uch issues fall within the scope of the Commission’s review of infringement as to the ’011 patent, and the Commission will address Comcast’s arguments based upon the Commission’s infringement findings as to the ’011 patent.” *Id.*

On August 29, 2019, Comcast and Rovi submitted opening briefs on the issues under review, and on remedy, the public interest, and bonding.² On that same day, OUII filed an opening brief on remedy, the public interest, and bonding.³ On September 10, 2019, Comcast and Rovi (but not OUII) filed replies.⁴

On March 2, 2020, the Federal Circuit issued a precedential opinion in an appeal from the Commission’s final determination in the related 1001 Investigation mentioned above, *Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-

² Comcast Resp’ts Resp. to Comm’n Notice and Req. for Written Submissions (Aug. 29, 2019) (“Comcast Br.”); Rovi’s Resp. to Comm’n Decision to Rev. in Part a Summary Determination and to Rev. in Part a Final Initial Determination (Aug. 29, 2019) (“Rovi Br.”).

³ Resp. of the Office of Unfair Import Investigations to the Commission’s Req. for Written Submissions on Remedy and the Public Interest (Aug. 29, 2019) (“OUII Br.”). OUII’s participation in this investigation is limited to importation, jurisdiction, and remedy.

⁴ Comcast Resp’ts Resp. to Compl’ts and OUII’s Written Submissions Regarding Comm’n Notice and Req. for Written Submissions (Sept. 10, 2019) (“Comcast Reply Br.”); Rovi’s Reply to Comcast Resp’ts Resp. to Comm’n Notice and Req. for Written Submissions (Sept. 10, 2019) (“Rovi Reply Br.”).

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1001. *Comcast Corp. v. Int’l Trade Comm’n*, 951 F.3d 1301 (Fed. Cir. 2020). The 1001 Investigation involved the same parties as the present investigation and it raised several of the same issues presented here, including whether Comcast’s X1 set-top boxes (“STBs”) are “articles that infringe” and whether Comcast is an importer within the meaning of section 337.

In *Comcast*, the Federal Circuit affirmed the Commission’s finding that Comcast’s X1 STBs are “articles that infringe” when Comcast induces Comcast’s STB users to directly infringe the asserted claims by using them in the United States after importation. *Comcast*, 951 F.3d at 1308 (“It is undisputed that direct infringement of the ’263 and ’413 patents occurs when the imported X1 set-top boxes are fitted by or on behalf of Comcast and used with Comcast’s customers’ mobile devices. Reversible error has not been shown in the Commission’s determinations that the X1 set-top boxes imported by and for Comcast for use by Comcast’s customers are ‘articles that infringe’ in terms of Section 337.”). The Federal Circuit’s decision in *Comcast* followed the Court’s earlier *en banc* decision in *Suprema, Inc. v. International Trade Commission*, 796 F.3d 1338 (Fed. Cir. 2015) (*en banc*), which held that “the Commission’s interpretation that the phrase ‘articles that infringe’ covers goods that were used by an importer to directly infringe post-importation as a result of the seller’s inducement is reasonable.” *Id.* (quoting *Suprema*, 796 F.3d at 1352-53).

The Federal Circuit also affirmed the Commission’s determination that Comcast is an “importer” within the meaning of section 337. *Id.* at 1308-10. This finding supports the SD’s determination that Comcast is an importer in the current investigation as well. The SD found that Comcast and its suppliers are similarly situated inasmuch as almost all of the same suppliers are involved in this investigation, the Supply Agreements are the same, and the control and conduct during importation are the same. SD at 15-24. The Commission determined not to

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review the relevant parts of the SD. Notice of Review at 3. Accordingly, those portions of the SD became the Commission’s final determination on August 15, 2019, as to whether Comcast is an importer.

B. The Accused Products

Rovi accuses Comcast’s X1 cable STBs of infringement. *See* ID at 44. These STBs are imported with Comcast’s proprietary operating system. *Id.* at 45. A variety of manufacturers including ARRIS, Cisco, and Samsung manufacture the accused boxes on behalf of Comcast. *Id.* at 44. The final ID explains, with respect to the products accused of infringing the ’011 patent claims: “The Accused 011 Products are STBs, initially imported on or after April 1, 2016, that implement the X1 Platform. Comcast’s X1 System includes an accused STB, an IPG [interactive program guide] accessed through the STB, [[REDACTED

]]:

[[FIGURE REDACTED]]

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ID at 46-47 (reprinting CDX-0008C.27). As shown in that figure, [[REDACTED

]]. As also shown in that figure, the remote control and STB are necessary, but not sufficient, to practice the claims of the '011 patent.

C. The '011 Patent

The '011 patent (JX-1), originally assigned to Veveo, Inc., issued in 2010 from non-provisional and provisional applications filed in 2005. The patent discloses and claims logic and processes for interpreting user input for an “overloaded keypad.” An “overloaded keypad” is one for which multiple letters are assigned to each key, as is customary with touch-tone dialing. *See, e.g., '011 patent, Fig. 1.* The overall system architecture is shown in Figure 2 of the patent:

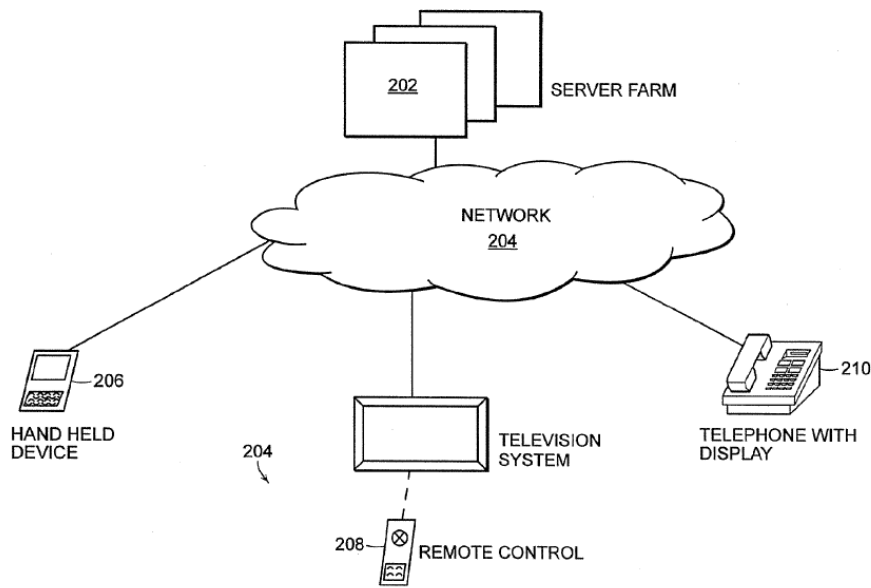
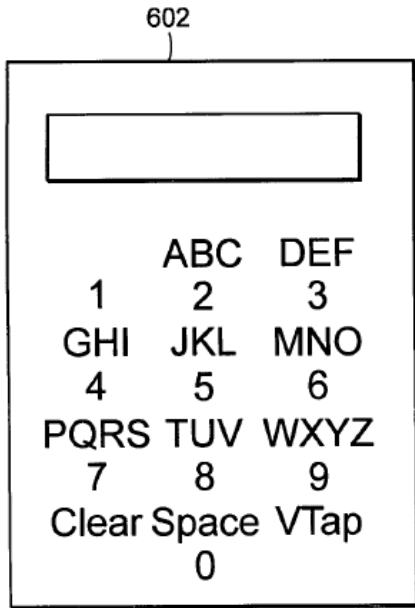


FIG. 2

'011 patent, Fig. 2. For both asserted claims, users enter information via a remote control (208), or, less commonly, via telephone (210) or hand-held device (206). *See '011 patent, col. 4 lines 43-51.* That information pertains to searches for relevant television programming. The searches are processed in a server farm (202), or in alternate embodiments, on the devices themselves. '011

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patent, col. 4 lines 20-26. The search results are then displayed with the user's entered input highlighted. Figures 6A and 6B show exemplary search results from a search for "866":



USER INPUT: 866

FIG. 6A

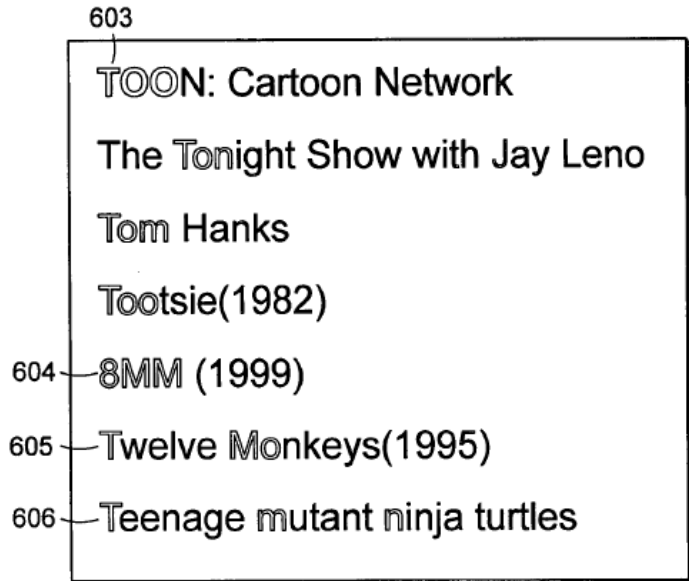


FIG. 6B

'011 patent, Figs. 6A & 6B.

Rovi asserts claims 1 and 9 against Comcast, which are reprinted, side-by-side, below, with reference characters (a)-(f) added to facilitate discussion of the claim limitations. As can be seen, the two claims are similar. Claim 1 is directed to a "method," whereas claim 9 is directed to a "computer-readable medium comprising instructions for causing a computer system to" perform the claim limitations. Claim 9 also includes certain references to a "display device." The parties do not dispute that claim 9 should be treated as a system or apparatus claim. Rovi Br. at 12; Comcast Br. at 13.

Claim 1	Claim 9
A method of processing unresolved keystroke entries by a user from a keypad with overloaded keys in	A system for processing unresolved keystroke entries by a user from a keypad with

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Claim 1	Claim 9
<p>which a given key is in fixed association with a number and at least one alphabetic character, said unresolved keystroke entries being directed at identifying an item from a set of items, each of said items being associated with information describing the item comprising one or more words, said method comprising:</p>	<p>overloaded keys in which a given key is in fixed association with a number and at least one alphabetic character, said unresolved keystroke entries being directed at identifying an item from a set of items, each of said items being associated with information describing the item comprising one or more words, said system comprising a computer-readable medium comprising instructions for causing a computer system to:</p>
<p>(a) indexing said items by associating subsets of said items with corresponding strings of one or more unresolved keystrokes for overloaded keys so that the subsets of items are directly mapped to the corresponding strings of unresolved keystrokes for various search query prefix substrings;</p>	<p>(a) index said items by associating subsets of said items with corresponding strings of one or more unresolved keystrokes for overloaded keys so that the subsets of items are directly mapped to the corresponding strings of unresolved keystrokes for various search query prefix substrings;</p>
<p>(b) for at least one subset of items, which determining letters and numbers present in the information associated with and describing the indexed items of said subset caused said items to be associated with the strings of one or more unresolved keystrokes that are directly mapped to said subset;</p>	<p>(b) for at least one subset of items, which determine letters and numbers present in the information associated with and describing the indexed items of said subset caused said items to be associated with the strings of one or more unresolved keystrokes that are directly mapped to said subset;</p>
<p>(c) subsequent to said indexing, receiving from a user a search query for desired items composed of unresolved keystrokes, said search query comprising a prefix substring for at least one word in information associated with the desired item;</p>	<p>(c) subsequent to said indexing, receive from a user a search query for desired items composed of unresolved keystrokes, said search query comprising a prefix substring for at least one word in information associated with the desired item;</p>
<p>(d) in response to each unresolved keystroke, identifying and displaying the subsets of items, and information associated therewith, that are associated with the strings of one or more unresolved</p>	<p>(d) in response to each unresolved keystroke, identify and display on a display device at least one of the subsets of items, and information associated therewith, that are associated with the strings of one</p>

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Claim 1	Claim 9
keystrokes received from the user based on the direct mapping of strings of unresolved keystrokes to subsets of items;	or more unresolved keystrokes received from the user based on the direct mapping of strings of unresolved keystrokes to subsets of items;
(e) in response to each unresolved keystroke, as the identified items are displayed, highlighting the letters and numbers present in the one or more words in said information describing the identified items that were determined to have caused the displayed items to be associated with the strings of unresolved keystrokes that are directly mapped to said items received so as to illustrate to the user how the unresolved keystrokes entered match the information associated with the displayed items; and	(e) in response to each unresolved keystroke, as the identified items are displayed, highlight on the display device the letters and numbers present in the one or more words in said information describing the identified items that were determined to have caused the displayed items to be associated with the unresolved keystrokes received so as to illustrate to the user how the strings of unresolved keystrokes that are directly mapped to said items entered match the information associated with the displayed items; and
(f) ordering the displayed items in accordance with one or more given criteria.	(f) order on the display device the displayed items in accordance with one or more given criteria.

In the accused products, the generation of the index reflected in limitations (a) and (b) of both claims [[REDACTED]]. The index is available to be searched by the user of the accused products via a remote-control query, *i.e.*, each user puts into service the Comcast system for processing unresolved keystroke entries with his or her search query. There is no dispute that limitations (c)-(f) occur in response to each search query by a user with his or her remote control.⁵

⁵ Limitations (c)-(f) expressly recite that they occur in response to user input. Limitation (c) (“subsequent to said indexing, receive from a user a search query . . . composed of unresolved keystrokes”); limitation (d) (“in response to each unresolved keystroke”); limitation (e) (“in response to each unresolved keystroke”); limitation (f) (displaying the items from the earlier steps). The final ID finds, and the parties do not dispute, that limitation (b) is performed as part of the indexing process. ID at 67-73, 279.

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II. STANDARD

With respect to the issues under review, “the Commission may affirm, reverse, modify, set aside or remand for further proceedings, in whole or in part, the initial determination of the administrative law judge.” 19 C.F.R. § 210.45(c). The Commission also “may take no position on specific issues or portions of the initial determination,” and “may make any finding or conclusions that in its judgment are proper based on the record in the proceeding.” *Id.*

III. ANALYSIS

On review, the Commission finds a violation of section 337 with respect to claim 9 of the '011 patent. In particular, the Commission finds that Comcast's users directly infringe claim 9, that Comcast induces that infringement, and that Comcast's importation of the X1 STBs, which are used to induce that infringement, is a violation of section 337. As discussed in more detail below, the Commission, however, declines to reach the issue of whether there has been a violation based on Rovi's theory of infringement as to claim 1 of the '011 patent.

A. Infringement

1. Claim 9

The parties all agree that claim 9 should be interpreted as a system or apparatus claim.⁶ Rovi Br. at 12; Comcast Br. at 13. The final ID found that Comcast's users directly infringe claim 9. ID at 276. Indeed, the final ID noted that at the end of 2016, Comcast's customers [[REDACTED]] *Id.* The final ID explained that

⁶ See, e.g., *Intellectual Ventures I LLC v. Motorola Mobility LLC*, 870 F.3d 1320, 1328 (Fed. Cir. 2017) (“Claim 41 is written to claim a ‘device configured’ to perform certain operations But the parties have treated *Centillion* [*Data Sys., LLC v. Qwest Commc'ns Int'l, Inc.*, 631 F.3d 1279 (Fed. Cir. 2011)], which addressed claims to ‘systems comprising’ certain elements, as the governing one in this case, and for that reason we limit our consideration to what *Centillion* means for this case. We do not decide what standards would govern here if claim 41 were not treated as a system claim under *Centillion*.”).

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“although the indexing and determining steps required by claim 9 of the ’011 patent take place [[REDACTED]], users still directly infringe because by initiating the search query, the users ‘control’ and ‘benefit’ from each claimed component of claim 9.” *Id.* at 279 (citing *Intellectual Ventures I LLC v. Motorola Mobility LLC*, 870 F.3d 1320 (Fed. Cir. 2017) and *Centillion Data Sys., LLC v. Qwest Commc’ns Int’l, Inc.*, 631 F.3d 1279 (Fed. Cir. 2011)). The final ID found that Comcast induces its users’ infringement of claim 9. ID at 274-75, 276-82.

a) The Parties’ Arguments and Issues of Waiver

In response to the Notice of Review, Rovi asserts that Comcast (by making or using) and its users (by using) each directly infringe claim 9. The Commission describes Comcast’s direct infringement arguments and then Comcast’s users’ direct infringement arguments below as well as resolves various waiver arguments. The Commission then analyses the substance of those arguments.

Comcast’s Alleged Direct Infringement Based Upon “Makes”: In its opening brief on Commission review, Rovi contends that Comcast is a direct infringer because it “makes” and “uses” the claimed system within the meaning of 35 U.S.C. § 271(a). Rovi Br. at 7. As to “makes,” Rovi contends that direct infringement for “making” occurs when an accused infringer “‘adds the final limitations’ to complete the system.” *Id.* at 8 (quoting *Centrak, Inc. v. Sonitor Techs., Inc.*, 915 F.3d 1360, 1372 (Fed. Cir. 2019)). Rovi emphasizes Comcast’s control over the X1 system, and its control over the manufacture of the accused X1 set top boxes. Rovi Br. at 8. Comcast argues that the issue has been waived. Comcast Reply Br. at 6. The Commission agrees with Comcast that Rovi has waived an opportunity to raise a theory of direct infringement based on

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“making” the infringing system; Rovi’s arguments in its post-hearing brief are based on using, not on making, the infringing system. Rovi Post-Hearing Br. at 26-27.

Comcast’s Alleged Direct Infringement Based Upon “Uses”: As to direct infringement by “use,” Rovi quotes *Centillion*: “[T]o ‘use’ a system for purposes of infringement, a party must put the invention into service, *i.e.*, control the system as a whole and obtain benefit from it.” *Centillion*, 631 F.3d at 1284. Rovi explains that Comcast “uses” the claimed system when Comcast employees use the search feature for testing purposes or otherwise from Comcast premises. Rovi Br. at 9. Comcast asserts that Rovi also waived this theory of direct infringement. Comcast Reply Br. at 7. The Commission agrees with Comcast that Rovi has waived direct infringement by Comcast by failing to allege such infringement in Rovi’s post-hearing brief. Rovi Post-Hearing Br. at 26-27; Comcast Reply Br. at 7 & n.4.

Comcast’s Users’ Direct Infringement Based Upon “Uses”: Relying extensively on *Centillion*, Rovi also argues that Comcast’s users directly infringe each time they use the Comcast system to search. Rovi Br. at 12. Comcast, citing *Centillion* and *Intellectual Ventures*, disagrees, and argues that “Comcast customers do not directly infringe claim 9 because they do not ‘use’ (or ‘control and benefit from’) the only computer-readable medium that allegedly comprises the instructions accused of satisfying the ‘indexing’ limitation, which is the [[REDACTED]].” Comcast Br. at 18. Comcast asserts that “[w]hen Comcast’s customers initiate a numeric keypad search using an X1 remote control, the [[REDACTED]] is not invoked or used in any way. . . . Therefore, according to Comcast, *at most* Comcast’s customers could be understood to ‘use’ the [[REDACTED]] when they conduct a search, but they cannot be understood to ‘use’ the [[REDACTED]] at all.” *Id.* at 20 (emphasis original).

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In reply, Rovi fairly characterizes Comcast's argument as follows:

Comcast does not dispute that its X1 System includes every element of system claim 9, or that its users invoke the X1 System as a whole to perform overloaded key search queries. Comcast Br. 17-20. Comcast does not dispute that it instructs its customers how to use the X1 System to perform overloaded key search queries and encourages such use. Rather, Comcast argues that its customers' use of the X1 system is not direct infringement because customers do not "control and benefit from" a single limitation—the "indexing" component. *Id.* at 18.

Rovi Reply Br. at 12.

b) Comcast's Users Directly Infringe Claim 9

Comcast's arguments are predicated on its assertion that in order to infringe an apparatus claim, a user must "control and benefit from" each limitation of the claim. Comcast Br. at 18. Comcast argues that its system includes a "[REDACTED]," which carries out the "indexing" limitation of claim 9 (limitation (a) as annotated above). According to Comcast, unlike other limitations of the claims, which are performed in response to a user's query, the [[REDACTED]]. Comcast Br. at 18-20. Comcast asserts that "Comcast's customers do not 'request service' from the [[REDACTED]] and they receive no responses from it at all." Comcast Br. at 20. Rovi responds that the [[REDACTED]] is merely part of the [[REDACTED]]. Rovi Reply Br. at 13. Rovi cites the final ID's statement that "[REDACTED]" *Id.* (quoting ID at 48 n.30 (in turn quoting Tr. (Bovik) at 561:13-16)).

Centillion, like the present case, deals with a user interacting with the system of a telecommunications provider (Qwest). *Centillion*, 631 F.3d at 1281. Also like the present case, that system included a "back-end" operated by Qwest and a "front-end" installed on user premises (on a user's computer system). *Id.* The Federal Circuit held that "to 'use' a system for purposes of

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infringement, a party must put the invention into service, *i.e.*, control the system as a whole and obtain benefit from it.” *Id.* at 1284. The Federal Circuit found that the standard operation of the system at issue was an “infringing” use, because once a user subscribes to the Qwest system, Qwest will automatically generate back-end reports.⁷ *Id.* at 1285 (“By subscribing a single time, the user causes the back-end processing to perform its function on a monthly basis.”). *Centillion* also states that in “order to ‘put the system into service,’ the end user must be using all portions of the claimed invention.” *Id.* at 1284.

In *Intellectual Ventures*, the Federal Circuit attempted to clarify *Centillion*. The Court explained that based on *Centillion*, “it follows that, to use a system, a person must control (even if indirectly) and benefit from each claimed component.” *Id.* The Court then applied the component-by-component test as to benefit, but not control:

In an analysis of a system claim under *Centillion*, proof of an infringing “use” of the claimed system under § 271(a) requires the patentee to demonstrate that the direct infringer obtained “benefit” from each and every element of the claimed system. *See Centillion*, 631 F.3d at 1284. In addition, the direct or indirect control required “is the ability to place the system as a whole into service.” *Id.*

Intellectual Ventures, 870 F.3d at 1329. The Court then examined on a component-by-component basis benefit, but not control. *Id.* at 1329-31. Judge Newman dissented from this reading of *Centillion*, arguing that there is no component-by-component requirement in *Centillion* for benefit or control. *Id.* at 1333 (Newman, J., dissenting). In a subsequent non-precedential decision, the Court “decline[d] the parties’ invitations to expand our doctrine on the

⁷ *Centillion* also examines an “on-demand” operation of the system in which a user exercises more control. *Id.* at 1285. We focus on the “normal” operation, because that operation presents facts closer to the case at hand.

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control aspect of ‘use’ of system claims under § 271(a).” *Grecia v. McDonald’s Corp.*, 724 F. App’x 942 (Fed. Cir. Mar. 6, 2018).

The Commission finds, consistent with the foregoing cases, that control and benefit are met by Comcast’s users, who use the X1 system to infringe under 35 U.S.C. § 271(a). As to benefit in the present case, the Commission finds, and Comcast does not dispute, that Comcast’s customers “obtain[] ‘benefit’ from each and every element of the claimed system,” *Intellectual Ventures*, 870 F.3d at 1329, including the indexing (*i.e.*, limitation (a) and the related determining element of limitation (b)). The indexing exists to serve user queries, ID at 279, and there is no point in creating, maintaining or updating an index corresponding to user remote-control searches, if the index [[REDACTED]] is never queried. Thus, Comcast’s users benefit from each and every element of the system claimed in claim 9 of the ’011 patent. *Intellectual Ventures*, 870 F.3d at 1329; *see also Centillion*, 631 F.3d at 1285-86.

The Commission further finds that Comcast’s users have “the ability to place the system as a whole into service,” satisfying “the direct or indirect control” requirement. *Intellectual Ventures*, 870 F.3d at 1329. Each user puts into service the Comcast system for processing unresolved keystroke entries with his or her search query. *See, e.g.*, ID at 276-79; Tr. (Bovik) at 603:10-606:1; Tr. (Shamos) at 389:5-9, 391:3-24, 392:20-393:5, 394:9-395:18, 396:23-397:9, 397:10-398:4, 398:24-399:4, 421:25-423:17; CX-0355C; CX-0356C; CX-0357C. Contrary to Comcast’s argument, the Commission does not find adequate support in Federal Circuit caselaw to conclude that user control must be established on a component-by-component basis. However, even if the Federal Circuit caselaw were read to require some control on a component-by-component basis, the Commission finds that the [[REDACTED]], which Comcast asserts is

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not controlled by the user, is merely part of the [[REDACTED]], which creates the index and conducts the search. *See* ID at 48 n.30. [[REDACTED]], which is part of the X1 system. ID at 46-48. The Commission finds, in accordance with the ID (at pp. 47-48), that the [[]] is the appropriate component under Comcast’s interpretation of Federal Circuit caselaw, and that Comcast’s users control, even if indirectly, the [[]] under *Centillion* and *Intellectual Ventures*.⁸ The Commission therefore rejects Comcast’s argument that Comcast’s users do not meet a “control” requirement with respect to indexing. Comcast asserts that its users do not control the Comcast system because Comcast [[REDACTED]]. Comcast Br. 7-9; Comcast Reply Br. 14. The Commission agrees with Rovi that “Comcast is breaking down the X1 system into smaller and smaller functional components,” Rovi Reply Br. at 13, *i.e.*, by attempting to focus on the [[REDACTED]] in isolation. As stated, the [[REDACTED]] is part of the [[]] which users at least indirectly control through their search queries. Thus, we find that Comcast, by deconstructing the X1 system into smaller and smaller components, has not rebutted Rovi’s evidentiary showing that the “control” requirement is met.

c) Comcast Induces Its Users’ Infringement

Comcast does not dispute its active inducement of its users’ direct infringement [[REDACTED]], and the Commission affirms the final ID’s findings on this issue. ID at 272-82; Comcast Br. at 21. As found in the ID, “Comcast provides videos and documents that instruct, direct, or advise its customers to use the X1 unresolved overloaded key search

⁸ It is undisputed that the same result would follow if the Commission treated the [[REDACTED]] as the appropriate component; Comcast’s argument relies on consideration of the [[REDACTED]] in isolation.

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functionality implemented on the X1 System in a way that infringes claim 9 of the '011 patent.” *Id.* at 274. The Commission notes that the record demonstrates that there are [[
REDACTED]]. *Id.* at 276.

The Commission further notes that on August 16, 2019, the Commission found two Comcast redesigns, which prevent search results from being highlighted, *see ID* at 80-83, to be noninfringing. Notice, 84 Fed. Reg. 43611, 43612 (Aug. 21, 2019) (“The Commission has determined not to review the remainder of the final ID’s findings as to the '011 patent, including the final ID’s findings that Comcast’s two redesigns do not infringe claims 1 and 9 of the '011 patent.”). Notwithstanding the passage of time since that notice, and notwithstanding Comcast’s concession of infringement of claims 1 and 9 of the '011 patent, the record provides no evidence that Comcast has implemented either redesign.

d) Comcast’s Importation of its Set-Top Boxes is a Violation of Section 337

Comcast has argued repeatedly in this proceeding that the Commission’s authority does not extend to a section 337 violation predicated on induced infringement. The Commission disagrees. As to claim 9, the Commission finds that the Federal Circuit’s en banc decision in *Suprema* and its subsequent decision in *Comcast* control. In *Suprema*, the Federal Circuit held that section 337 encompasses inducement of infringement. *Suprema*, 796 F.3d at 1346-47. In particular, the Federal Circuit explained: “Induced infringement is one kind of infringement, and when it is accomplished by supplying an article, the article supplied can be an ‘article that infringes’ if the other requirements of inducement are met.” *Id.* at 1349. The Federal Circuit in *Comcast* upheld the Commission’s determination that section 337 applies to products that were imported on behalf of a respondent and supplied to its customers with instructions to use the imported products to directly

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infringe the asserted system claims.⁹ *Comcast*, 951 F.3d at 1308. That is precisely the situation here inasmuch as the same parties and same conduct is involved. Specifically, the Commission has found that Comcast induced the direct infringement of claim 9 by its users' by supplying the accused STBs with instructions for infringing use. Accordingly, the Commission finds that the STBs are "articles that infringe" and Comcast has violated section 337 by importing those infringing STBs into the United States.

2. Claim 1

The final ID found that Comcast, but not its users, performed all the steps of claim 1, including the steps regarding indexing. ID at 65-83 & 270-71. Rovi agrees with this finding and acknowledges that only Comcast, and not Comcast's users, directly infringes claim 1 of the '011 patent. Rovi Br. at 9-10, 12-13. Thus, Rovi seeks to establish a violation of section 337 as to claim

⁹ The Commission finds based on the record of the present investigation that, even if the location of Comcast's inducing conduct were legally relevant, and it is not, *see Comcast*, 951 F.3d at 1307-08, Comcast designed the X1 STBs to be used in an infringing manner and directed their manufacture overseas—requiring, among other things overseas installation of the relevant software onto the STBs. *See, e.g.*, Order No. 47 at 10-13, 15. Comcast then directed and caused the importation of those STBs to Comcast facilities in the United States while simultaneously inducing its users to infringe through the continuous provision of videos and documents instructing its users how to infringe. *See, e.g., id.* The record demonstrates that initially Comcast practiced the claims of the '011 patent under a license from Rovi, and Comcast instructed its customers to practice the claims of the '011 patent. When that license expired, and prior to the importation of any of the X1 STBs at issue in this investigation, Comcast continued to instruct its users to practice the claims of the '011 patent, which by virtue of the expiration of the license became induced infringement. That inducement continued long after the license expired, including throughout this investigation, as Comcast refused for years to disable the infringing functionality, and during that time, Comcast continued to induce its users' infringement and to import the X1 STBs.

In the *Comcast* appeal, Comcast attempted to draw distinctions between the facts in that investigation and the Federal Circuit's decision in *Suprema*. As set forth in *Comcast*, those distinctions are irrelevant. *Comcast*, 951 F.3d at 1307-08. Moreover, those distinctions are factually false. In *Suprema*, *Suprema* encouraged Mentalix to infringe after importation by importing a *Suprema* scanner and then cooperating with Mentalix (in the United States), after importation, to combine that previously-imported scanner with Mentalix's software. *Suprema*, 796 F.3d at 1343; *id.* at 1354 (Dyk, J., dissenting).

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1 based on Comcast's direct infringement of the claim. Rovi does not seek to establish a violation of section 337 as to claim 1 based on a theory of indirect infringement by Comcast as it does with regard to claim 9. Rovi Br. at 12-13.

The Commission declines to reach the issue of whether there has been a section 337 violation based on Rovi's theory of infringement of claim 1 of the '011 patent. The remedy issuing herein for claim 9 provides the same relief as would be provided under claim 1. The added delay to the parties and burden on the Commission in resolving the issues concerning claim 1 are unjustified given the relief afforded to Rovi as to claim 9 (discussed above), which covers the same accused products as claim 1. *See Yingbin-Nature (Guangdong) Wood Indus. Co., Ltd. v. Int'l Trade Comm'n*, 535 F.3d 1322, 1331-32 (Fed. Cir. 2008) (finding that there was no justiciable dispute as to infringement of certain patent claims, where the exclusion order covered the same goods based on infringement of other patent claims). Accordingly, the Commission has decided to take no position on the issues concerning infringement of claim 1.¹⁰

IV. REMEDY, THE PUBLIC INTEREST, AND BONDING

A. Remedy

Where a violation of section 337 has been found, the Commission must consider the issues of remedy, the public interest, and bonding. Section 337(d)(1) provides that "[i]f the Commission determines, as a result of an investigation under this section, that there is a violation of this section,

¹⁰ The Notice of Review also solicited briefing on "whether and how the 'single entity' test of *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, 797 F.3d 1020, 1022 (Fed. Cir. 2015) should be applied and whether the final ID's application of that test to claim 1 of the '011 patent, *see* Final ID at 271, is correct." Notice of Review at 4. *Akamai* allows liability for performance of certain method claims where one party's partial performance of the claims can fairly be attributed to the other party's partial performance. The parties agree that *Akamai* is limited to method claims, and therefore does not affect claim 9. Rovi Br. at 15; Rovi Reply Br. at 16; Comcast Reply Br. at 15.

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it shall direct that the articles concerned, imported by any person violating the provision of this section, be excluded from entry into the United States, unless, after considering the [public interest], it finds that such articles should not be excluded from entry.” 19 U.S.C. § 1337(d)(1). The Commission has “broad discretion in selecting the form, scope, and extent of the remedy.” *Viscofan, S.A. v. US. Int’l Trade Comm’n*, 787 F.2d 544, 548 (Fed. Cir. 1986).

1. Limited Exclusion Order

Rovi requests the entry of an LEO against Comcast and requests that the LEO specifically recite Comcast’s suppliers, ARRIS and Technicolor, who import STBs on Comcast’s behalf.¹¹ Rovi Br. at 16. While Comcast does not dispute that an LEO is the appropriate remedy, Comcast requests that non-party suppliers be excluded from the order, and Comcast further requests the addition of certain provisions in the order, including a certification provision and an exception for warranty and repair. Comcast Br. at 26-29. OUII agrees that an LEO is the appropriate remedy. OUII Br. at 5-8. The Commission has determined to issue an LEO as to Comcast’s infringing digital video receivers and hardware and software components thereof. The Commission addresses below the parties’ arguments concerning the appropriate content of the exclusion order.

a) Certification Provision

Comcast requests that the LEO include a certification provision that allows Comcast to certify that its imported STBs are being used with the two redesigns that the Commission found do not infringe. Comcast Br. at 26. Comcast argues that this is necessary because it is not

¹¹ ARRIS and Technicolor refer to Technicolor SA; Technicolor USA, Inc.; Technicolor Connected Home USA LLC; ARRIS International plc; ARRIS Group Inc.; ARRIS Technology, Inc.; ARRIS Enterprises LLC; ARRIS Solutions, Inc.; ARRIS Global Ltd.; and Pace Americas; or any of their affiliated companies, parents, subsidiaries, agents, or other related business entities, or their successors or assigns.

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readily apparent from inspecting the STBs whether or not they infringe, especially because the accused functionality resides on domestic servers. *Id.* Rovi does not object to inclusion of a certification provision. Rovi Reply Br. at 17. The RD also recommended a certification provision enabling Comcast to certify that the imported X1 STBs will be used as part of a noninfringing system. RD at 314.

The Commission will include a certification provision that will allow persons seeking to import adjudicated noninfringing digital video receivers and hardware and software components thereof that are potentially subject to exclusion to certify that, to the best of their knowledge and belief, the products being imported are not subject to exclusion. This certification allows persons seeking to import XI STBs to certify that, to the best of their knowledge and belief, the XI STBs will be used as part of an adjudicated noninfringing system. Respondents may only submit a certification regarding products for use in a system for which there is a prior adjudication of no infringement. For example, the Commission has already adjudicated two alternative Comcast redesigns not to infringe. Notice of Review at 1-3. The Commission is including the following language to address these issues in its LEO:

At the discretion of U.S. Customs and Border Protection (“CBP”) and pursuant to the procedures it establishes, persons seeking to import digital video receivers and hardware and software components thereof that are potentially subject to this Order may be required to certify that they are familiar with the terms of this Order, that they have made appropriate inquiry, and thereupon state that, to the best of their knowledge and belief, the products being imported are not excluded from entry under paragraph 1 of this Order, including because the products will be used as part of a redesign adjudicated by the Commission in the violation investigation not to infringe, and thus the products cannot be used in a manner that infringes the claim of the patent that is the subject of this Order. At its discretion, CBP may require persons who have provided the certification described in this paragraph to furnish such records or analyses as are necessary to substantiate this certification.

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b) Warranty and Repair

Comcast argues that it is well settled that exclusion orders are not meant to retroactively punish customers who already obtained their devices. Comcast Br. at 27. In addition, Comcast argues that it is undisputed that its STBs are subject to existing service and warranty contracts. *Id.* Accordingly, Comcast requests that the exclusion order include an exemption for warranty and repair. *Id.* Rovi does not object to inclusion of an exemption for warranty and repair. Rovi Reply Br. at 17. OUII recommends that there be an exception for replacement parts. OUII Br. at 7. The RD recommends the inclusion of a limited exception for service and repair under existing warranty and service contracts to avoid unnecessary disruption caused by an LEO. RD at 314-15. In light of the fact that it is undisputed that Comcast's STBs are subject to existing service and warranty contracts, the Commission has determined to include an exemption to the remedial order for replacement parts used to repair previously-imported STBs under warranty. Tr. at 935:3-6; ID at 314-14. *See Certain Sleep-Disordered Breathing Treatment Sys. & Components Thereof*, Inv. No. 337-TA-890, Comm'n. Op. at 47 (Jan. 16, 2015).

c) Non-Parties

Finally, Comcast disagrees that any exclusion order should cover non-party suppliers, ARRIS and Technicolor. Comcast Br. at 28-9. Rovi argues that they should be included because they are the vehicle that Comcast uses to import its products into the United States. Rovi Br. at 17. Rovi points out that in the 1001 Investigation, the Commission expressly named ARRIS and Technicolor in the LEO that issued. Rovi Br. at 18. The RD, however, did not recommend including ARRIS or Technicolor within the scope of the LEO. RD at 313.

The exclusion order that issued in Inv. No. 1001 includes the following provision:

Digital video receivers and hardware and software components thereof that infringe one or more of claims 1, 2, 14, and 17 of United States Patent No.

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8,006,263 or one or more of claims 1, 3, 5, 9, 10, 14, and 18 of United States Patent No. 8,578,413 that are manufactured by, or on behalf of or are imported by or on behalf of the Respondents or any of their affiliated companies, parents, subsidiaries, agents, or other related business entities, or their successors or assigns, including ARRIS and Technicolor to the extent they import such products on behalf of Respondents, are excluded from entry...

The Federal Circuit in *Comcast* affirmed the Commission's decision to name ARRIS and Technicolor in the LEO that issued in that investigation. *Comcast*, 951 F.3d at 1310.

As discussed earlier, and is replete in the factual record of this investigation and in the 1001 Investigation (such factual findings were not challenged on appeal), the X1 STBs, *inter alia*, are designed by and for Comcast, apparently work only on Comcast's network, are preloaded by ARRIS and Technicolor with Comcast's software, and cannot be sold or marketed to persons other than Comcast without Comcast's permission. *See, e.g.*, Order No. 47 at 10-13, 15; 1001 Investigation, Final ID at 10-12. The Commission finds, based upon the same relationship between ARRIS, Technicolor, and Comcast in this investigation as in the 1001 Investigation, including the same supply relationships, that ARRIS and Technicolor act on behalf of Comcast in the importation of Comcast's infringing STBs.

The Commission recognizes that the express inclusion of ARRIS and Technicolor, to the extent that they act on behalf of Comcast, ought to have no legal effect, and ought to be unobjectionable to Comcast. Yet, Comcast steadfastly opposes the naming of ARRIS and Technicolor in the LEO here. It has been standard for decades that Commission limited exclusion orders extend to infringing articles that are "manufactured by, or on behalf of, or are imported by, or on behalf of" the infringing respondent.¹² The ALJ found and the Commission

¹² *See, e.g., Stainless Steel Rod Treating Apparatus and Components Thereof*, No. 337-TA-97, Comm'n Op., 1981 WL 50445, at *35 (Dec. 10, 1981). In 1994, Congress codified Commission practice by recognizing the Commission's issuance of limited exclusion orders and adopting the Commission's requirements for issuance of general exclusion orders. Uruguay Round

[Footnote continued on next page]

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determined not to review that, based on the record of the present investigation, including Comcast's relationship to ARRIS and Technicolor, that Comcast is liable as an importer of its X1 STBs. *See* Order No. 47 at 8-21.

The Commission has named ARRIS and Technicolor in the exclusion order to provide clarity to Customs, the parties, and the public that Comcast's X1 STBs that are made by ARRIS or Technicolor are subject to the terms of the exclusion order, so long as ARRIS or Technicolor acts on Comcast's behalf. Although the record of the present investigation standing alone provides adequate basis for the Commission's decision to name ARRIS and Technicolor, the Commission further notes that given that the limited exclusion order in the 1001 Investigation expressly named ARRIS and Technicolor, there would be risk of confusion if the terms of the two orders were disparate and ARRIS and Technicolor were not named in the present exclusion order. For the foregoing reasons, the Commission has determined that it is appropriate to name ARRIS and Technicolor in the exclusion order in this investigation in order to assist CBP with enforcement. To be clear, even absent such express inclusion, ARRIS and Technicolor would be covered by the order regardless through the statement "manufactured abroad for or on behalf of, or imported by or on behalf of Comcast or any of their affiliated companies, parents, subsidiaries, or other related business entities or their successors or assigns." Accordingly, infringing STBs imported by or on behalf of Comcast, but manufactured by other parties, such as ARRIS and Technicolor, are prohibited from entry. The Commission notes that the LEO would not reach ARRIS and Technicolor were those companies not to act on Comcast's behalf.

Agreements Act, Pub. L. No. 103-465, § 321, 108 Stat. 4809, 4944-45 (1994), codified at 19 U.S.C. § 1337(d)(2).

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2. Cease and Desist Order

Section 337(f)(1) provides that in addition to, or in lieu of, the issuance of an exclusion order, the Commission may issue a CDO as a remedy for violation of section 337. *See* 19 U.S.C. § 1337(f)(1). CDOs are generally issued when, with respect to the imported infringing products, respondents maintain commercially significant inventories in the United States or have significant domestic operations that could undercut the remedy provided by an exclusion order.¹³ *See, e.g., Certain Table Saws Incorporating Active Injury Mitigation Technology & Components Thereof* (“Table Saws”), Inv. No. 337-TA-965, Comm’n Op. at 4-6 (Feb. 1, 2017); *Certain Protective Cases & Components Thereof*, Inv. No. 337-TA-780, USITC Pub. No. 4405, Comm’n Op. at 28 (Nov. 19, 2012) (citing *Certain Laser Bar Code Scanners & Scan Engines, Components Thereof & Prods. Containing Same*, Inv. No. 337-TA-551, Comm’n Op. at 22 (June 24, 2007)). Rovi requests CDOs against all of the Comcast entities. Comcast argued that CDOs are unnecessary because it holds zero inventory of STBs that run the accused functionality. Comcast Br. at 30. Comcast does not dispute its inventory levels in its submissions to the Commission. Rather, Comcast suggested that it disabled the functionality, so the STBs in inventory no longer infringe. OUII supported the imposition of CDOs. OUII Br. at 8-10. The RD found that Comcast maintains commercially significant levels of inventory and

¹³ When the presence of infringing domestic inventory or domestic operations is asserted as the basis for a CDO under section 337(f)(1), Commissioner Schmidlein does not adopt the view that the inventory or domestic operations needs to be “commercially significant” in order to issue the CDO. *See, e.g., Certain Magnetic Tape Cartridges and Components Thereof*, Inv. No. 337-TA-1058, Comm’n Op. at 65, n.24 (Mar. 25, 2019); *Table Saws*, Comm’n Op. at 6-7, n.2 (Feb. 1, 2017). In Commissioner Schmidlein’s view, the presence of some infringing domestic inventory or domestic operations, regardless of its commercial significance, provides a basis to issue a CDO. *Id.*

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recommended that the Commission issue CDOs to Comcast with a limited exception for service and repair. RD at 316-17.

The Commission has determined to issue CDOs against Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; and Comcast Shared Services, LLC. All of these entities are domestic entities. The Commission agrees with the RD that Rovi has shown that Comcast maintains commercially significant U.S. inventories of its STBs.¹⁴ RD at 316-17. The Commission has also determined to include an exemption to the CDOs for replacement parts used to repair previously-imported STBs.

B. The Public Interest

Section 337 requires the Commission, upon finding a violation of section 337, to issue an LEO “unless, after considering the effect of such exclusion upon the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers, it finds that such articles should not be excluded from entry.” 19 U.S.C. § 1337(d)(1). Similarly, the Commission must consider these public interest factors before issuing a CDO. 19 U.S.C. § 1337(f)(1).

The statute requires the Commission to consider and make findings on the public interest in every case in which a violation is found regardless of the quality or quantity of public interest information supplied by the parties. 19 U.S.C. § 1337(d)(1) & (f)(1). Thus, the Commission publishes a notice inviting the parties as well as interested members of the public and interested government agencies to gather and present evidence on the public interest at multiple junctures

¹⁴ Commissioner Schmidlein supports issuance of the CDOs due to the presence of some infringing domestic inventory, regardless of the commercial significance.

PUBLIC VERSION

in the proceeding. 19 U.S.C. § 1337(d)(1) & (f)(1). In this investigation, the Commission received comments from Rovi on the public interest. Rovi argued that public interest concerns favor enforcement of U.S. intellectual property rights in the United States and that there is no reason not to issue an exclusion order. Rovi Br. at 19-23. Comcast did not present any arguments indicating that the public interest should preclude issuance of an exclusion order.

The Commission also received comments from the following organizations asserting that robust enforcement of section 337 is in the national interest: Tea Party Patriots Action; Americans for Limited Government; Frontiers of Freedom Institute; Market Institute; and Conservatives for Property Rights (joined by 60 Plus Association, and Americans for Limited Government). The Commission also received similar comments concerning the importance of patent rights from Rep. Peter King (R-N.Y.), Jackie Speier (D-Cal.), and Steve Stivers (R-Ohio). Neither they nor the parties raise any public interest concerns that would preclude the issuance of relief in this investigation.

For the reasons set forth below, the Commission finds that these factors do not warrant denying a remedy against Comcast.

1. Public Health and Welfare

Specifically, the Commission has historically examined the first factor, effect of the remedy on the public health and welfare, by looking to whether “an exclusion order would deprive the public of products necessary for some important health or welfare need[.]” *Spansion, Inc. v. Int’l Trade Comm’n*, 629 F.3d 1331, 1360 (Fed. Cir. 2010). The Commission has already determined that two Comcast redesigns do not infringe, and the Commission will allow Comcast to certify that the imported STBs are being used with the non-infringing redesigns. Both of those redesigns modify Comcast’s servers to prevent the display of highlighted search results to users.

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ID at 80-83. The Commission finds that this factor does not weigh against the issuance of a remedy as there is no unfilled need by virtue of the exclusion order.

2. Competitive Conditions in the United States Economy

With respect to the effect of the remedy on competitive conditions in the United States economy, the Commission finds no evidence in the record that this factor would weigh against the issuance of a remedy.

3. Production of Like or Directly Competitive Articles in the United States

The third public interest factor is the effect of the remedy on the production of like or directly competitive articles in the United States. No party has argued that this factor weighs against a remedy. Accordingly, the Commission finds that this factor does not weigh against issuing an LEO or CDOs against Comcast's products.

4. United States Consumers

As to the effect of the remedy on United States consumers, the Commission finds that this factor does not weigh against the issuance of a remedy. The Commission finds that United States consumers will continue to have noninfringing options for Comcast STBs. The Commission has already adjudicated two noninfringing redesigns. Moreover, the Commission concludes that there are no public interest concerns from the non-highlighting of search results. Accordingly, the public interest factors do not preclude issuance of an exclusion order in this investigation.

C. Bonding

If the Commission enters an exclusion order or a cease and desist order, a respondent may continue to import and sell its products during the 60-day period of Presidential review under a bond in an amount determined by the Commission to be "sufficient to protect the

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complainant from any injury.” 19 U.S.C. § 1337(j)(3); *see also* 19 C.F.R. § 210.50(a)(3). When reliable price information is available in the record, the Commission has often set the bond in an amount that would eliminate the price differential between the domestic product and the imported, infringing product. *See Certain Microsphere Adhesives, Processes for Making Same, & Prods. Containing Same, Including Self-stick Repositionable Notes*, Inv. No. 337-TA-366, USITC Pub. No. 2949, Comm’n Op. at 24 (Jan. 16, 1996). The Commission also has used a reasonable royalty rate to set the bond amount where a reasonable royalty rate could be ascertained from the evidence in the record. *See, e.g., Certain Audio Digital-to-Analog Converters & Prods. Containing Same*, Inv. No. 337-TA-499, Comm’n Op. at 25 (Mar. 3, 2005). Where the record establishes that the calculation of a price differential is impractical or there is insufficient evidence in the record to determine a reasonable royalty, the Commission has imposed a 100 percent bond. *See, e.g., Certain Liquid Crystal Display Modules, Prods. Containing Same, & Methods Using the Same*, Inv. No. 337-TA-634, Comm’n Op. at 6-7 (Nov. 24, 2009). The complainant, however, bears the burden of establishing the need for a bond. *Certain Rubber Antidegradants, Components Thereof & Prods. Containing Same*, Inv. No. 337-TA-533, USITC Pub. No. 3975, Comm’n Op. at 40 (July 21, 2006).

The parties dispute the amount of any bond during the period of Presidential review. Consistent with its argument to the ALJ, Rovi requests that the bond be set at “approximately \$35.46 to \$39.62 per product, or a reasonable royalty of no less than \$0.22 per subscriber per month.” Rovi Br. at 28. The RD found that a zero percent bond is appropriate because Rovi failed to establish a well-founded basis to support a bond based on price differential or reasonable royalty rates. RD at 319-22. The RD further noted that the Commission imposed a zero percent bond in the 1001 Investigation. *Id.*

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The Commission agrees with the RD's conclusion that Rovi failed to justify the need for a bond, including that Rovi did not establish an appropriate price differential in view of the absence of reliable pricing information, RD at 320-21, or royalty rate, where Rovi failed to show the role of these patents in the portfolio patent licenses Rovi put forward, RD at 321-22. Accordingly, the Commission has determined to set the bond during the period of Presidential review in the amount of zero percent of entered value.

V. CONCLUSION

For the reasons set forth herein, the Commission determines that Rovi established a violation of section 337 by Comcast with respect to claim 9 of the '011 patent. The Commission determines that the appropriate remedy is an LEO and CDOs directed to the Comcast respondents, the public interest does not preclude that remedy, and the bond during the period of Presidential review is set in the amount of zero percent of entered value. Accordingly, the investigation is terminated with a finding of a violation of section 337.

By order of the Commission.

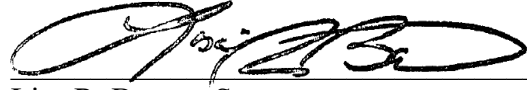


Lisa R. Barton
Secretary to the Commission

Issued: May 13, 2020

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **COMMISSION OPINION** has been served via EDIS upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **May 13, 2020**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
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Washington, DC 20436

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**On Behalf of Respondents Comcast Corporation, Comcast
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Communications, LLC, Comcast Holdings Corporation, and
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UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

In the Matter of

**CERTAIN DIGITAL VIDEO
RECEIVERS AND RELATED
HARDWARE AND SOFTWARE
COMPONENTS**

Investigation No. 337-TA-1103

**NOTICE OF COMMISSION DECISION
TO REVIEW IN PART A SUMMARY DETERMINATION
AND TO REVIEW IN PART A FINAL INITIAL DETERMINATION;
SCHEDULE FOR FILING WRITTEN SUBMISSIONS ON THE ISSUES UNDER
REVIEW AND ON REMEDY, THE PUBLIC INTEREST, AND BONDING**

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to review in part the presiding administrative law judge's ("ALJ's") summary determination ("SD") (Order No. 47) concerning importation and sale after importation and to review in part a final initial determination ("ID" or "final ID") finding a violation of section 337 of the Tariff Act of 1930, as amended, with respect to U.S. Patent No. 7,779,011 ("the '011 patent"). The Commission requests briefing from the parties on certain issues under review, as set forth in this notice. The Commission also requests briefing from the parties, interested persons, and government agencies on the issues of remedy, the public interest, and bonding.

FOR FURTHER INFORMATION CONTACT: Sidney A. Rosenzweig, Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436, telephone (202) 708-2532. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server (<https://www.usitc.gov>). The public record for this investigation may be viewed on the Commission's Electronic Docket Information System ("EDIS") (<https://edis.usitc.gov>). Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal, telephone (202) 205-1810.

SUPPLEMENTARY INFORMATION: On March 16, 2018, the Commission instituted this investigation based on a supplemented complaint filed on behalf of Rovi Corporation of San Jose, California; Rovi Guides, Inc. of San Jose, California; and Veveo, Inc. of Andover, Massachusetts (collectively, “Rovi”); as well as Rovi Technologies Corporation of San Jose, CA. The supplemented complaint alleges violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337 (“section 337”), based upon the importation into the United States, the sale for importation, and the sale within the United States after importation of certain digital video receivers and related hardware and software components by reason of infringement of one or more claims of the ’011 patent; and one or more claims of U.S. Patent Nos. 7,937,394 (“the ’394 patent”); 7,827,585 (“the ’585 patent”); 9,294,799 (“the ’799 patent”); 9,396,741 (“the ’741 patent”); 9,578,363 (“the ’363 patent”); 9,621,956 (“the ’956 patent”); and 9,668,014 (“the ’014 patent”). 83 FR 11792 (Mar. 16, 2018). The Commission’s notice of investigation named as respondents Comcast Corporation of Philadelphia, Pennsylvania; Comcast Cable Communications, LLC of Philadelphia, Pennsylvania; Comcast Cable Communications Management, LLC of Philadelphia, Pennsylvania; Comcast Business Communications, LLC of Philadelphia, Pennsylvania; Comcast Holdings Corporation of Philadelphia, Pennsylvania; and Comcast Shared Services, LLC of Chicago, Illinois (collectively, “Comcast”). *Id.* The Office of Unfair Import Investigations was also named as a party in this investigation. *Id.*

The Commission previously terminated the investigation as to complainant Rovi Technologies Corporation; as to the ’956, ’394, ’014, ’799, and ’363 patents in their entirety; and as to certain claims of the ’011, ’585, and ’741 patents. Order No. 12, *unreviewed*, Notice (July 24, 2018); Order No. 33, *unreviewed*, Notice (Sept. 19, 2018); Order 39, *unreviewed*, Notice (Oct. 25, 2018).

On June 3, 2019, the presiding ALJ issued Order No. 47, the subject SD, which, *inter alia*, granted Rovi’s motions for summary determination as to importation and sale after importation. On June 11, 2019, Comcast filed a petition for review of the SD. On June 18, 2019, Rovi responded to Comcast’s petition. On June 25, 2019, the Commission investigative attorney (“IA”) responded to Comcast’s petition.

On June 4, 2019, the ALJ issued the final ID. On June 17, 2019, Comcast and Rovi each filed a petition for review of the final ID. On June 25, 2019, Comcast and Rovi responded to each other’s petition, and the IA responded to both.

In addition, the Commission has received comments from Rovi on the public interest pursuant to Commission Rule 210.50(a)(4). The Commission also received comments from the following organizations in response to the Commission notice soliciting public interest comments, 84 FR 27804 (June 14, 2019): Tea Party Patriots Action; Americans for Limited Government; Frontiers of Freedom Institute; Market Institute; and Conservatives for Property Rights (joined by 60 Plus Association, and Americans for Limited Government).

On June 26, 2019, the Commission extended the deadline for whether to review the SD to be commensurate with the deadline for the final ID. On July 24, 2019, the Commission extended the deadline for whether to review the SD and the final ID from August 5, 2019 to August 15, 2019.

With respect to the subject SD, having reviewed the record of this investigation, including the SD and the parties' submissions to the ALJ and to the Commission, the Commission has determined to review in part the SD. In particular, the Commission has determined to review and take no position on whether Comcast's alleged reimportations satisfy the importation requirement of section 337; the SD made no findings on the issue. The Commission has determined not to review the remainder of the SD.

With respect to the subject final ID, having reviewed the record of the investigation, including the final ID and the parties' submissions to the ALJ and to the Commission, the Commission has determined to review in part the final ID as follows:

For the '011 patent, the Commission has determined to review the final ID's findings on direct and indirect infringement of claims 1 and 9 of the '011 patent by Comcast's non-redesigned system. The Commission has determined not to review the remainder of the final ID's findings as to the '011 patent, including the final ID's findings that Comcast's two redesigns do not infringe claims 1 and 9 of the '011 patent.

For the '585 patent, the Commission has determined to review and take no position as to the final ID's findings on the contingent noninfringement issues raised in Comcast's petition for review of the final ID, particularly whether the final ID erred in finding no disavowal by Rovi of settings that do not control how programs are to be digitally stored; whether the accused "auto pad recordings" functionality infringes claims 1 and 15; and whether the accused "start," "stop," and "HD Preferred" functionality infringes claims 8, 11, and 22. The Commission has determined not to review the remainder of the final ID's findings as to the '585 patent, including the finding that the asserted claims are invalid in view of the ReplayTV prior art.

For the '741 patent, the Commission has determined to review and take no position as to the final ID's findings on the contingent invalidity issues raised in Comcast's petition for review of the final ID, particularly whether U.S. Patent Application Publication US 2002/0095510 to Sie (RX-69) anticipates claims 1, 8, and 14 of the '741 patent and whether, under Rovi's claim construction, U.S. Patent No. 7,073,189 to McElhatten (RX-71) anticipates Claims 1, 8, and 14 of the '741 patent. The Commission has determined not to review the remainder of the findings as to the '741 patent, including the ALJ's construction of "specified time" in the *Markman* order, Order No. 41 (Oct. 15, 2018), the final ID's finding of noninfringement, and the final ID's waiver determination with respect to the "Restart Reminder" feature.

Comcast's petition for review of the final ID questioned the final ID's findings as to whether the accused products are "articles that—infringe" the asserted patents, 19 U.S.C. 1337(a)(1)(B) & (a)(1)(B)(i), and the scope of the Commission's authority to find an unfair trade act based upon Comcast's direct infringement. Such issues fall within the scope of the Commission's review of infringement as to the '011 patent, and the Commission will address Comcast's arguments based upon the Commission's infringement findings as to the '011 patent.

In connection with its review, the Commission requests responses to the following questions based in part on Comcast's assertion in its petition for review of the final ID that the final ID "is not entirely clear as to whether it found a violation of Section 337 on the basis of direct infringement of claim 9 of the '011 Patent by way of Comcast's use of the claimed system." Comcast Pet. 20. The parties are requested to brief their positions with reference to the applicable law and the existing evidentiary record.^[1] In addition, the parties are to take as true: all of the final ID's findings as to the structure, function, and operation of Comcast's X1 system; and Comcast's inducement of its users' conduct. Comcast did not petition the Commission for review of any of those findings. The questions below reflect the Federal Circuit's understanding that certain "persons' actions" constitute infringement under 35 U.S.C. 271. *Suprema, Inc. v. ITC*, 796 F.3d 1338, 1347 (Fed. Cir. 2015) (en banc) (emphasis omitted).

1. Please explain, with attention to the statutory language of 35 U.S.C. 271(a) and any differences in claim language between claims 1 and 9 of the '011 patent, the circumstances in which each act of direct infringement by Comcast occurs for each claim. (For example, is there direct infringement by Comcast's testing or other use of its system, by a Comcast user's own searching, or both.)
2. Please explain, with attention to the statutory language of 35 U.S.C. 271(a) and any differences in claim language between claims 1 and 9 of the '011 patent, the circumstances in which Comcast's users directly infringe either claim. In connection with your response to this question please explain whether and how Comcast's users can directly infringe claim 9 but not claim 1, or vice versa.
3. Based on your answers to questions 1 and 2, please explain for claims 1 and 9 of the '011 patent whether and how the "single entity" test of *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, 797 F.3d 1020, 1022 (Fed. Cir. 2015) should be applied and whether the final ID's application of that test to claim 1 of the '011 patent, *see* Final ID at 271, is correct.

In connection with the final disposition of this investigation, the Commission may (1) issue an order that could result in the exclusion of the subject articles from entry into the United States, and/or (2) issue a cease and desist order that could result in the respondent being required to cease and desist from engaging in unfair acts in the importation and sale of such articles. Accordingly, the Commission is interested in receiving written submissions that address the form of remedy, if any, that should be ordered. If a party seeks exclusion of an article from entry into the United States for purposes other than entry for consumption, the party should so indicate and provide information establishing that activities involving other types of entry either are adversely affecting it or likely to do so. For background, see *Certain Devices for Connecting*

^[1] In seeking briefing on these issues, the Commission has not determined to excuse any party's noncompliance with Commission rules and the ALJ's procedural requirements, including requirements to present issues in pre-hearing and post-hearing submissions. *See, e.g.*, Order No. 2 (Mar. 28, 2018) (ground rules). The Commission may, for example, decline to disturb certain findings in the final ID upon finding that issue was not presented in a timely manner to the ALJ.

Computers via Telephone Lines, Inv. No. 337-TA-360, USITC Pub. No. 2843, Comm'n Op. at 7-10 (Dec. 1994).

If the Commission contemplates some form of remedy, it must consider the effects of that remedy upon the public interest. The factors the Commission will consider include the effect that an exclusion order and/or cease and desist order would have on (1) the public health and welfare, (2) competitive conditions in the U.S. economy, (3) U.S. production of articles that are like or directly competitive with those that are subject to investigation, and (4) U.S. consumers. The Commission is therefore interested in receiving written submissions that address the aforementioned public interest factors in the context of this investigation.

If the Commission orders some form of remedy, the U.S. Trade Representative, as delegated by the President, has 60 days to approve or disapprove the Commission's action. *See* Presidential Memorandum of July 21, 2005, 70 FR 43251 (July 26, 2005). During this period, the subject articles would be entitled to enter the United States under bond, in an amount determined by the Commission and prescribed by the Secretary of the Treasury. The Commission is therefore interested in receiving submissions concerning the amount of the bond that should be imposed if a remedy is ordered.

WRITTEN SUBMISSIONS: The parties to the investigation are requested to file written submissions limited to the enumerated questions above. The parties' opening submissions should not exceed 40 pages, and their reply submissions should not exceed 30 pages. Parties to the investigation, interested government agencies, and any other interested parties are encouraged to file written submissions on the issues of remedy, the public interest, and bonding. Such submissions should address the recommended determination by the ALJ on remedy and bonding. Complainant and the Commission investigative attorney are also requested to submit proposed remedial orders for the Commission's consideration. Complainant is also requested to state the date that the asserted patents expire and the HTSUS numbers under which the accused products are imported, and provide identification information for all known importers of the subject articles. Initial written submissions and proposed remedial orders must be filed no later than close of business on Thursday, August 29, 2019. Reply submissions must be filed no later than the close of business on Tuesday, September 10, 2019. No further submissions on these issues will be permitted unless otherwise ordered by the Commission. Persons filing written submissions must file the original document electronically on or before the deadlines stated above and submit 8 true paper copies to the Office of the Secretary by noon the next day pursuant to section 210.4(f) of the Commission's Rules of Practice and Procedure (19 CFR 210.4(f)). Submissions should refer to the investigation number (Inv. No. 337-TA-1103) in a prominent place on the cover page and/or the first page. (*See Handbook for Electronic Filing Procedures*, https://www.usitc.gov/documents/handbook_on_filing_procedures.pdf). Persons with questions regarding filing should contact the Secretary at (202) 205-2000.

Any person desiring to submit a document to the Commission in confidence must request confidential treatment. All such requests should be directed to the Secretary to the Commission and must include a full statement of the reasons why the Commission should grant such treatment. *See* 19 CFR 201.6. Documents for which confidential treatment by the Commission is properly sought will be treated accordingly. All information, including confidential business information and documents for which confidential treatment is properly sought, submitted to the

Commission for purposes of this investigation may be disclosed to and used: (i) by the Commission, its employees and Offices, and contract personnel (a) for developing or maintaining the records of this or a related proceeding, or (b) in internal investigations, audits, reviews, and evaluations relating to the programs, personnel, and operations of the Commission including under 5 U.S.C. Appendix 3; or (ii) by U.S. government employees and contract personnel,^[2] solely for cybersecurity purposes. All nonconfidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.

The authority for the Commission's determination is contained in section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and in Part 210 of the Commission's Rules of Practice and Procedure (19 CFR part 210).

By order of the Commission.

A handwritten signature in black ink, appearing to read 'Lisa R. Barton', with a stylized flourish at the end.

Lisa R. Barton
Secretary to the Commission

Issued: August 15, 2019

^[2] All contract personnel will sign appropriate nondisclosure agreements.

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **NOTICE** has been served by hand upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **August 15, 2019**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
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**On Behalf of Complainants Rovi Corporation, Rovi Guides,
Inc., and Veveo, Inc.:**

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- Via Express Delivery
- Via First Class Mail
- Other: _____

**On Behalf of Respondents Comcast Corporation, Comcast
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Communications, LLC, Comcast Holdings Corporation, and
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UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of

**CERTAIN DIGITAL VIDEO RECEIVERS
AND RELATED HARDWARE AND
SOFTWARE COMPONENTS**

Inv. No. 337-TA-1103

**INITIAL DETERMINATION ON VIOLATION OF SECTION 337 AND
RECOMMENDED DETERMINATION ON REMEDY AND BOND**

Administrative Law Judge MaryJoan McNamara

(June 4, 2019)

Appearances:

For the Complainants Rovi Corporation, Rovi Guides, Inc., Rovi Technologies Corporation, and Veveo, Inc.:

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John B. Campbell, Esq.; Joshua W. Budwin, Esq.; Leah B. Buratti, Esq.; and Kristina S. Baehr, Esq. of McKool Smith, P.C., Austin, TX.

Matthew J. Rizzolo, Esq. of Ropes & Gray LLP, Washington, DC.

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David F. Nickel, Esq.; Susan Koegel, Esq.; and Matthew N. Duescher, Esq. of Foster, Murphy, Altman & Nickel, PC, Washington, DC.

For the Commission Investigative Staff:

Margaret D. McDonald, Esq., Director; Jeffrey T. Hsu, Esq., Supervisory Attorney; and John K. Shin, Esq., Investigative Attorney, of the Office of Unfair Import Investigations, U.S. International Trade Commission, Washington, D.C.

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SELECTED SUMMARY FINDINGS

Pursuant to the Notice of Investigation, 83 Fed. Reg. 11791, dated March 16, 2018, this is the Initial Determination (“ID”) of the Investigation in the Matter of Certain Video Receivers and Related Hardware and Software Components, United States International Trade Commission Investigation No. 337-TA-1103. *See* 19 C.F.R. § 210.42(a).

It is a finding of this ID that Complainants Rovi Corporation; Rovi Guides, Inc.; and Veveo, Inc. (collectively, “Complainants” or “Rovi”) have proven by a preponderance of the evidence that Respondents Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; and Comcast Shared Services, LLC (collectively, “Respondents” or “Comcast”) have violated subsection (b) of Section 337 of the Tariff Act of 1930, in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain video receivers and related hardware and software components.

It is a finding of this ID that Comcast has infringed asserted claims 1 and 9 of U.S. Patent No. 7,779,011 (“the ’011 patent”) and that claims 1 and 9 of the ’011 patent are valid.

It is a finding of this ID that Comcast has infringed asserted claims 1, 8, 11, 15, and 22 of U.S. Patent No. 7,827,585 (“the ’585 patent”). However, it is a finding of this ID that claims 1, 8, 11, 15, and 22 of the ’585 patent are invalid.

It is a finding of this ID that Comcast has not infringed asserted claims 1, 8, and 14 of U.S. Patent No. 9,369,741 (“the ’741 patent”). It is also a finding of this ID that claims 1, 8, and 14 of the ’741 are valid.

It is a finding of this ID that one or more of Rovi’s domestic industry products have

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satisfied the technical industry prong of the domestic industry requirement for the '011 and '585 patents. It is also a finding of this ID that Rovi's domestic industry products do not satisfy the technical industry prong of the domestic industry requirement for the '741 patent.

It is a finding of this ID that Rovi has satisfied the economic prong of the domestic industry requirement under Section 337(a)(3)(A), (B), and (C).

This decision recommends: (1) a Limited Exclusion Order with a standard certification provision and service and repair exception; (2) a Cease and Desist Order with a standard service and repair exception; and (3) no bond during the Presidential Review Period.

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APPENDICES

Appendix A: Accused Products

Appendix B: DI Products

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ABBREVIATIONS

The following shorthand references to the parties, related U.S. agencies, and related proceedings are used in this Initial Determination:

Complainants or Rovi	Complainants Rovi Corporation; Rovi Guides, Inc.; and Veveo, Inc., collectively
Respondents or Comcast	Respondents Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; and Comcast Shared Services, LLC, collectively
Staff	Commission Investigative Staff, Office of Unfair Import Investigations
Private Parties	Rovi and Comcast, collectively
Parties	Rovi, Comcast, and Staff, collectively
OUII	Office of Unfair Import Investigations
CBP	U.S. Customs and Border Protection
PTO	U.S. Patent and Trademark Office
PTAB	Patent Trial and Appeal Board of the PTO
SEC	Securities and Exchange Commission
Veveo	Veveo, Inc.
TSI	TiVo Solutions, Inc.
1001 Investigation	Investigation No. 337-TA-1001

The following abbreviations for pleadings, exhibits, briefs, transcripts, and Orders are used in this Initial Determination:

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Compl.	Complaint
Resp.	Response of Respondents Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; and Comcast Shared Services, LLC to the Notice of Investigation and Complaint Under Section 337 of the Tariff Act of 1930, as Amended
CX	Complainants' exhibit
CDX	Complainants' demonstrative exhibit
CPX	Complainants' physical exhibit
CPBr.	Complainants' Pre-Hearing Brief
CBr.	Complainants' Initial Post-Hearing Brief ¹
CRBr.	Complainants' Post-Hearing Reply Brief
CPSt.	Complainants' Pre-Hearing Statement
JX	Joint exhibit
RX	Respondents' exhibit
RDX	Respondents' demonstrative exhibit
RPX	Respondents' physical exhibit
RPBr.	Respondents' Pre-Hearing Brief
RBr.	Respondents' Initial Post-Hearing Brief
RRBr.	Respondents' Post-Hearing Reply Brief
RPSt.	Respondents' Pre-Hearing Statement
SPBr.	Commission Investigative Staff's Pre-Hearing Brief

¹ This refers to Complainants' Corrected Initial Post-Hearing Brief.

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SBr.	Commission Investigative Staff's Initial Post-Hearing Brief ²
SPSt.	Commission Investigative Staff's Pre-Hearing Statement
SX	Commission Investigative Staff's exhibit
Tr.	Evidentiary hearing transcript
Dep. Tr.	Deposition transcript
CMBr.	Complainants' <i>Markman</i> Brief
RMBr.	Respondents' <i>Markman</i> Brief
SMBr.	Commission Investigative Staff's Claim Construction Brief
<i>Markman</i> Order	Order No. 41 (Oct. 15, 2018)

The following abbreviations for technical terms are used in this Initial Determination:

API	Application program interface
DVR	Digital video recorder
HD	High definition
HDD	Hard disks
HW	Hardware
IP	Internet Protocol
IPG	Interactive Program Guide
iVOD	Instant Video-On Demand
RAM	Random-Access Memory
REX	Relevance Engine for Xfinity

² Staff did not file a separate Post-Hearing Reply Brief.

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RPS	Resume Point Service
SD	Standard definition
STB	Set-top box
T9	Text on 9 keys
TV	Television
VCR	Videocassette recorder
VOD	Voice-On Demand
VREX	Voice Relevance Engine for Xfinity
XRE	Cross-platform runtime environment

The following shorthand references to certain products and patents at issue are used in this Initial Determination:

'011 patent	U.S Patent No. 7,779,011
'585 patent	U.S. Patent No. 7,827,585
'741 patent	U.S. Patent No. 9,369,741
Asserted Patents	'011, '585, and '741 patents, collectively
Accused 011 Products	XG1, XG2, Xi5, and XiD STBs, collectively
Accused 585 Products	XG1 and XG2 STBs with cloud DVR enabled, XG1 STBs with cloud DVR disabled, and Xi5 and XiD STBs, collectively
Accused 741 Products	XG1, XG2, XiD, and Xi5 STBs, collectively
Accused Products	Accused 011 Products, Accused 585 Products, and Accused 741 Products, collectively
011 DI Products	AS&R and Next-Gen Platform

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585 DI Products	i-Guide, Passport Guide, Next-Gen Platform and TiVo Bolt with Experience 4.0
741 DI Products	Next-Gen Platform and TiVo Bolt with Experience 4.0
DI Products	011 DI Products, 585 DI Products, and 741 DI Products, collectively

I. INITIAL DETERMINATION ON VIOLATION OF SECTION 337, AND RECOMMENDED DETERMINATION ON REMEDY AND BOND

A. Overview of Unsettled Issues

This is not the first television “set-top box” or television programming equipment-related (broadly defined) investigation the Commission has undertaken. This Investigation is one of several investigations in which one or both of the parties to this Investigation has been a party, whether together in the same investigation, or in investigations involving other parties. It is not the last of similar investigations. *See Certain Digital Video Receivers, Broadband Gateways, and Related Hardware and Software Components*, Inv. No. 337-TA-1158 (May 22, 2019).

However, in this Investigation, there are two (2) issues of unsettled law that have been decided by summary determination and that are not addressed in the Initial Determination on Violation (“ID”). Instead, the two (2) issues were litigated fully both on paper and in a separate hearing I held on September 6, 2018 precisely so the issues would receive a thorough airing on their merits away from the potential distractions of the evidentiary hearing.

The first issue, which is not addressed in this ID, is whether Comcast is an “importer” within the meaning of Section 337. In an investigation with the same parties, virtually the same accused set-top boxes, and the same evidence, the Commission affirmed the finding of the ID of the companion investigation, Inv. No. 337-TA-1001 (“1001 Investigation”), that “Comcast” is an “importer” within the meaning of Section 337 even though Comcast was not the importer of record. *See Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-1001, Comm’n Op. at 10 (Nov. 21, 2017) (“*Digital Video Receivers*”). That issue is pending on Comcast’s appeal in the Federal Circuit. *Comcast Corp., et al., v. Int’l Trade Comm’n*, 2018-1450, 2018-1653, 2018-1667 (Fed. Cir. 2018).

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I adopted the finding of the 1001 Investigation and the Commission's affirmation that Comcast is an "importer" within the meaning of Section 337. The outcome in the Federal Circuit also will affect that same finding in this Investigation.

The second issue of unsettled law is whether the charge, or "retail price," that Comcast requires its subscribers to pay who fail to return their set-top boxes at the end of their lease agreement, constitutes a "sale" within the meaning of Section 337, the Uniform Commercial Code ("UCC"), or common law, including under a theory of conversion. The Commission did not take a position on this issue in the 1001 Investigation. (See *Digital Video Receivers*, Comm'n Op. at 10.). In another investigation, Inv. No. 337-TA-1010 ("1010 Investigation"), the issue was limited to "whether the rental of products by Comcast constitutes a sale after importation." See *Certain Semiconductor Devices, Semiconductor Device Packages, & Prods. Containing Same*, Order No. 69 (Feb. 27, 2017) ("*Semiconductor Devices*"), not reviewed, Comm'n Notice (Mar. 27, 2017).

Unlike in the 1001 or in the 1010 Investigations, a more extensive evidentiary record was developed in this Investigation, which included but was not limited to: (1) evidence with respect to Comcast's Subscriber Agreement for pertinent products at certain points in time; (2) evidence with respect to Comcast's actions when a set-top box is not returned; (3) how Comcast treats unreturned set-top boxes on its balance sheets; and how (4) Comcast invoices its subscribers for the cost, including profit, of an unreturned set-top box following the expiration or termination of a Comcast lease agreement with its subscriber.

Both issues are discussed in Order No. 47 that was filed on June 3, 2019. (Doc. ID No. 677614 (June 3, 2019).).

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B. Summary of Findings

A summary of this decision's findings are set forth in Table No. 1 below.

Table No. 1: Summary of Findings

Product	Patent	Claims	Determination
Accused 011 Products	'011 patent	1 and 9	<i>Violation (claims 1 and 9):</i> Claims 1 and 9 are valid and infringed by the Accused 011 Products.
Accused 585 Products	'585 patent	1, 8, 11, 15, and 22	<i>No violation (claims 1, 8, 11, 15, and 22):</i> Claims 1, 8, 11, 15, and 22 are infringed by the Accused 585 Products but are invalid.
Accused 741 Products	'741 patent	1, 8, and 14	<i>No violation (claims 1, 8, and 14):</i> Claims 1, 8, and 14 are valid but not infringed by the Accused 741 Products.
DI Products	All Asserted Patents		<i>Satisfied.</i> Rovi's domestic R&D activities with respect to their DI Products satisfy the domestic industry requirement set forth in 19 U.S.C. § 337(a)(3)(A), (B), and (C).

II. BACKGROUND

A. Institution and Selected Procedural History

On February 8, 2018, Rovi Corporation; Rovi Guides, Inc.; Rovi Technologies Corporation;³ and Veveo, Inc. filed a complaint (“Complaint”) under Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, alleging infringement of certain claims of U.S. Patent No. 7,779,011 (JX-0001, hereafter “the ’011 patent”); U.S. Patent No. 7,937,394 (JX-0003, hereafter “the ’394 patent”); U.S. Patent No. 7,827,585 (JX-0004, hereafter “the ’585 patent”); U.S. Patent No. 9,294,799; (JX-0005, hereafter “the ’799 patent”); U.S. Patent No. 9,369,741 (JX-0006, hereafter “the ’741 patent”); U.S. Patent No. 9,578,363 (Compl. at Ex. 6, hereafter “the ’363 patent”); U.S. Patent No. 9,621,956 (Compl. at Ex. 7, hereafter “the ’956 patent”); and U.S. Patent No. 9,668,014 (JX-0007, hereafter “the ’014 patent”). (*See, e.g.*, Doc. ID No. 636148, Compl. at ¶ 7 (Feb. 8, 2018)).⁴

The Commission instituted this Investigation pursuant to subsection (b) of Section 337 of the Tariff Act of 1930, as amended, to determine:

whether there is a violation of subsection (a)(1)(B) of section 337 in the importation into the United States, the sale for importation, or the sale within the United States after importation of certain digital video receivers and related hardware and software components by reason of infringement of one or more of claims 1-3, 5-11, 13-19, and 21-24 of the ’011 patent; claims 1, 2, 4-6, and 8-11 of the ’394 patent; claims 1, 3, 4, 8, 10, 11, 15, 17, 18, 22, 24, and 25 of the ’585 patent; claims 1-3, 5, 7, 9-12, 14, 16, 18, and 28 of the ’799 patent; claims 1-3, 5-10, 12, 14-17, 19, and 20 of the ’741 patent; claims 1-8, 10-18, and 20 of the ’363 patent; claims 1, 2, 4-6, 11, 12, and 14-16 of the ’956 patent; and claims 1-4, 7-13, and 17-20 of the ’014 patent, and whether an industry in the United States exists or is in the process of being established as required by subsection (a)(2) of section 337[.]

³ Rovi Technologies Corporation has since withdrawn from this Investigation. (*See* Order No. 33 (Aug. 20, 2018); Doc. ID No. 656136, Notice of Comm’n Not to Review ID (Sept. 19, 2018)).

⁴ Rovi also filed a confidential version of the Complaint. (Doc. ID No. 635973 (Feb. 8, 2018)).

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83 Fed. Reg. 11792 (Mar. 16, 2018).

The Notice of Investigation (“NOI”) names as complainants: Rovi Corporation, Rovi Guides, Inc., and Rovi Technologies Corporation, of San Jose, California; and Veveo, Inc. of Andover, Massachusetts (collectively, “Complainants” or “Rovi”). *Id.* The NOI names as respondents: Comcast Corporation, Comcast Cable Communications, LLC, Comcast Cable Communications Management, LLC, Comcast Business Communications, LLC, and Comcast Holdings Corporation, all of Philadelphia, Pennsylvania; and Comcast Shared Services, LLC of Chicago, Illinois (collectively, “Respondents” or “Comcast,” and with Complainants, “the Private Parties”). *Id.* Commission Investigative Staff of the Office of Unfair Import Investigations (“Staff,” and with the Private Parties, the “Parties”) is also named as a party.⁵ *Id.*

On April 3, 2018, Comcast filed a response to the Complaint and NOI (“Response”). (Doc. ID No. 640900 (Apr. 3, 2018)).⁶ In its Response, Comcast identified 18 affirmative defenses (“Comcast’s Affirmative Defenses”).⁷ (Resp. at 59-75.).

As the result of a series of Initial Determinations (“ID”) granting Rovi’s partial terminations of this Investigation against Comcast with respect to certain asserted claims and the asserted ’394, ’799, ’363, ’956 and ’014 patents in their entirety, the ten (10) claims remaining that are the subject of this decision are: (i) claims 1 and 9 of the ’011 patent; (ii) claims 1, 8, 11,

⁵ On April 24, 2018, OUII provided notice that its participation in this Investigation would be limited to issues relating to importation, jurisdiction, and remedy. (Doc. ID No. 643074 (Apr. 24, 2018)).

⁶ Comcast also filed a confidential version of its Response. (Doc. ID No. 640893 (Apr. 3, 2018)).

⁷ Comcast withdrew its Sixteenth Affirmative Defense of unclean hands. (Doc. ID No. 651424, Notice of Withdrawal of Affirmative Defense (July 27, 2018)).

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15, and 22 of the '585 patent; and (iii) claims 1, 8, and 14 of the '741 patent.⁸

On July 27, 2018, Rovi and Comcast each filed a motion for summary determination (“MSD”) related to importation and a statement of undisputed facts (“SUMF”) in support: Rovi’s MSD on Importation (Motion Docket No. 1103-021 (July 27, 2018)); and Comcast’s MSD on No Sale After Importation (Motion Docket No. 1103-020 (July 27, 2018)). On August 8, 2018, Staff filed responses to Rovi’s and Comcast’s MSDs and SUMFs. (Doc. ID No. 652481 (Aug. 8, 2018); (Doc. ID No. 652484 (Aug. 8, 2018)). On August 17, 2018, Rovi filed a cross-motion related to importation: Rovi’s MSD on Sale After Importation (Motion Docket No. 1103-031 (Aug 17, 2018)).⁹ On August 21, 2018, Staff filed a response to Rovi’s cross-motion. (Doc. ID No. 653538 (Aug. 21, 2018)). The Parties provided oral argument on the summary determination motions on September 6, 2018 (“MSD Hearing”). (Doc. ID Nos. 655116, 655117 (Sept. 6, 2018)).

Although the findings on the summary determination motions were given to the Parties orally during a pre-hearing conference, the fully explained rationale is provided in Order No. 47 (“Importation ID”). (Order No. 47 (June 3, 2019); Oct. 16, 2018 Telephone Conference Transcript (“Teleconf. Tr.”) (Doc. ID No. 659593 at 16:4-15 (Oct. 23, 2018)). In Order No. 47, I followed Judge Shaw’s finding and the Commission’s affirmance of the 1001 ID’s finding that Comcast is an “importer” within the meaning of Section 337. (*Id.* at 23.). I also found that the charge Comcast subscribers pay when they fail to return set-top boxes (“STB”) results in a “sale”

⁸ These IDs are Order Nos. 12 (July 2, 2018), 16 (Mar. 8, 2018), 33 (Aug. 29, 2018), and 39 (Oct. 3, 2018), which the Commission determined not to review. (*See* Doc. ID Nos. 651067 (July 24, 2018), 656136 (Sept. 19, 2018), 659869 (Oct. 25, 2018)).

⁹ *See* n.18, *infra*, regarding an ID and Order, granting and denying Rovi’s MSD and Comcast’s MSD, respectively.

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within the meaning of the UCC, common law, and the Restatement of Torts. (*See id.* at 35.).

On June 15, 2018, the Private Parties filed a joint *Markman* hearing proposal. (Doc. ID No. 647986 (June 15, 2018)). The Private Parties agreed that early resolution of the claim construction disputes in this Investigation would be desirable and that a *Markman* hearing would be beneficial. (*Id.* at 1.). Thus, a *Markman* hearing was held on July 26, 2018. (*See* Doc. ID No. 651341 (July 27, 2018)). On October 15, 2018, a *Markman* Order issued that: (1) adopted the claim terms on which the Parties agreed; and (2) construed the claim terms in dispute. (Order No. 41 (“*Markman* Order”) (Oct. 15, 2018)).

Rovi filed four (4) motions *in limine* (“MILs”). (Motion Docket Nos. 1103-034 (Sept. 4, 2018), 1103-037 (Sept. 7, 2018), 1103-038 (Sept. 7, 2018), 1103-040 (Sept. 7, 2018)). Comcast also filed four (4) MILs. (Motion Docket Nos. 1103-039 (Sept. 7, 2018), 1103-041 (Sept. 7, 2018), 1103-042 (Sept. 7, 2018), 1103-044 (Sept. 14, 2018)). Staff had limited participation in this Investigation. Staff only filed briefs or participated in oral argument with respect to jurisdiction and certain summary determination motions, and did not file any MILs.

Rovi’s and Comcast’s MILs, and the rulings on these motions, are summarized in Table Nos. 2 and 3 below.

Table No. 2: Rovi’s MILs

MIL No./Motion Docket No.	Caption/Issue	Ruling
MIL No. 2 (Motion Docket No. 1103-034)	Rovi’s MIL to exclude late invoices and to strike portions of Comcast’s updated statement of material facts	Granted in-part, denied in-part. (Order No. 42 at 3-4 (Oct. 15, 2018)). The first part of Rovi’s MIL requests that invoices that Comcast filed on August 28, 2018, without leave, and then attached as Exhibits 1-4 (“Late Invoices”) to its MSD of No Sale be

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MIL No./Motion Docket No.	Caption/Issue	Ruling
		<p>stricken. (MIL No. 2 at 1-2.).</p> <p>“During the Oct. 10, 2018 Teleconference, I advised the Parties that the first part of Rovi’s MIL No. 2 is moot because it resurrects the substance of Comcast’s Motion for Leave to file the same Late Invoices, Motion Docket No. 1103-033, that I <i>denied</i> in Order No. 37 (Doc. ID No. 657570 (Oct. 3, 2018)). Accordingly, the first part of Rovi’s MIL No. 2 is effectively <i>granted</i> and Exhibits 1-4 to Comcast’s No Sale SD and its SMF <i>are stricken</i>, even though that part of Rovi’s MIL No. 2 is technically moot in view of Order No. 37. Comcast may not allude to, cite to or use any of the stricken exhibits, i.e., Late Invoices, for any purpose. As I explained in Order No. 37, the Late Invoices were very late, especially since I extended discovery deadlines to permit more extensive discovery on the sale/vs. liquidated damages issue. Comcast did not meet any of the initial deadlines for production let alone the extended discovery deadline for production of the Late Invoices.” (Order No. 42 at 3-4 (emphases in original)).</p> <p>The second part requests that certain of Comcast’s “facts” in its Statement of Material Facts that was revised as part of its MSD of No Sale that reference the Late Invoices also be stricken. (MIL No. 2 at 8.).</p> <p>“During the Oct. 10, 2018 Teleconference, I advised the Parties that I was denying the second part of Rovi’s MIL No. 2 and would not strike any supplementation of Comcast’s SMF. I am <i>modifying that part of the Order</i> from the Oct. 10, 2018</p>

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MIL No./Motion Docket No.	Caption/Issue	Ruling
		Teleconference. To the extent that Comcast modified its SMF to allude to or reference the stricken Exhibits, or to change any of the wording of its SMF to correct or amend its SMF to incorporate the Late Invoices that are stricken, that part of Rovi's MIL No. 2 is granted and any language alluding to the stricken invoices not contained in Comcast's original SMF is also stricken ." (Order No. 42 at 4 (emphases in original)).
MIL No. 3 (Motion Docket No. 1103-038)	Rovi's MIL to preclude Comcast's Todd Schoettelkotte from testifying to opinions that are contrary to law	Denied without prejudice. (<i>Id.</i> at 6-7.).
MIL No. 4 (Motion Docket No. 1103-037)	Rovi's MIL to exclude Comcast's alleged alternative designs for U.S. Patent No. 7,779, 011	Denied without prejudice. (<i>Id.</i> at 9-10.).
MIL No. 5 (Motion Docket No. 1103-040)	Rovi's MIL to preclude undisclosed arguments with respect to "motivation to combine" certain prior art References	Denied without prejudice. (<i>Id.</i> at 11-12.).

Table No. 3: Comcast's MILs

MIL No./Motion Docket No.	Caption/Issue	Ruling
MIL No. 1 (Motion Docket No. 1103-042)	Comcast's MIL to exclude new claim construction and validity arguments raised in Dr. Balakrishnan's Rebuttal Expert Report and Errata, and to preclude argument	Granted in-part, denied in-part. (Order No. 43 at 5-6 (Oct. 16, 2018)). "In its first argument, Comcast contends that Dr. Balakrishnan's opinions are based on a misunderstanding of the law. Comcast argues that under controlling

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MIL No./Motion Docket No.	Caption/Issue	Ruling
	regarding the Same	<p>Federal Circuit precedent, a ‘claim is not limited to performance of the steps in the order recited, unless the claim explicitly or implicitly requires a specific order.’” (<i>Id.</i> at 2 (citation omitted)).</p> <p>“During the Oct. 10, 2018 Teleconference, I <i>denied</i> the first part of Comcast’s MIL No. 1, Motion Docket No. 1093-042. I am not striking the paragraphs identified above in Dr. Balakrishnan’s Rebuttal Report or in Rovi’ Pre-Hearing Brief that Comcast asks be stricken. That Rovi did not specifically make an ‘order of performance’ argument for the pertinent claims does not amount to either a “new construction” or a waiver. . . . Rovi is not precluded from making any arguments with respect to the order of the claims at issue.” (<i>Id.</i> at 5 (emphasis in original)).</p> <p>“In addition to portions of Dr. Balakrishnan’s Rebuttal Expert Report, Comcast contends that the errata sheet to Dr. Balakrishnan’s Opening Expert Report should be excluded because it is an ‘unseasonable, substantive supplementation of an expert report’ in violation of Ground Rule 5.” (<i>Id.</i> at 3 (citation omitted)).</p> <p>“During the Oct. 10, 2018 Teleconference, I <i>granted</i> the second part of Comcast’s MIL No. 1 by striking the words ‘some of’ from the errata to Dr. Balakrishnan’s Rebuttal Expert Report as a violation of Ground Rule 5 which prohibits “substantive supplementation.” (<i>Id.</i> at 5-6 (emphasis in original) (citations</p>

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MIL No./Motion Docket No.	Caption/Issue	Ruling
		omitted).).
MIL No. 2 (Motion Docket No. 1103-039)	Comcast's MIL to strike and preclude expert reports and testimony beyond the scope of Dr. Bovik's expertise	Denied without prejudice. (<i>Id.</i> at 9-10.).
MIL No. 3 (Motion Docket No. 1103-041)	Comcast's MIL to exclude new validity arguments raised in Dr. Bovik's and Balakrishnan's Rebuttal Expert Reports	Denied. (<i>Id.</i> at 13-14.).
MIL No. 4 (Motion Docket No. 1103-044)	Comcast's MIL to preclude certain evidence, opinions, and argument regarding Rovi's unsupported economic prong activities and expenditures	Denied without prejudice. (<i>Id.</i> at 16.).

The evidentiary hearing ("Hearing") was held October 17-19, 2018, and October 22-24, 2018. During and immediately after the Hearing, the Private Parties filed motions to strike ("MTSs") evidence adduced during the Hearing. The Private Parties filed a total of three (3) MTSs. The MTSs, and their respective rulings, are summarized in Table No. 4 below.

Table No. 4: Private Parties' Hearing MTSs

Party and Motion	Issue	Ruling
Rovi's MTS (Motion Docket No. 1103-048)	MTS to strike certain of Dr. David Karger's hearing testimony based upon Comcast's withdrawal of the disputed testimony	Granted. (Order No. 45 (Feb. 5, 2019).). "Dr. Karger's Hearing testimony at Hr. Tr. 1522:23-1523:11, 1524:5-1525:19, 1527:1-23, 1528-17-19, and 1530:21-22 is withdrawn and effectively is stricken from the record." (<i>Id.</i> at 2.).

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Party and Motion	Issue	Ruling
Rovi's MTS (Motion Docket No. 1103-049)	MTS undisclosed invalidity arguments in Dr. Albonesi's hearing testimony	Denied. (Order No. 49 (June 3, 2019). "First, demonstratives are not evidence. . . . Rovi's Motion to Strike Dr. Albonesi's testimony from the Hr. Tr. at 1823:5-1824:5; 1826:18-1827:4; 1879:20-1880:25; 1837:5-1838:19; and 1876:3-1879:13, and Demonstrative Slides 31, 43-45, 61, 85-87, 129-130, and 131-132, that is Motion Docket No. 1103-049, is <i>denied</i> ." (<i>Id.</i> at 3.).
Comcast's MTS (Motion Docket No. 1103-050)	MTS exhibit CX-1472C	Granted. (<i>Id.</i>). "In sum, no foundation was laid for CX-1472C. Mr. McCann's testimony was far more direct and specific in his quote taken from CX-1472 which he gave without any reference to CX-1472C. The questions posed to Mr. McCann about CX-1472C did not unequivocally tie the contents of that document to Mr. McCann's testimony. . . . Finally, Comcast did not misinterpret the Ground Rules." (<i>Id.</i> at 6.).

B. Related Investigation

This Investigation is the second action Rovi Corporation and Rovi Guides, Inc. have filed with the Commission against Comcast to prevent Comcast's alleged unlawful acts in violation of Section 337.¹⁰

The Commission instigated the first action, *Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-1001 ("Digital Video Receivers" or the "1001 Investigation"), based on Rovi Corporation and Rovi Guides, Inc.'s complaint

¹⁰ Veveo was not a party in the first action, Inv. No. 337-TA-1001.

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(collectively, “1001 Complainants”), filed May 26, 2016. 81 Fed. Reg. 33547 (May 26, 2016).

In addition to Comcast, the Notice of Investigation (“NOI”) also named the following respondents:¹¹ (1) Technicolor SA; Technicolor USA, Inc.; and Technicolor Connected Home USA LLC (collectively, “Technicolor”); and (2) ARRIS International plc; ARRIS Group Inc.; ARRIS Technology, Inc.; ARRIS Enterprises LLC; ARRIS Solutions, Inc.; ARRIS Global Ltd., and Pace Americas, LLC (collectively, “ARRIS,” and with Comcast and Technicolor, the “1001 Respondents”). *Id.* at 33548.

The additional Respondents named in the 1001 Investigation are Comcast’s subscribers whose “Supply Agreements” with Comcast are discussed at length in the Parties’ summary determination motions as well as in Order No. 47.

The Final Initial Determination (“1001 ID”) issued on May 26, 2017, in which a violation of Section 337 was found with respect to U.S. Patent Nos. 8,006,263 (“the ’263 patent”) and 8,578,413 (“the ’413 patent”). (Doc. ID No. 612872 (May 26, 2017)).¹² Specifically, the 1001 ID found that Comcast, ARRIS, and Technicolor imported the accused X1 STBs,¹³ but that Comcast did not sell accused products after importation. (1001 ID at 9-14, 610.). However, the

¹¹ Rovi accused the same Comcast respondents of infringement in this Investigation. *See, e.g.*, 83 Fed. Reg. at 11792.

¹² A public version of the 1001 ID also issued. (Doc. ID No. 615236 (June 26, 2017)).

¹³ This Investigation and the 1001 Investigation both involve IPG-related technologies. In the 1001 Investigation, Rovi accused Comcast’s XG1, XG2, RNG150, Xi3, XiD, and Xi5 set-top boxes of infringing the patents it asserted in that investigation. In this Investigation, Rovi initially accused, *inter alia*, Comcast’s XG1, XG2, RNG150, Xi3, XiD, and Xi5 set-top boxes of infringing the Asserted Patents. However, on August 1, 2018, Rovi filed a Notice of Withdrawal of Certain Accused Products, specifically withdrawing the RNG150 and Xi3 STBs as Accused Products. Accordingly, the remaining Accused Products are Comcast’s XG1, XG2, XiD, and Xi5 STBs. (*See* Section V.A, *infra*; *see also* n.26, *infra*, regarding Xi6.).

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evidentiary record on the “retail” price that Comcast charges its subscribers who do not return their Comcast STBs was more extensively developed and discussed in this Investigation than in the 1001 Investigation. (See MSD Hearing Transcript (“MSD Hr. Tr.”); see also Order No. 47 at 4.).

The 1001 ID also found that Comcast’s X1 system practices the claims at issue, Comcast’s subscribers directly infringed the relevant claims by using the accused system, and Comcast induced infringement as a result. (See, e.g., *id.* at 610.). Additionally, the 1001 ID found that ARRIS and Technicolor did not directly infringe or contributed to infringement. (See, e.g., *id.* at 611.). On June 9, 2017, the Recommendation on Remedy and Bond (“1001 RD”) issued, in which it was recommended that the Commission issue a Limited Exclusion Order (“LEO”) and Cease and Desist Orders (“CDOs”), and that no bond was required during the Presidential Review Period. (Doc. ID No. 613866, 1001 RD at 1 (June 9, 2017)).¹⁴

On June 12, 2017, the 1001 Complainants and 1001 Respondents each filed a petition for review of the 1001 ID. (Doc. ID No. 614000, 1001 Complainants’ Petition (June 12, 2017); Doc. ID No. 614014, 1001 Respondents’ Petition (June 12, 2017)). On August 10, 2017, the Commission reviewed some of the petitioned issues, which included, *inter alia*, the following: (1) the 1001 “ID’s determination that Comcast is an importer of the accused products”; (2) the 1001 “ID’s determination that Comcast has not sold accused products in the United States after the importation of those products into the United States”; and (3) “whether the X1 products are ‘articles that infringe,’ the issue of direct infringement of the ’263 and ’413 patents by the X1 accused products, and the issue of ‘the nature and scope of the violation found[.]’” (Doc. ID No.

¹⁴ A public version of the 1001 RD also issued. (Doc. ID No. 616255 (July 6, 2017)).

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619655 (Aug. 10, 2017) (internal parentheticals omitted). *See also* 82 Fed. Reg. at 38934-36 (Aug. 16, 2017).

On review, the Commission affirmed the 1001 ID's conclusions ("1001 Commission Opinion") that the X1 STBs are "articles that infringe" the '263 and '413 patents and that Comcast imported the X1 STBs. (Doc. ID No. 629603, 1001 Comm'n Op. at 10, 18-22 (Nov. 21, 2017)).¹⁵ The Commission also affirmed the 1001 ID's finding that Comcast's customers¹⁶ directly infringed the '263 and '413 patents. (*Id.* at 16.). Thus, the Commission affirmed the 1001 ID's conclusion that the 1001 Complainants had proven that Comcast violated section 337 as to the '263 and '413 patents. (*Id.* at 1.). Having found that Comcast violated Section 337, the Commission issued the requested LEO and CDOs. (*Id.* at 2.).

On January 22, 2018, Comcast filed a notice of appeal to the U.S. Court of Appeals for the Federal Circuit ("Comcast Appellants"). *Comcast Corp. v. Int'l Trade Comm'n*, No. 2018-1450, Dkt. No. 1 (Fed. Cir. Jan. 22, 2018). The 1001 Complainants filed a motion for leave to intervene in the action ("Rovi Intervenors"), which the Federal Circuit granted. *Id.* at Dkt. Nos. 16 (Feb. 9, 2018), 24 (Feb. 12, 2018). The case was subsequently consolidated with *ARRIS Enterprises, Inc. v. Int'l Trade Comm'n*, No. 2018-1653, and *Technicolor, S.A. v. Int'l Trade Comm'n*, No. 2018-1667, filed by ARRIS and Technicolor ("ARRIS and Technicolor Appellants"), respectively. *Id.* at Dkt. Nos. 41 (Mar. 9, 2018), 53 (Mar. 20, 2018).

On March 19, 2018, the Comcast Appellants filed its opening brief, and the ARRIS and Technicolor Appellants filed their joint opening brief. *Comcast Corp. v. Int'l Trade Comm'n*,

¹⁵ A public version of the opinion also issued. (Doc. ID No. 630893 (Dec. 6, 2017)).

¹⁶ The terms "customers," "users," and "subscribers" are used interchangeably throughout this ID.

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No. 2018-1450, -1653, Dkt. Nos. 57, 59 (Mar. 19, 2018). The Comcast Appellants, and the ARRIS and Technicolor Appellants jointly, each filed a reply brief. *Comcast Corp. v. Int'l Trade Comm'n*, No. 2018-1450, -1653, -1667, Dkt. Nos. 95 (June 29, 2018), 98 (July 2, 2018). The Commission and the Rovi Intervenors also each filed a response brief. *Id.* at Dkt. Nos. 108 (July 3, 2018), 109 (July 6, 2018).

The Federal Circuit heard oral argument from all parties, including the Commission, on March 6, 2019. *Id.* at 134, Notice of Oral Argument (Jan. 22, 2019). The Federal Circuit has not yet issued an opinion.

C. The Parties

1. Complainants Rovi Corporation; Rovi Guides, Inc.; and Veveo, Inc.

Complainant Rovi Corporation is incorporated in Delaware and has a principal place of business at 2160 Gold Street, San Jose, CA 95002. (Compl. at ¶ 10.).

Complainant Rovi Guides, Inc. (f/k/a Gemstar-TV Guide International Inc.) is incorporated in Delaware and has a principal place of business at 2160 Gold Street, San Jose, CA 95002. (*Id.* at ¶ 11.). Rovi Guides, Inc. is a wholly-owned subsidiary of Rovi Corporation. Rovi Guides, Inc. is the sole owner of the '585 and the '741 patents. (*Id.*; JX-0016; JX-0017.).

Complainant Veveo, Inc. is a Delaware corporation with a principal place of business at 40 Shattuck Road, Suite 303, Andover, MA 01810. (Compl at ¶ 13.). Veveo, Inc., is a wholly-owned subsidiary of Rovi Corporation and is the sole owner of the '011 patent.¹⁷ (*Id.*; JX-0014).

Rovi has described itself as follows:

Since the launching of TV Guide Magazine in 1953, the Rovi family of companies (which include, through mergers, joint ventures, and acquisitions, United Video,

¹⁷ Rovi acquired Veveo in February 2014. (CX-0249 (Rovi Corp. Form 10-K, Feb. 21, 2014); Tr. (Koenig) at 462:6-11.).

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TV Guide Onscreen, StarSight Telecast, Prevue, TV Guide, Video Guide, Gemstar, GuideWorks, Aptiv Digital, Macrovision, FanTV, and Veveo) 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 set-top boxes ("STBs") and digital video recorders ("DVRs")); PCs, mobile devices, and tablet devices; and other means by which consumers connect to entertainment.

(Compl. at ¶ 14.).

2. Respondents Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; and Comcast Shared Services, LLC

Comcast Corporation is a Pennsylvania corporation with its principal place of business at One Comcast Center, 1701 JFK Boulevard, Philadelphia, PA 19103. (Resp. at ¶ 34.). Comcast Cable Communications, LLC ("CCCL") is a Delaware limited liability company with its principal place of business at One Comcast Center, 1701 JFK Boulevard, Philadelphia, PA 19103. (*Id.*) Comcast Cable Communications Management, LLC ("CCCM") is a Delaware limited liability company with its principal place of business at One Comcast Center, 1701 JFK Boulevard, Philadelphia, PA 19103. (*Id.*) Comcast Business Communications, LLC ("CBC") is a Pennsylvania limited liability company with its principal place of business at One Comcast Center, 1701 JFK Boulevard, Philadelphia, PA 19103. (*Id.*) Comcast Holdings Corporation ("CHC") is a Pennsylvania corporation with its principal place of business at One Comcast Center, 1701 JFK Boulevard, Philadelphia, PA 19103. (*Id.*) Comcast Shared Services, LLC ("CSS," and with CCCL, CCCM, CBC, and CHC, "Comcast") is a Delaware limited liability

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company with its principal place of business at 30 Rockefeller Plaza, New York, NY 10112.

(*Id.*).

Comcast delivers cable programming under the Xfinity® brand and has become one of the largest suppliers of cable TV services in the United States. (*See, e.g.,* RPBr. at 5.).

III. JURISDICTION, IMPORTATION, AND STANDING¹⁸

A. The Commission Has Jurisdiction

To have the authority to decide a case, a court or agency must have subject matter jurisdiction and jurisdiction over either the parties or the property involved. *See Certain Steel Rod Treating Apparatus and Components Thereof*, Inv. No. 337-TA-97, Comm'n Op., 215 U.S.P.Q. 229, 231 (U.S.I.T.C. 1981). For the reasons discussed below, the facts support a finding that the Commission has jurisdiction over this Investigation.

1. Subject Matter Jurisdiction

Rovi alleged that Comcast violated 19 U.S.C. §1337(a)(1)(B) based upon the importation, the sale for importation, and/or the sale of products within the United States after importation of the Accused Products that infringe the asserted claims of the Asserted Patents. (*See* Compl. at ¶¶ 1, 5-6, 104.).

Pursuant to Section 337 of the Tariff Act of 1930, as amended, the Commission investigates alleged violations and decides actions involving those alleged violations. 19 U.S.C. § 1337; 83 Fed. Reg. 11791 (Mar. 16, 2018).

¹⁸ The issue of importation is addressed in an Initial Determination granting Rovi's Motion for Summary Determination Regarding Importation (Motion Docket No. 1103-023 (July 27, 2018)) and Motion for Summary Determination of Sale After Importation (Motion Docket No. 1103-031 (Aug. 17, 2018) ("Importation ID"). (Order No. 47 (June 3, 2019); *see also* Oct. 16, 2018 Teleconf. Tr. (Doc. ID No. 659593 at 16:4-15 (Oct. 23, 2018)). Comcast's Motion for Summary Determination of No Sale After Importation (Motion Docket No. 1103-020 (July 27, 2018)) has been denied. (Order No. 47 (June 3, 2019); *see also* Oct. 16, 2018 Teleconf. Tr. at 16:16-17 (Doc. ID No. 659593) (Oct. 23, 2018)).

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Comcast has contested whether the Commission has subject matter jurisdiction.

Specifically, Comcast argued that: (1) the Accused Products are not “articles that infringe” under Section 337; and (2) Section 337 does not reach direct infringement of a method claim of a patent, where the method is practiced in the United States. (See RPBr. at 6-10; RRBr. at 8-15.).

Relying upon its erroneous interpretation of *Suprema, Inc. v. Int’l Trade Comm’n*, 796 F.3d 1338 (Fed. Cir. 2015), Comcast contended that the accused X1 STBs are not “articles that infringe” based upon an inducement theory because liability for inducement does not attach “at the time of importation,” but rather, occurs “after importation, when Comcast ‘suppl[ies]’ the STB to the subscriber and, according to Rovi, intentionally persuades the subscriber to infringe.” (RRBr. at 9 (citing *Suprema*, 796 F.3d at 1349 (other citations omitted)).¹⁹ Comcast argued “every Comcast action directed towards its customers that allegedly constitutes inducement occurs entirely in the United States and implicates a given STB (if at all) only after its importation.” (*Id.* at 10.). Comcast’s assertions are misguided for the following reasons.

As Staff contended, “Comcast’s argument conflates an analysis of the Commission’s jurisdiction with an examination of whether Rovi has met its burden to prove a violation of section 337.” (SPBr. at 8.). A clear distinction exists between whether Rovi alleged sufficient facts to establish the Commission’s subject matter jurisdiction and whether Rovi established, on the merits, a violation of 19 U.S.C. § 1337(a)(1)(B)(i). See *Certain Elec. Devices with Image Processing Sys., Components Thereof, and Associated Software*, Inv. No. 337-TA-724, Comm’n Op. at 9 (Dec. 21, 2011) (“*Electronic Devices*”).

¹⁹ Comcast made similar arguments in the 1001 Investigation, which the ALJ and Commission rejected. (See 1001 ID at 7-8; 1001 Comm’n Op. at 10, 18-22.). As noted in Section II.B above, this issue is currently on appeal before the Federal Circuit. See *Comcast Corp. v. Int’l Trade Comm’n*, No. 2018-1450, -1653, -1667.

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The Federal Circuit set forth the framework for analyzing the Commission's jurisdiction in *Amgen*. The complainant in *Amgen* alleged a violation of 19 U.S.C. § 1337(a)(1)(B)(ii), an analogous statutory provision to 19 U.S.C. § 1337(a)(1)(B)(i), which involves imported articles made using a process covered by a valid and enforceable U.S. patent. *Amgen*, 902 F.2d at 1534. The Commission determined that the asserted patent claims were directed to genetically altered cells, and not to a patented process for making an article as contemplated in Section 337 (a)(1)(B)(ii). *Elec. Devices*, Comm'n Op. at 9. Consequently, the Commission dismissed the investigation for lack of jurisdiction, after concluding that "existence of a process patent claim was a jurisdictional prerequisite for an investigation" under that section of the statute. *Amgen*, 902 F.3d at 1535.

The Federal Circuit reversed the Commission's finding, holding that because "the jurisdictional requirements of [Section 337] mesh with the factual requirements necessary to prevail on the merits[,] the Commission should first "assume jurisdiction" and then determine "the merits of the case." *Id.* at 1536; *see also Certain Cardiac Pacemakers and Components Thereof*, Inv. No. 337-TA-162, Order No. 37 (March 21, 1984) (unreviewed in relevant part) (following a similar analysis, the ALJ drew a distinction between whether the Commission "has jurisdiction over the subject matter of an investigation" and "whether there is a violation of the statute upon which a remedy can be based"). Here, Rovi alleged sufficient facts that have been found to demonstrate that Comcast's imported articles infringe the Asserted Patents. (*See, e.g.,* Compl. at ¶¶ 118-31, 142-51, 161-69; *see also* Order No. 47 at 23; *see also* Section II.A, *supra.*). Accordingly, the Commission properly has subject matter jurisdiction over this Investigation.

Comcast also mistakenly relied upon the holding of *Suprema* to support its assertions. In

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Suprema,²⁰ the Federal Circuit resolved *en banc* the issue of whether goods are “articles that infringe” when direct infringement does not occur until after importation, in *Rovi’s favor*.

Suprema, 796 F.3d at 1340-41. The Federal Circuit then vacated the panel decision in *Suprema, Inc. v. Int’l Trade Comm’n*, 742 F.3d 1350 (Fed. Cir. 2013), and upheld the Commission’s interpretation of the phrase “articles that infringe” “to cover importation of goods that, *after* importation, are used by the importer to directly infringe at the inducement of the goods’ seller.” *Suprema*, 796 F.3d at 1340-41 (emphasis added); *see also id.* at 1352-53. In so doing, the Federal Circuit explained:

The Commission’s interpretation recognizes that acts necessary for induced infringement, including acts of direct infringement, may not occur simultaneously at the time of importation. In many cases, such acts *cannot* occur at the time of importation. ***In that context, the Commission’s interpretation that Section 337 grants it authority to prevent importation of articles that have been part of inducement as an unfair trade act is consistent with the statutory phrase “articles that infringe.”***

Id. at 1349 (emphases added).

The Federal Circuit also stated:

Section 337 contemplates that infringement may occur *after* importation. The statute defines as unlawful “the sale within the United States after importation . . . of articles that—(i) infringe . . .” § 337(a)(1)(B)(i). The statute thus distinguishes the unfair trade act of importation from infringement by defining as unfair the importation of an article that will infringe, *i.e.*, be sold, “after importation.” *Id.* Section 337(a)(1)(B)’s “sale . . . after importation” language confirms that the Commission is permitted to focus on post-importation activity to identify the completion of infringement.

Id. (emphasis in original).

²⁰ Specifically, the Federal Circuit reversed the panel’s reasoning that “Section 337’s language, ‘articles that infringe,’ is a temporal requirement and that infringement must be measured at the time of importation.” *Suprema*, 796 F.3d at 1344 (citing *Suprema*, 742 F.3d at 1363); *see also id.* (rejecting the panel’s “suggest[ion] that Section 337 must exclude inducement of post-importation infringement because the acts that complete infringement have not all taken place at the time of importation”) (citing *Suprema*, 742 F.3d at 1358).).

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Furthermore, the Federal Circuit acknowledged that “[t]his court has consistently affirmed the Commission’s determination that a violation of Section 337 may arise from an act of induced infringement,” and noted that the interpretation adopted by the vacated panel decision in *Suprema* “weakens the Commission’s overall ability to prevent unfair trade acts involving infringement of a U.S. patent. *Id.* at 1351-52. The Federal Circuit also observed:

The panel’s interpretation of Section 337 would eliminate relief for a distinct unfair trade act and induced infringement. There is no basis for curtailing the Commission’s gap-filling authority in that way. Indeed, the practical consequence would be an open invitation to foreign entities (which might for various reasons not be subject to a district court injunction) to circumvent Section 337 by importing articles in a state requiring post-importation combination or modification before direct infringement could be shown.

Id. at 1352.

In the 1001 Investigation the Administrative Law Judge (“ALJ”) held that the Commission had subject matter jurisdiction over Rovi’s complaint. (1001 ID at 7-8 (“Here, Rovi has alleged sufficient facts that are expected to show that Respondents imported articles that infringe Rovi’s patents.” (Shaw, J).). The Commission rejected Comcast’s arguments and incorrect application of *Suprema*, upheld the 1001 ID and found that the X1 STBs were “articles that infringe” under §337. (*Id.*, Comm’n Op. at 21.). In so doing, the Commission concluded that Comcast’s acts of inducement “took place overseas, prior to importation; it took place at importation; and it took place in the United States, after importation.” (1001 Comm’n Op. at 21 n.13.).²¹

²¹ The Commission discussed the timing and location of Comcast’s inducing actions in its analysis of induced infringement:

[E]ven if the location of Comcast’s inducing conduct were legally relevant, and it is not, Comcast designed the X1 STBs to be used in an infringing manner, and directed their manufacture overseas—requiring, among other things, overseas installation of the relevant software onto the

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Comcast has been found to infringe in this Investigation based upon similar acts of inducement that were found to constitute inducement in the 1001 Investigation. For example, this ID finds that Comcast induces infringement before importation in its conception, design, and control over the manufacture of certain Accused Products that infringe certain asserted claims of the '011 and '585 patents. *See Tegal Corp. v. Tokyo Electron Co.*, 248 F.3d 1376, 1378-79 (Fed. Cir. 2001); *Forest Labs., Inc. v. Ivax Pharms., Inc.*, 501 F.3d 1263, 1272 (Fed. Cir. 2007). (*See* Order No. 47 (Importation ID)). This finding does not explicitly rely upon the finding of Order No. 47 that Comcast is an importer. (Order No. 47 at 23.). Accordingly, even under Comcast's mistaken view of Section 337, Comcast's activities give the Commission jurisdiction.

Comcast also has been found to induce infringement after importation by recommending, encouraging, and promoting its customers to infringe certain asserted claims of the '011 and '585 patents. *See Takeda Pharm. U.S.A., Inc. v. W.-Ward Pharm. Corp.*, 785 F.3d 625, 631 (Fed. Cir. 2015). (*See also* Order No. 47 (Importation ID); *see also* Section X.D, *infra.*). Rovi presented evidence during the Hearing that Comcast induces infringement after importation by providing specific instructions to its subscribers that enable the infringing activity. *See Arthrocare Corp. v. Smith & Nephew, Inc.*, 406 F.3d 1365, 1377 (Fed. Cir. 2005). (*See* Section X.D, *infra.*).

Additionally, Comcast contended that Section 337 does not reach direct infringement of a

STBs. Final ID at 9-12, 232, 234; *Wing Shing Pdis. (BVI), Lrd. v. Simatelex Manufactory Co.*, 479 F.Supp.2d 388, 409-11 (S.D.N.Y. 2007) (“[N]umerous courts have held that, in contrast to §§ 271 (a) and (c), § 271 (b) applies to extraterritorial conduct”); *see also, e.g., Honeywell, Inc. v. Metz Apparaterwerke*, 509 F.2d 1137, 1141-42 (7th Cir. 1975); *MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon Corp[.]*, 2006 WL 463525, at *7 (N.D. Cal. 2006). Comcast then directed the importation of those STBs to Comcast facilities in the United States. Final ID at 9-12. Comcast's inducing activity took place overseas, prior to importation; it took place at importation; and it took place in the United States, after importation. *See, e.g., id.* at 9-12, 232-37, 399.

1001 Comm'n Op. at 21 n.13.

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method claim in the United States. (RPBr. at 9-10). Comcast primarily relied upon *Electronic Devices* for the proposition that no violation can be shown because “domestic use of such a method, without more, is not a sufficient basis for a violation of section 337(a)(1)(B)(i).” (RPBr. at 9 (quoting *Elec. Devices*, Comm’n Op. at 19)). The Commission in *Electronic Devices* held, however, that it has jurisdiction to investigate the complaint alleging a violation of Section 337. *Elec. Devices*, Comm’n Op. at 9-10 (“We, like the ALJ, find that [respondent] Apple’s argument conflates an analysis of the Commission’s jurisdiction with an analysis of whether [complainant] S3G has met its burden to prove a violation of section 337.”).

To be clear, *Electronic Devices* predates the controlling decision in *Suprema*. *Suprema* makes clear that “[i]f Congress meant to forbid the Commission from looking past the time of importation in defining Section 337’s reach, Section 337 would not have reached even garden-variety direct infringement. . . . [W]e cannot attribute that result to Congress.” *Suprema*, 796 F.3d at 1348. Since *Suprema*, the Commission has found violations of section 337 where a respondent induced customers in the United States to directly infringe method claims recited in a U.S. patent. (See, e.g., *Certain Network Devices, Related Software & Components Thereof (II)*, Inv. No. 337-TA-945, Initial Determination at 107-09 (Dec. 9, 2016) (finding that “Arista’s customers directly infringe the ’577 patent” and “Arista induces infringement of the ’577 patent”); Doc. ID No. 613184 (June 1, 2017), Comm’n Op. at 29 (affirming “the Final ID’s finding that Arista has induced infringement of the asserted claims of the ’577 patent by importing the Imported Components”)).

Comcast also argued that the Accused Products have substantial non-infringing uses, such as permitting a subscriber to watch television without using cable services, which the Commission squarely dismissed in the 1001 Investigation. (RPBr. at 8-9.). “Because the

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concept of substantial non-infringing uses is applicable only in the context of contributory infringement, it plays no role in the analysis of the direct and induced infringement that remains at issue here.” (1001 Comm’n Op. at 21-22 (citing *Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358, 1364 (Fed. Cir. 2012) (explaining that “substantial non-infringing use” is relevant only to contributory infringement); cf. *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 942 (2005)).).

For the foregoing reasons, the Commission has subject matter jurisdiction over this Investigation.

2. Personal Jurisdiction

Comcast stipulated that the Commission has personal jurisdiction over it in this Investigation. (See Doc. ID No. 656707, Stipulation of Undisputed Issues and Facts at 2 (Sept. 25, 2018)). At a minimum, Comcast appeared and responded to the Complaint and NOI, and participated in discovery and the Hearing. Thus, the Commission has personal jurisdiction over Comcast. See, e.g., *Certain Windshield Wiper Devices and Components Thereof* (“*Wiper Devices*”), Inv. No. 337-TA-881, ID at 5 (May 8, 2014) (unreviewed in relevant-part) (Doc. ID No. 534255).

3. In Rem Jurisdiction

Section 337(a)(1)(B) applies to the “[t]he importation into the United States, the sale for importation, or the sale within the United States after importation” of articles that infringe a valid and enforceable United States patent.” 19 U.S.C. § 1337(a)(1)(B). A single instance of importation is sufficient to satisfy the importation requirement of Section 337. *Certain Optical Disc Drives, Components Thereof, and Prods. Containing the Same*, Inv. No. 337-TA-897, Order No. 101 at 3 (Sept. 22, 2014) (citations omitted) (Doc. ID No. 543438).

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For the reasons set forth in the Importation ID, there is no dispute that the Accused Products are manufactured abroad and imported into the United States. (See Order No. 47 (June 3, 2019)). Thus, evidence presented in this Investigation establishes that the Commission has *in rem* jurisdiction over the Accused Products. See, e.g., *Wiper Devices*, Inv. No. 337-TA-881, Initial Determination at 5 (*in rem* jurisdiction exists when importation requirement is satisfied).

B. Complainants Have Standing in the Commission

In addition to subject matter jurisdiction and *in rem* jurisdiction, a complainant must also have standing to bring suit. See *SiRF Technology, Inc. v. Int'l Trade Comm'n*, 601 F.3d 1319, 1326 (Fed. Cir. 2016) (standing to bring an infringement suit is the same under Commission Rules as it would be in a Federal District Court case); *Certain Optical Disc Drives, Components Thereof and Prods. Containing Same*, Inv. No. 337-TA897, Opinion Remanding the Investigation at 4 (Jan. 7, 2015). Commission Rule 210.12 requires that intellectual-property based complaints filed by a private complainant “include a showing that at least one complainant is the exclusive license of the subject intellectual property.” 19 C.F.R. § 210.12(a)(7).

Here, Rovi has standing to bring suit for infringement under Section 337 because Veveo, Inc., a wholly-owned subsidiary of Rovi, is the sole owner of the '011 patent, and Rovi Guides, Inc. is the sole owner of the '585 and '741 patents. (See Compl. at ¶¶ 11-12; see also JX-0014 (assignment record of the '011 patent); JX-0016 (assignment record of the '585 patent.); JX-0017 (assignment record of the '741 patent); Stip. of Undisputed Issues and Facts at 2.).

IV. THE ASSERTED PATENTS

A. Overview of the Technology

The technologies claimed in the Asserted Patents relate to interactive programming guide (“IPG”) technology and related functionalities for subscription-based television broadcasting

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("Pay-TV"). (Compl. at ¶¶ 15-16; RPBr. at 3.). Generally, the '011 patent relates to the methods and equipment that is used for searching databases and displaying the results on a screen through the use of a STB and other equipment, such as remote controls (*see, e.g.*, Compl. at ¶ 61; JX-0001 at Abstract); the '585 patent relates to storing content based on selected storage options (*see, e.g.*, Compl. at ¶ 75; JX-0004 at Abstract); and the '741 patent relates to restarting a program from the beginning while the program is being broadcasted (*see, e.g.*, Compl. at ¶ 89; JX-0006 at Abstract).

The patented technologies at issue also provide for multi-screen entertainment across a variety of user devices (e.g., seamless access to the same media from multiple devices and device types, such as a television and mobile device). (Compl. at ¶ 19.). The patented technologies provide customizable listings for televisions, receivers, game consoles, and mobile devices, which permit viewers (i.e. the users) to find and enjoy the content of their choosing, at a time and place most convenient and/or desirable. (*Id.*). According to Rovi, these and other advances have helped viewers to navigate an increasingly vast amount of viewable content, and to discover and to obtain access to desired entertainment on an array of platforms and devices. (*Id.*).

B. U.S. Patent No. 7,779,011 ("the '011 Patent")

1. Overview of the '011 Patent

The '011 patent, titled "Method and System for Dynamically Processing Ambiguous Reduced Text Search Queries and Highlighting Results Thereof," was filed on December 20, 2005, as U.S. Patent Application Serial No. 11/312,908 ("the '908 application"). (JX-0001 at (21), (22), (54).). The '908 application issued as the '011 patent on August 17, 2010, and names Sashikumar Vankataraman, Rakesh Barve, Murali Aravamudan, and Ajit Rajasekharan as the inventors. (*Id.* at (10), (45), (75).). The '011 patent claims priority to U.S. Provisional

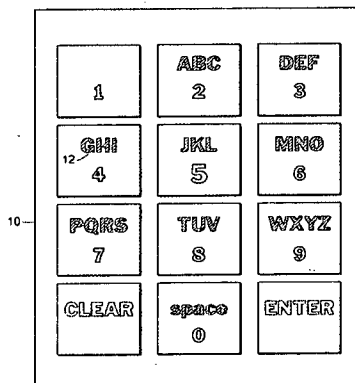
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Application Serial Nos. 60/716,101, filed September 12, 2005, and 60/711,866, filed August 26, 2005. (*Id.* at (60).)

The '011 patent generally relates to “a method and system of processing a search query entered by a user of a device having a text input interface with overloaded keys.” (*Id.* at 2:13-15.). A variety of devices with text input interfaces or a keypad have overloaded keys. (*See, e.g., id.* at 4:20-22, Fig. 2.). These include a handheld device, a remote control, or a telephone with a display. (*See id.* at 4:20-22, Fig. 2.).

An overloaded key is a single key that represents a number and at least one alphabetic character. (Tech. Stip. at 2; JX-0001 at 1:39-43.). An example are the keys of a touchtone telephone, where, for instance, the “2” key is associated with the number “2” as well the letters “A,” “B,” and “C.” (Tech. Stip. at 2; JX-0001 at 1:39-43.). A keypad with overloaded keys is shown below in Figure 1.

Figure 1: Keypad with Overloaded Keys



(JX-0001 at Fig. 1.).

The problem with search queries using an overloaded keypad is that the queries generate “unresolved” keystrokes. (CMBr. at 4.). A keystroke is “unresolved” because one keystroke could signify more than one of the characters associated with an overloaded key. (*Id.*) For

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example, pressing the “2” key could represent the number “2” or the letter “A,” “B,” or “C.” (JX-0001 at 1:41-43.). As the ’011 patent explains, an unresolved keystroke “can result in an ambiguous text entry, which requires some type of a disambiguation action.” (*Id.* at 1:43-45.).

The ’011 patent explains solutions taught by the prior art, which include a user “press[ing] a particular key multiple times in quick succession to select a desired character (e.g., to choose ‘B’, [sic] the user would press the ‘2’ key twice quickly, and to choose ‘C’, [sic] the user would press the key three times quickly).” (*Id.* at 1:46-50.). The ’011 patent recognizes that “[o]ne deficiency of the multi-press interface is that too many key strokes are needed,” especially for a word having many letters. (*Id.* at 1:55-57.).

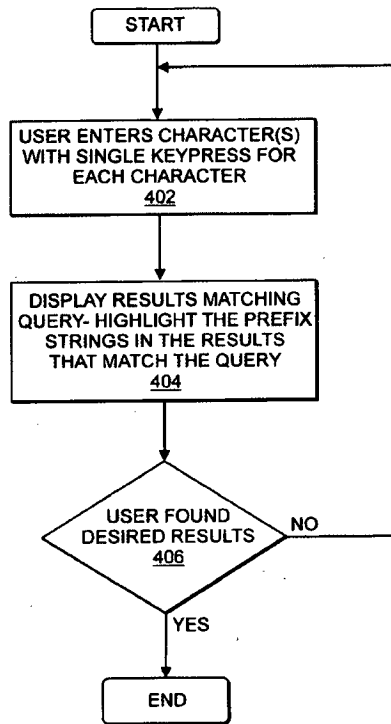
The ’011 patent also discloses prior art methods that require the user to provide the completion choices for each word entered, that is, upon each entry of an overloaded key as part of a search query, the system could return a list of all possible word matches, i.e., “vocabulary based completion choices,” generated by the ambiguous text input. (*Id.* at 1:50-53; 1:57-60.). The ’011 patent points out, however, that “[a] drawback of applying a vocabulary based word completion interface is the need for the additional step of making a choice from a list of all possible word matches[.]” (*Id.* at 1:57-60.).

The methods and systems described in the ’011 patent purport to address these issues by allowing the user to enter a search query using unresolved key strokes without the need for extra steps entailed with disambiguation, as discussed above. (*Id.* at 2:15-17, 3:23-25.). The ’011 patent discloses that the “search query is directed at identifying an item from a set of items,” where each item has a name containing one or more words. (*Id.* at 2:15-17, 3:23-25.). These searchable items are indexed, before the user enters any search query, “by performing a many-to-many mapping from the alphanumeric space of terms to numeric strings corresponding to the

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various prefixes of each alphanumeric term constituting the query string.” (*Id.* at 3:44-53, 3:27-29.). For example, in the index, “Tom” would be mapped to “8” and “86” and “Jerry” would be mapped to “5,” “53,” “537,” etc. This mapping scheme allows the user to “incrementally retrieve results matching the ambiguous alphanumeric input query, as the user types in each character of the query.” (*Id.* at 3:53-56, *see also id.* at 5:26-29, 7:4-8:11.). An embodiment of this search process is illustrated below in Figure 2.

Figure 2: Flow Chart Illustrating a Method for Finding and Highlighting Results of an Ambiguous Search Query



(*Id.* at Fig. 4.).

The specification discloses that:

At step 402, the user enters a character using an ambiguous text input interface, e.g., using a keypad with overloaded keys where a single key press is performed for each character entered. At 404, an incremental search system determines and displays at least some of the results that match the input character entered at 402.

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Since the input is ambiguous, the match of results would include the matches for all the ambiguous input characters represented by the single key press (including those not of interest to the user). To address this increased set of matches, an ordering scheme is preferably used to order the results to improve accessibility to results expected to be more of interest to the user. The ordering of results can be based on a variety of criteria including, e.g., temporal relevance, location relevance, popularity and personal preferences (that may have been determined implicitly or explicitly) or some combination of these criteria.

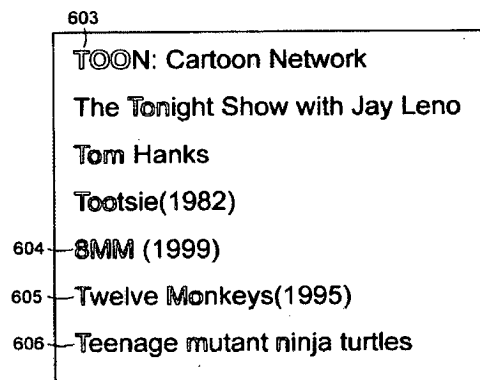
* * *

If the user does not find the desired results at 406, he or she can continue to enter more characters to the search query at step 402. Then at step 404, the system will perform the search based on the cumulative substring of characters of the search query entered by the user up to that point.

(*Id.* at 5:29-44, 6:31-35.).

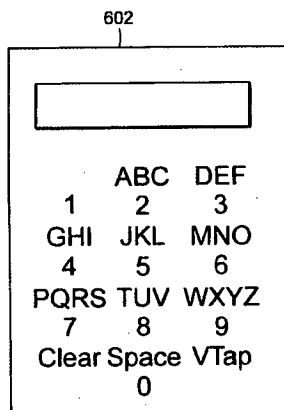
Figure 3 shows the results of a search query comprising the overloaded keys “866,” illustrated in Figure 4.

Figure 3: Exemplary Display Interface



(*Id.* at Fig. 6B.).

Figure 4: Exemplary Text Input Interface



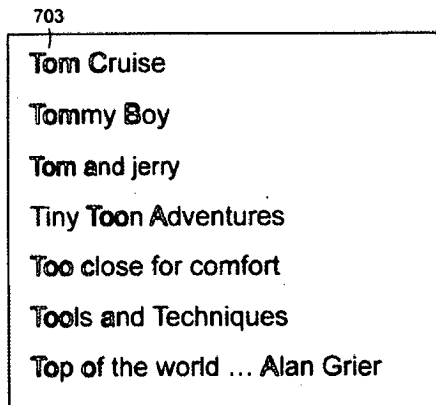
USER INPUT: 866

(*Id.* at Fig. 6A.).

The results shown in Figure 3 above identify single-word term matches (603, 604) before abbreviation matches (605, 606). (*Id.* at 7:9-12.). Because the “relationship between the overloaded characters entered by the user and the match results is complicated and not necessarily intuitive to the user[,] . . . the characters in the search result that match the overloaded single-word search prefix characters are highlighted, providing the user with a visual indication of the relationship between the key pressed and the incremental match results.” (*Id.* at 7:41-48.). For example, as shown in Figure 3 above, the letters “TOO” in the word “TOON,” which match the input unresolved overloaded keys “866,” are highlighted. The ’011 specification explains that “[t]his [highlighting] facilitates identification by the user of the item of interest from the group of items displayed.” (*Id.* at 7:48-50.).

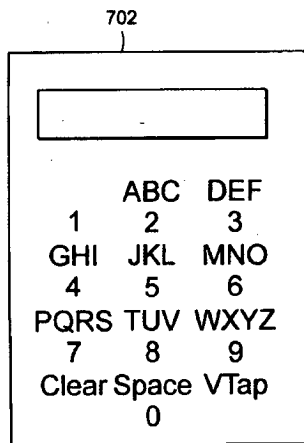
Figure 5 below shows the results for a two-word search having the unresolved overloaded keys “866 2,” shown in Figure 6. (*Id.* at 7:58-8:11.).

Figure 5: Exemplary Display Interface



(Id. at Fig. 7B.).

Figure 6: Exemplary Text Input Interface



USER INPUT: 866 2

(Id. at Fig. 7A.).

The '011 patent informs that “[t]he difference between the single-word search illustrated in FIG. 6B and the multi-word search illustrated in FIG. 7B is that the use of an explicit word separator in the user input (in this case a space character) before the ‘2’ entry, further limits results of the search.” (Id. at 7:62-66.).

2. Asserted Claims of the '011 Patent

The remaining asserted claims 1 and 9 of the '011 patent are recited below.²² Claims 1 and 9 are directed to a method and a system, respectively, for processing a search query entered by a user of a device having a text input interface with overloaded keys. (See, e.g., JX-0001 at Abstract.).

1. A method of processing unresolved keystroke entries by a user from a keypad with overloaded keys in which a given key is in fixed association with a number and at least one alphabetic character, said unresolved keystroke entries being directed at identifying an item from a set of items, each of said items being associated with information describing the item comprising one or more words, said method comprising:

indexing said items by associating subsets of said items with corresponding strings of one or more unresolved keystrokes for overloaded keys so that the subsets of items are directly mapped to the corresponding strings of unresolved keystrokes for various search query prefix substrings;

for at least one subset of items, determining which letters and numbers present in the information associated with and describing the indexed items of said subset caused said items to be associated with the strings of one or more unresolved keystrokes that are directly mapped to said subset;

subsequent to said indexing, receiving from a user a search query for desired items composed of unresolved keystrokes, said search query comprising a prefix substring for at least one word in information associated with the desired item;

in response to each unresolved keystroke, identifying and displaying the subsets of items, and information associated therewith, that are associated with the strings of one or more unresolved keystrokes received from the user based on the direct mapping of strings of unresolved keystrokes to subsets of items;

in response to each unresolved keystroke, as the identified items are displayed, highlighting the letters and numbers present in the one or more words in said information describing the identified items that were determined to have caused the displayed items to be associated with the strings of unresolved keystrokes that are directly mapped to said items so as to illustrate to the user how the unresolved keystrokes entered match the information associated with

²² Bolded patent claim numbers indicate independent claims.

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the displayed items; and

ordering the displayed items in accordance with one or more given criteria.

9. A system for processing unresolved keystroke entries by a user from a keypad with overloaded keys in which a given key is in fixed association with a number and at least one alphabetic character, said unresolved keystroke entries being directed at identifying an item from a set of items, each of said items being associated with information describing the item comprising one or more words, said system comprising a computer-readable medium comprising instructions for causing a computer system to:

index said items by associating subsets of said items with corresponding strings of one or more unresolved keystrokes for overloaded keys so that the subsets of items are directly mapped to the corresponding strings of unresolved keystrokes for various search query prefix substrings;

for at least one subset of items, determine which letters and numbers present in the information associated with and describing the indexed items of said subset caused said items to be associated with the strings of one or more unresolved keystrokes that are directly mapped to said subset;

subsequent to said indexing, receive from a user a search query for desired items composed of unresolved keystrokes, said search query comprising a prefix substring for at least one word in information associated with the desired item;

in response to each unresolved keystroke, identify and display on a display device at least one of the subsets of items, and information associated therewith, that are associated with the strings of one or more unresolved keystrokes received from the user based on the direct mapping of strings of unresolved keystrokes to subsets of items;

in response to each unresolved keystroke, as the identified items are displayed, highlight on the display device the letters and numbers present in the one or more words in said information describing the identified items that were determined to have caused the displayed items to be associated with the unresolved keystrokes received so as to illustrate to the user how the strings of unresolved keystrokes that are directly mapped to said items entered match the information associated with the displayed items; and

order on the display device the displayed items in accordance with one or more given criteria.

(JX-0001 at 8:40-9:13, 9:37-10:14; JX-0002 (Certificate of Correction) at 1.).

C. U.S. Patent No. 7,827,585 (“the ’585 Patent”)

1. Overview of the ’585 Patent

The ’585 patent, titled “Electronic Program Guide with Digital Storage,” was filed on August 4, 2005, as U.S. Patent Application Serial No. 11/197,867 (“the ’867 application”). (JX-0004 at (21), (22), (54).). The ’867 application is a continuation of U.S. Application Serial No. 10/383,281, filed March 5, 2003, which is a continuation of now abandoned U.S. Patent Application Serial No. 09/157,256, filed September 17, 1998, to which the ’585 patent claims priority. The ’867 application issued as the ’585 patent on November 2, 2010, and names Joel G. Hassell, Edward B. Knudson, L. Joe Hedges, Michael D. Ellis, and David M. Berezowski as the inventors. (*Id.* at (10), (45), (75).).

The ’585 patent generally relates to IPGs that provide a user with storage options for storing a program on a random access digital storage device. (Tech. Stip. at 2.). The ’585 patent discloses IPGs that are configured to display program listings, provide a user with an opportunity to choose a program to be recorded on a random access digital storage device, and provide the user with an opportunity to select at least one storage option. (Compl. at ¶ 75.). The ’585 patent also teaches options for storing the program to be recorded on the digital storage device in accordance with the storage option selected by the user. (*Id.*).

According to the ’585 patent, “[t]he use of a digital storage device associated with the program guide provides the user with more advanced features than could be performed using an independent analog storage device.” (JX-0004 at 2:22-25.). The asserted claims of the ’585 patent cover two (2) different means of providing selectable storage options to users. The first invention, at a high level, provides for the selection and setting of a storage option that is then applied globally to programs selected for recording through an interactive television program

guide. (See, e.g., *id.* at 2:25-39.). The second invention, at a high level, provides for the selection of a program from a program listing followed by the selection and setting of a storage option for the selected program. (*Id.*) An illustrative set-up screen is shown below in Figure 7.

Figure 7: Illustrative Set-up Screen

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	VIEWED		

STORAGE OPTIONS 122

LANGUAGES	<input type="text" value="ENGLISH"/>	AVAILABLE LANGUAGES ENGLISH GERMAN FRENCH ITALIAN SPANISH ALL
VIDEO FORMAT	HDTV	
ENFORCE PARENTAL CONTROL ON STORAGE	YES	
AUTO-ERASE VIEWED ENTRIES	YES	

PLAYBACK OPTIONS 133

DEFAULT LANGUAGE	ENGLISH
DEFAULT VIDEO	HDTV
SKIP COMMERCIALS	YES

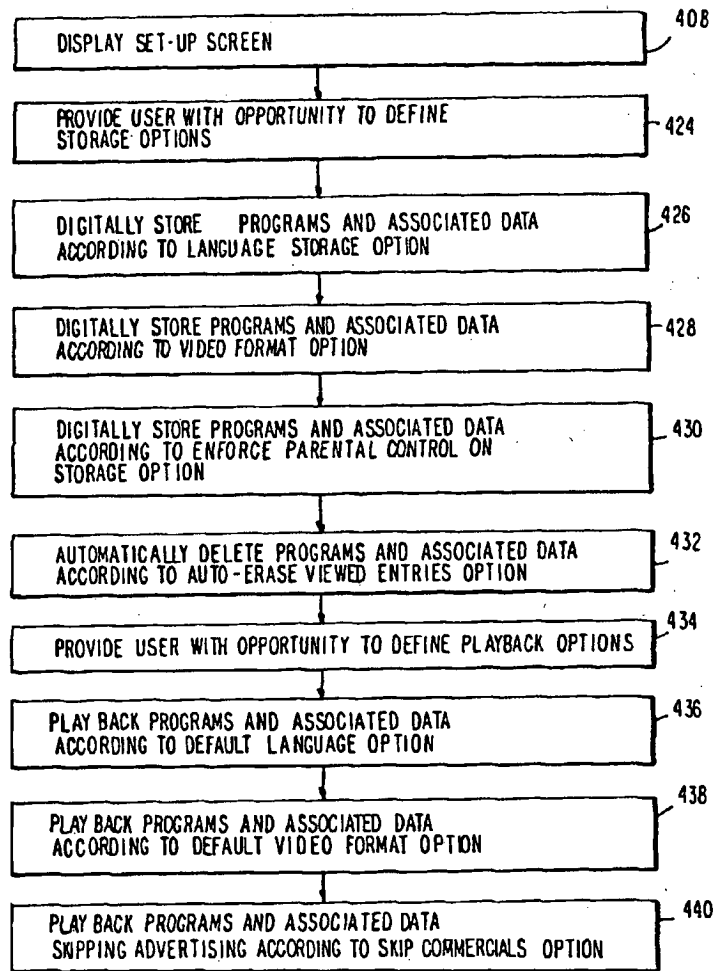
(*Id.* at Fig. 14.).

As the '585 patent informs, “[t]he set-up feature allows a user to select options and set user preferences. . . . 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.” (*Id.* at 15:35-16:2.).

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In both cases, the programs are recorded on the claimed “random access digital storage device” and the storage option must relate to *how* programs are recorded. These user-selectable *how* storage options include adding time before or after a recording (padding), HD/SD format, and/or the ability to “keep [a recording] until.” (*Id.* at 16:29-43.). Figure 8 below illustrates the steps involved in providing the user with the ability to define selectable options.

Figure 8: Flow Chart of Steps Involved in Providing User with Ability to Define Selectable Options



(*Id.* at Fig. 16.).

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2. Asserted Claims of the '585 Patent

Remaining asserted claims 1, 8, 11, 15, and 22 of the '585 patent are recited below.²³

Claims 1, 8, and 11 are method claims directed to an interactive television program guide that gives users the ability to store information associated with recorded programs in a directory in the digital storage device thereby providing easy access to program information. (*See, e.g., JX-0004 at Abstract.*) Claims 15 and 22 are system claims directed to the same.

1. A method for allowing a user to select storage options for storing programs using an interactive television program guide implemented on user television equipment, the method comprising:

providing the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on a random access digital storage device;

in response to a user selection of the at least one storage option, modifying the at least one storage setting;

displaying in the interactive television program guide at least one program listing related to at least one program;

providing the user with an opportunity to select a program listing from the at least one displayed program listing for recording on the random access digital storage device; and

recording the program on the random access digital storage device based on the modification of the at least one storage setting.

8. A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:

displaying in a display screen at least one program listing relating to at least one program;

providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from

²³ Bolded patent claim numbers indicate independent claims.

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the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;

providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;

in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and

recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

11. The method of claim 10 wherein the at least one video format comprises at least one of high definition television, normal television and a digital format.

15. A system for allowing a user to select storage options for storing programs, the system comprising:

a display screen;

a random access digital storage device;

and an interactive television program guide implemented at least partially on circuitry, wherein the interactive television program guide is programmed to:

provide the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein said at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on the random access digital storage device;

in response to a user selection of the at least one storage option, modify the at least one storage setting;

display in the display screen at least one program listing related to at least one program;

provide the user with an opportunity to select a program listing from the at least one displayed program listing for recording on the random access digital storage device; and

record the program on the random access digital storage device based on the modification of the at least one storage setting.

22. A system for recording programs, the system comprising:

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a display screen;
a random access digital storage device;
and an interactive television program guide implemented at least partially on circuitry, wherein the interactive television program guide is programmed to:

display in the display screen at least one program listing related to at least one program;

provide a user with the opportunity to indicate a program to be recorded on the random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;

provide the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;

modify said at least one storage setting in response to said user selection;

in response to receiving the user selection of the at least one storage option, modify the at least one storage setting for the program to be recorded;
and

record the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

(JX-0004 at 18:46-67, 19:21-43, 19:49-51, 19:64-20:20, 20:41-21:3.).

D. U.S. Patent No. 9,369,741 (“the 741 Patent”)

1. Overview of the ’741 Patent

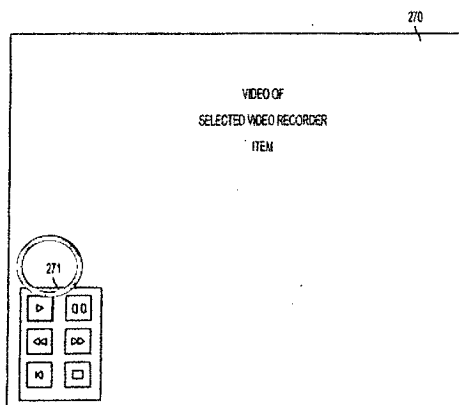
The ’741 patent, titled “Interactive Television Systems with Digital Video Recording and Adjustable Reminders,” filed on June 16, 2015, as U.S. Patent Application Serial No. 14/741,034 (“the ’034 application”). (JX-0006 at (21), (22), (54)). The ’034 application is a continuation of U.S. Patent Application Serial No. 14/313,348, filed June 24, 2014, which issued as U.S. Patent No. 9,071,872. (*Id.* at (63)). Through a series of continuations, the ’741 patent claims priority to U.S. Patent Application Serial No. 10/357,001, filed January 30, 2004, which issued as U.S. Patent No. 7,493,646. (*Id.*). The ’034 application issued as the ’741 patent on June 14, 2016 and

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names Michael D. Ellis as the inventor. (*Id.* at (72).).

The '741 patent generally relates to enabling a viewer to start a program from the beginning when, for example, the program has already started when the viewer first tunes in. (*See, e.g.*, JX-0006 at 21:40-57.). In such situations, the '741 patent discloses that a screen such as the one below in Figure 9 be shown to the viewer.

Figure 9: Illustrative Display Screen Showing How Playback Controls May Be Displayed



(*Id.* at Fig. 21.).

Figure 9 shows the video of the selected program (270) and a simultaneously displayed indication (271) that some actions may be taken including restarting the program from the beginning (the bottom left “restart” icon). (*Id.* at 21:40-22:3.).

2. Asserted Claims of the '741 Patent

The remaining asserted claims 1, 8, and 14 of the '741 patent are recited below.²⁴ Claim 1 is a system claim, and claims 8 and 14 are method claims. All the claims are directed to an interactive television system in which an interactive television application is used to support

²⁴ Bolded patent claim numbers indicate independent claims.

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network-based or local personal video recorder capabilities.

1. A system comprising:

storage circuitry for storing archived copies of videos;

control circuitry configured to:

transmit a video to a plurality of user equipment, wherein the transmitting begins at a start time and ends at an end time;

access a database to determine whether an archived copy corresponding to the video is available to a user after the start time;

based on determining that the archived copy is available to the user after the start time, cause an indication corresponding to the archived copy to be displayed simultaneously with the video after a specified time after the start time but before the end time, wherein the specified time was configured prior to the start time;

receive a user response to the indication that is displayed; and

based on the received user response, retrieve, from the storage circuitry, the archived copy.

8. A method comprising:

transmitting a video to a plurality of user equipment, wherein the transmitting begins at a start time and ends at an end time;

accessing a database to determine whether an archived copy corresponding to the video is available to a user after the start time;

based on the determining, causing an indication corresponding to the archived copy to be displayed simultaneously with the video after a specified time after the start time, but before the end time, wherein the specified time was configured prior to the start time;

receiving a user response to the indication that is displayed; and

based on the received user response, retrieving from storage the archived copy.

14. The method of claim 8, further comprising: removing the archived copy from the storage device at an end of a retention period, wherein the archived copy on the storage device is associated with the retention period.

(JX-0006 at 37:62-38:13, 38:39-54, 39:7-11.).

V. THE PRODUCTS AT ISSUE.

A. Comcast's Accused Products

Generally, Rovi alleged that all Comcast X1 STBs, IPG software, Comcast's X1 remote and streaming applications ("apps"), and Comcast voice remote controls initially imported after April 1, 2016 infringe one or more claims of the Asserted Patents.²⁵ (*See, e.g.*, CPBr. at 5; CBr. at 3.).

Specifically, Complainants accused the Comcast Xfinity receivers or STBs 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.²⁶ (Compl. at ¶ 52.).

²⁵ Rovi stated that it "seeks no remedy as to any product that was initially imported during the term of the parties' license agreement that expired on March 31, 2016." (CBr. at 3 n.4 (citing Compl. at ¶ 9 n.2; Doc. ID No. 651870, Complainants' Notice of Withdrawal of Certain Accused Products (Aug. 1, 2018))). On July 27, 2018, Comcast filed a MSD of no violation as to any Comcast products initially imported prior to April 1, 2016. (Motion Docket No. 1103-022 (July 27, 2018.)). Rovi filed an opposition to Comcast's MSD. (Doc. ID No. 652469 (Aug. 8, 2018.)). The ID resolves this issue by addressing in this Investigation only the Accused Products imported after March 31, 2016.

²⁶ Rovi also accused the Comcast Xi6 STB. (Compl. at ¶ 52.). Rovi alleged that at the time it filed the Complaint, the Xi6 was available to Comcast employees only. Rovi stated that "[u]pon information and belief, Comcast intends to release the Xi6 set-top box to the public in the near future." (Compl. at ¶ 52 n.7 (citing *id.* at Exs. 87-88)). However, Rovi failed to present any evidence during the Hearing or

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On August 1, 2018, Rovi filed a Notice of Withdrawal of Certain Accused Products, specifically withdrawing the RNG150N and Xi3 STBs from this Investigation. (Doc. ID No. 651870, Complainants' Notice of Withdrawal of Certain Accused Products (Aug. 1, 2018).). Thus, the remaining accused products are Comcast's XG1, XG2, XiD, and Xi5 STBs ("Accused Products").²⁷

Comcast's X1 set-top boxes are the hardware that run the software-based X1 Guide or Platform (collectively, the "X1 System") Comcast provides to its customers. (CPBr. at 5; SPBr. at 7.). The X1 STBs are manufactured and imported into the United States by companies such as ARRIS Solutions Inc., Technicolor Connected Home USA LLC, and Universal Electronics Inc. (RPBr. at 5.). Comcast has also been held to be an "importer" with its suppliers, identified above. (Order No. 47 at 23.). Comcast purchases them in the United States and generally rents them to its customers when providing cable services. (*Id.*). As discussed in the Importation ID, Comcast extensively controls the manufacture and importation of the Accused Products. (*See* Order No. 47 at 14-15.).

otherwise that the Xi6 STB practices any of the asserted claims. Importantly, Rovi did not tie the Xi6 STB to any of the representative products to which the Private Parties stipulated. (JX-0163C; *see also* Section V.A.4; Table No. 5.). To the extent that RNG150 is different from RNG150N, Rovi also failed to tie this STB to any of the representative products. Thus, any argument on these STBs is deemed to be waived. (*See* Ground Rule 10.1 (if "the party who raised the issue or made the argument did not adduce evidence on the same during the evidentiary hearing, . . . it shall be deemed waived").).

²⁷ In its Complaint, Rovi also accused the following Comcast voice remote controls: Remote Solution Co., Ltd. XR11v1 RC38A, Universal Electronics Inc. XR11v2 4350, and Universal Electronics Inc. XR15 4352. (Compl. at ¶ 52.). Additionally, Rovi accused Comcast's X1 remote and streaming tv apps. (*Id.* (citing <https://www.xfinity.com/support/xfinity-apps/setting-up-the-cable-tv-app/>; <https://www.xfinity.com/get-stream>)). These products no longer appear to be asserted as a result of the terminations of the '394, '799, '363, '956, and '014 patents from this Investigation. (*See* Section II.A, *supra.*).

1. Accused 011 Products

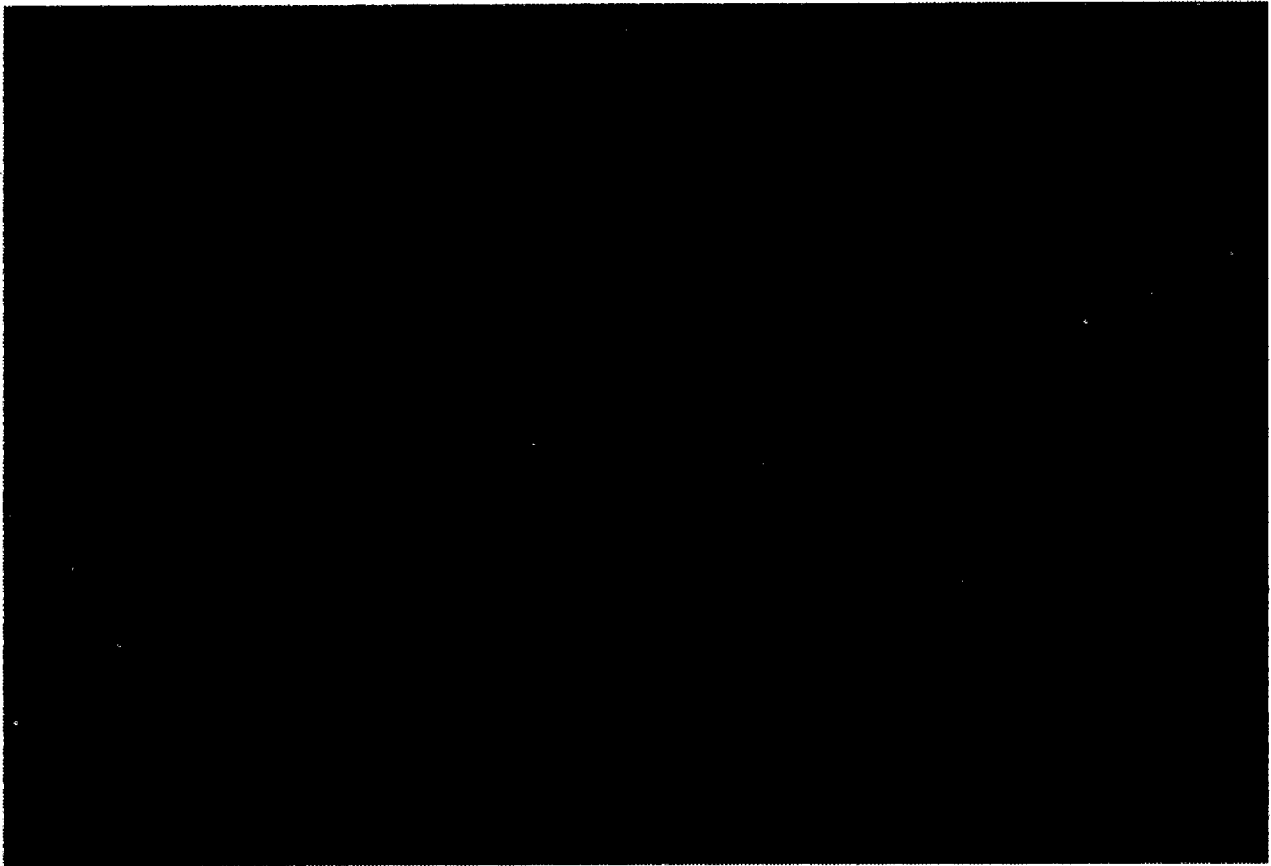
The Accused 011 Products are STBs, initially imported on or after April 1, 2016, that implement the X1 Platform. Comcast's X1 System includes [REDACTED]

[REDACTED]

[REDACTED], as shown below in Figure 10. (Tr. (Alan Bovik)²⁸ at 560:3-562:24.).

²⁸ When he testified during the Hearing on October 18-19, 2018, Dr. Alan Bovik was a Professor at the University of Texas at Austin. (CPSt. at 8:). His Appointments were in the Department of Electrical and Computer Engineering, the Department of Computer Sciences, and the Department of Biomedical Engineering. (*Id.*). Dr. Bovik was also the Director of the Laboratory for Image and Video Engineering and held the Cockrell Family Regents Endowed Chair at the University of Texas at Austin. (*Id.*). Rovi identified Dr. Bovik as an expert to testify: (i) about how the Accused 011 Products infringe the '011 patent; (ii) about how the 011 DI Products satisfy the technical prong for the '011 patent; and (iii) in rebuttal to Comcast's invalidity contentions regarding obviousness and the written description requirement. (*Id.*).

Figure 10: Depiction of Comcast's X1 System



(CDX-0008C.0027 (introduced during Dr. Bovik's testimony).)

[Redacted]

[Redacted] ²⁹ (Tr.

(Bovik) at 560:3-23, 599:23-600:24.) [Redacted]

[Redacted]

²⁹ [Redacted] (Tr. (Bovik) at 560:13-20).

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[REDACTED]³⁰ (*Id.* at 561:8-16; CDX-0008C.0038.).

[REDACTED]

[REDACTED]³¹ (*See, e.g.*, CX-1019C (Entity Document for “Disney’s Descendants 2”). [REDACTED]

[REDACTED]

[REDACTED]. (Tr. (Bovik) at 568:15-569:7, 586:13-22.).

[REDACTED]

[REDACTED]

[REDACTED]³² (*Id.* at 568:15-570:3; CDX-0008C.0040; CX-1019C.0003.). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (Tr. (Bovik) at 568:9-21, 587:3-590:23; RX-0137.).

Comcast’s X1 users access the STB with a remote control to search for program content

³⁰ [REDACTED] (Tr. (Bovik) at 561:13-16.).

³¹ [REDACTED] (Tr. (Bovik) at 568:22-569:3; *see also, e.g.*, CX-1019C.).

³² “T9” is shorthand for text on 9 keys. (Tr. (Sree Kotay) at 506:13-21, 507:11-509:2.). Mr. Sree Kotay was the former Chief Technology Officer at Comcast. (CPSt. at 6.). Rovi identified Mr. Kotay as a fact witness to testify generally as to Comcast’s infringement of, *inter alia*, the ’011 patent and issues relating to the validity of the ’011 patent, including Comcast’s relationship with the prior assignee of the ’011 patent. (*Id.* at 6-7.).

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by entering numbers on the remote's keypad that has overloaded keys. (CDX-0008C.0030-31; CX-0062.0001-3.). When a number is pressed, the STB relays the information to [REDACTED]. (Tr. (Bovik) at 568:9-570:8; CDX-0008C.0041; JX-0107C (Srikanth Kallurkar Dep. Tr.) (June 21, 2018))³³ at 154:5-155:13.). Search results are returned with each overloaded key entry, and [REDACTED] the letters in the title mapped to the string of unresolved keystrokes, as shown in Figure 11. (Tr. (Bovik) at 596:17-597:17.).

Figure 11: REX Search Results



(CDX-0008C.0042 (showing the X1 user entering the unresolved, overloaded keystrokes 3-4-7 in that order)).

The displayed results are [REDACTED]. (Tr. (Bovik) at 597:25-598:24; RX-0541C; CDX-0008C.0044.). Although the algorithm runs on Comcast

³³ At the time of his deposition on June 21, 2018, Mr. Srikanth Kallurkar was the Vice President of Procurement at Comcast. (RPSt. at 5.). Comcast identified Mr. Kallurkar as a fact witness to testify about the Accused Products, the purchase of STBs from suppliers, and the rental and deployment of the Accused Products to customers. (*Id.*).

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servers, X1 overloaded key searching would not work without the STB. No search could be entered, and no results could be received or displayed, without the STB. (Tr. (Bovik) at 567:19-25 (“Q. Would a number search or overloaded key search work without a set-top box? A. Not in the consumer setting at all. Q. So if you remove the set-top box from the system, from the consumer’s home, the user wouldn’t be able to do an overloaded key search? A. That’s correct.”)).

2. Accused 585 Products

The Accused 585 Products are STBs (hardware and software) [redacted]
[redacted], which run Comcast’s X1 System and were imported on or after April 1, 2016. (Tr. (Ravin Balakrishnan)³⁴ at 737:4-738:15, 739:12-19, 745:9-19 (describing the Accused Products); Tr. (Steven Allinson)³⁵ at 1494:3-7 (Comcast’s engineer confirming that the STBs are Comcast-specific). [redacted]

³⁴ When he testified during the Hearing on October 19, 22, and 25, 2018, Dr. Ravin Balakrishnan was a Professor of Computer Science in the Department of Computer Science at the University of Toronto, where he was also the Chair of the Department. (CPS_t. at 7.). Rovi identified Dr. Balakrishnan as an expert to testify about: (i) the understandings of the disputed terms of the ’585 and ’741 patents to one of skill in the art in view of the intrinsic and extrinsic evidence, the specification, prosecution history, and the knowledge of one of ordinary skill in the art; (ii) how the Accused Products infringe the ’585 and ’741 patents; and (iii) how the 585 and 741 DI Products satisfy the technical prong for the ’585 and ’741 patents.

³⁵ When he testified during the Hearing on October 23, 2018, Mr. Steven A. Allinson was the Senior Director of Product Management for Consumer Premise Equipment Software at Comcast. (Tr. (Allinson) at 1467:23-1468:2; RPS_t. at 5.). As Senior Director, Mr. Allinson’s duties included “specify[ing] for new features the requirements to implement . . . those features and then work with the engineering teams to prioritize the implementation of those features.” (Tr. (Allinson) at 1468:3-8.). Comcast identified Mr. Allinson as a fact witness to testify about the accused STBs. (*Id.*).

³⁶ [redacted] (See, e.g., Tr. (Balakrishnan) at 740:16-18.). [redacted] (CX-0440C.0016; Tr. (Balakrishnan) at 740:19-741:9.).

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[REDACTED] (Tr. (Balakrishnan) at 739:12-743:14.).

3. Accused 741 Products

The Accused 741 Products are STBs (hardware and software), [REDACTED]
[REDACTED], that run in Comcast's X1 System and were initially imported on or after April 1, 2016. (Tr. (Balakrishnan) at 1032:8-20, 1034:10-1036:5, 1037:2-1038:9, 1040:1-4.).

4. Representative Accused Products

Representative Accused Products, to which the Parties stipulated, are identified in Table No. 5 below.

Table No. 5: Representative Accused Products

Patent	Representative Accused Product	Accused Products Represented by the Representative Accused Product
'011	[REDACTED]	XG1, XG2, Xi5, and XiD STBs
'585	[REDACTED]	XG2 and XG1 STBs with cloud DVR enabled
	[REDACTED]	XG1 STBs with cloud DVR disabled
	[REDACTED]	Xi5 and XiD STBs
'741	[REDACTED]	XG1 and XG2 STBs
	[REDACTED]	XiD and Xi5 STBs

(Doc. ID No. 657986, Stipulations of the Parties at Ex. 2C (Oct. 5, 2018); JX-0163C (Representative Products)).

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Rovi's experts, Dr. Bovik and Mr. Jim Williams,³⁷ testified that the [REDACTED] STB is representative of the Accused 011 Products XG1, XG2, Xi5, and XiD STBs, and confirmed that there is no difference among these Comcast products for X1 search functions using overloaded key searches and resolution of ambiguous keystrokes. (Tr. (Williams) at 341:7-343:15; Tr. (Bovik) at 567:5-18.).

Mr. Williams and Rovi's expert, Dr. Balakrishnan, testified that the [REDACTED] [REDACTED] are representative of the corresponding Accused 585 Products identified above in Table No. 5, and the [REDACTED] STB is representative of the Xi5 and XiD STBs. (Tr. (Balakrishnan) at 737:4-739:2; Tr. (Williams) at 336:12-340:19, 344:15-348:5.). Mr. Williams and Dr. Balakrishnan confirmed that each Accused 585 Product operates in the same material way with respect to the infringement of the '585 patent so that if one product is found to infringe, the other products should also be found to infringe. (Tr. (Williams) at 336:12-340:19, 344:15-348:5 (discussing JX-0163C, CX-1131C, CDX-0014C.0021); Tr. (Balakrishnan) at 738:9-739:2.).

With regard to the Accused 741 Products, Mr. Williams and Dr. Balakrishnan testified that the [REDACTED] STB is representative of the XG2, XG1 STBs with cloud DVR enabled; the [REDACTED] [REDACTED] is representative of the XG1 STBs with cloud DVR disabled; and

³⁷ When he testified during the Hearing on October 18, 2018, Mr. Jim Williams was President and Founder of Media Strategies and Solutions, LLC. (CPSt., App. F at 1-2.). Rovi identified Mr. Williams as an expert to testify about: (i) the disputed terms of the '799 and '363 patents to one of skill in the art in view of the intrinsic and extrinsic evidence, the specification, prosecution history, and the knowledge of one of ordinary skill in the art; (ii) how certain accused products infringe the '799 and '363 patents; and (iii) how the relevant domestic industry products satisfy the technical prong for the '799 and '363 patents. (CPSt. at 11.). However, as mentioned in Section II.A, *supra*, these patents were terminated from this Investigation before the Hearing commenced. Thus, Mr. Williams did not provide any testimony with respect to these patents during the Hearing.

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the [] STB is representative of the Xi5 and XiD STBs. (JX-0163C; Tr. (Williams) at 337:25-338:4; Tr. (Balakrishnan) at 1032:8-1034:3.). Mr. Williams and Dr. Balakrishnan confirmed that there is no material difference between any of the Accused 741 Products. (Tr. (Williams) at 340:20-341:2; Tr. (Balakrishnan) at 1036:6-23; CDX-0006C.0307.).

B. Comcast's Design Alternatives

Comcast asserted that it has developed and disclosed two (2) alternative designs that remove or replace the features accused of infringing the '011 patent ("Design Alternatives"): (i) the "[] Design Alternative"; and (ii) the "[] Design Alternative."³⁸ (See, e.g., RPBr. at 6, 27; RRB. at 44-46.). According to Comcast, the Design Alternatives eliminate what Rovi has accused as "highlighting." (RX-0547C (Kelly Reb. Rpt. at Ex. C); RPX-0240C (Comcast [] Redesign Source Code); RPX-0241C ([] Redesign Source Code); RPX-0198C ([] Redesign Source Code); RX-0547C (Kelly Reb. Rpt. at Ex. C); RPX-0201C (Comcast [] Redesign Source Code); RPX-0202C ([] Redesign Source Code).).

On June 8, 2018, Comcast made available to Rovi for inspection equipment that provides access to the Design Alternatives and the source code to implement those designs. (*Id.*). On June 11, 2018, Comcast explained in discovery responses why these designs do not infringe. (See CX-1220C (Comcast's 6th Supp. Rog. Resp.) at Nos. 36-37.). Comcast supplemented its responses on June 29, 2018. (See CX-1230C (Comcast's 11th Supp. Rog. Resp.) at Nos. 36-37.).

Rovi's expert, Dr. Bovik, did not present any non-infringement positions for either

³⁸ Rovi filed a motion *in limine* seeking to exclude the Design Alternatives from this Investigation. (Motion Docket No. 1103-037 (Sept. 7, 2018)). Rovi's motion was denied without prejudice. (Order No. 42 (Oct. 15, 2018); see also Table No. 2, *supra.*).

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Design Alternative.³⁹ Rovi failed to address Comcast's Design Alternatives in either its Pre-Hearing or Initial Post-Hearing Briefs. Thus, Rovi has waived any opportunity to do so under Ground Rules 7.2 and 10.2.

C. Rovi's DI Products

Rovi asserted that the following DI Products practice one or more claims of the Asserted Patents: i-Guide, Passport Guide, Advanced Search and Recommendation ("AS&R"), Next-Gen Platform, and TiVo Bolt with Experience 4.0. (CPBr. at 6-7; CBr. at 4.).

Rovi's AS&R software (f/k/a SmartRelevance, SmartSearch, and Reveal), which Rovi argued practices the '011 patent, provides an advanced television experience through features directed at improving users' ability to quickly search for content. (Tr. (Michael Koenig)⁴⁰ at 427:20-435:7.). One such feature relates to the use of overloaded key index searching to provide incremental and highlighted search results. (*Id.* at 430:6-434:10.). AS&R customers have included [REDACTED], and Comcast. (*Id.* at 435:12-20.). [REDACTED] currently uses AS&R. (*Id.* at 435:21-438:2.).

Rovi's iGuide and Passport (collectively, "Classic Guides"), which Rovi contended practice the '585 patent, are IPGs that operate on QAM networks⁴¹ (as opposed to newer IP

³⁹ See Section VII.A.4(f), *infra*.

⁴⁰ When he testified during the Hearing on October 18, 2018, Mr. Michael A. Koenig was Vice President of Business Development at Rovi, and formerly the Vice President of Sales, Service and Business Development at Veveo before its acquisition. (CPSt. at 2; Tr. (Koenig) at 425:8-12, 425:15-426:3.). Rovi identified Mr. Koenig as a fact witness to testify as to Veveo's history with Comcast and Rovi's investments in search technology over time. (CPSt. at 2.).

⁴¹ Ms. Sarah Gaeta, Rovi's Vice President and General Manager in Guide Products and Professional Services when she testified during the Hearing on October 17-18, 2018, confirmed that QAM is the "traditional old technology deployed by U.S. cable systems." (Tr. (Gaeta) at 262:7-9; *see also id.* at 232:20-233:2 ("Q. What are the differences between the classic guides that you managed and those new

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networks) and provide users with interactive discovery and navigation functions. (Tr. (Sarah Gaeta)⁴² at 200:22-202:8, 204:18-205:17; CX-1159 (i-Guide Video); CX-0640 (i-Guide Product Details); CX-1162 (Passport Video); CX-0641 (Passport Product Details).). Approximately [] U.S. subscribers use the Classic Guides in their homes. (CX-1379C (U.S. Revenue).). Ms. Gaeta testified that []. (Tr. (Gaeta) at 221:10-20, 225:3-11; CX-0488C (Roadmaps) at 8-9.).

Rovi's Next-Gen Platform ("Next-Gen"), which Rovi asserted practices the '011, '585 and '741 patents, is Rovi's newest IPG solution. Next-Gen delivers IP-based capabilities derived from both FanTV and TiVo elements. (*Id.* at 239:3-242:11.). The Next-Gen platform provides users with guide and content discovery services, and can be run on a variety of hardware devices. (*Id.* at 239:14-25.). Rovi first released Next-Gen ([]) in April 2018. (*Id.* at 248:6-8.).

[]
[]
[]. (*Id.* at 248:9-252:21.). []
[]. (*Id.*;
CX-0476C (Roadmap) at 2.).

IP guides that you just referred to? A. So classic guides are on that QAM technology, and that's pretty much the original cable infrastructure that was rolled out in the United States back when cable pay TV started. And the newer guides are based on Internet protocol, or IP technology, which is exactly that. It's like getting onto the Internet to get your video streams. And the classic guides do not understand or speak IP, so they can't operate in that new environment."), 291:6-11.).

⁴² When she testified during the Hearing on October 17-18, 2018, Ms. Sarah R. Gaeta was Vice President and General Manager in Guide Products and Professional Services at Rovi, a position she from 2014. (CPSt. at 1; Tr. (Gaeta) at 200:18-21.). Rovi identified Ms. Gaeta as a fact witness to testify generally as to Rovi, Rovi's domestic industry products, and the trajectory of Rovi's product development from cable to IP. (CPSt. at 1).

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Licensee TSI's TiVo Bolt with Experience 4.0, which Rovi argued practices the '585 and '741 patents, [REDACTED]

[REDACTED]. (JX-0096C (James Denney Dep. Tr. (June 15, 2018))⁴³ at 16:16-17:8, 58:15-59:15; JX-0171C (Denney Dep. Tr. (Aug. 24, 2018)) at 26:17-27:9, 47:6-11; JX-0126C (Chris Thun Dep. Tr. (June 27, 2018))⁴⁴ at 15:11-22, 17:20-23.).

VI. CLAIM CONSTRUCTION

A. Legal Standard: Level of Ordinary Skill in the Art

The relevant time for assessing the level of ordinary skill in the art is the effective filing date of the patent. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc) (“We have made clear, moreover, that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.”).

Factors to consider in determining the level of ordinary skill in the art include: (1) the educational level of the inventor; (2) the type of problems encountered in the art; (3) the prior art solutions to those problems; (4) the rapidity with which innovations are made; (5) the sophistication of the technology; and (6) the educational level of active workers in the field. *See*

⁴³ At the time of his deposition on June 15, 2018, Mr. James Denney was the Vice President of Product and Strategy of TiVo Solutions, a position he held for 7-8 years. (JX-0096C (Denny Dep. Tr. (June 15, 2018)) at 8:20-9:2.). His responsibilities included running the product management team “for the service part of the business,” which involved managing “a team that works on usability studies and a team that works on media operations,” and then “coordinat[ing] product solutions across different groups.” (*Id.* at 9:3-9.).

⁴⁴ Rovi designated Mr. Chris Thun to testify on behalf of Rovi with regard to certain topics listed in Respondent's Notice of Corporate Deposition Directed to Complainants. (JX-0126C (Thun Dep. Tr. (June 27, 2018)) at 7:17-8:7.).

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Envtl. Designs, Ltd. v. Union Oil Co. of Cal., 713 F.2d 693, 696 (Fed. Cir. 1983). “These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art.”

Daiichi Sankyo Co., Ltd. v. Apotex, Inc., 501 F.3d 1254, 1256 (Fed. Cir. 2007).

B. Definition of Person of Ordinary Skill in the Art

The Private Parties disagreed over the qualifications of a person of ordinary skill in the art for the Asserted Patents.

Rovi proposed that a person of ordinary skill in the art would have a bachelor’s degree in electrical engineering, computer engineering, computer science, or applied mathematics as well as two or more years of relevant industry experience, including in electronic content delivery, electronic program guides, television video signal processing, graphical user interfaces, cable or satellite television systems, set-top boxes, multimedia systems, or data search techniques.

(CMBr. at 1 (citing Madisetti Decl. at ¶ 7; Madisetti Decl. at ¶¶ 17-23; Balakrishnan Decl. at ¶ 12).).

Comcast proposed that a person of ordinary skill in the art would have a bachelor’s degree in electrical engineering, computer engineering, computer science, applied mathematics, or a similar discipline, as well as two or more years of relevant industry or research experience, including in electronic content delivery, electronic program guides, television video signal processing, graphical user interfaces, cable or satellite television systems, set-top boxes, multimedia systems, or data search techniques. (RMBr. at 12, 27, 74.).

Staff did not offer a definition.

It was determined that a person of ordinary skill in the art would have had a bachelor’s degree in electrical engineering, computer engineering, computer science, or applied mathematics as well as two or more years of relevant industry experience, including in electronic

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content delivery, electronic program guides, television video signal processing, graphical user interfaces, cable or satellite television systems, set-top boxes, multimedia systems, or data search techniques. (*Markman* Order at 11-12.).

C. Legal Standard: Claim Construction⁴⁵

Claim construction begins with the plain language of the claims themselves. Claims should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art, viewing the claim terms in the context of the entire patent. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006). In some cases, the plain and ordinary meaning of the claim language is readily apparent and claim construction will involve little more than “the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314. In other cases, claim terms have a specialized meaning and it is necessary to determine what a person of ordinary skill in the art would have understood the disputed claim language to mean by analyzing “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, as well as the meaning of technical terms, and the state of the art.” *Id.* (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

The claims themselves provide substantial guidance as to the meaning of disputed claim language. *Id.* “[T]he context in which a term is used in the asserted claim can be highly instructive.” *Id.* Likewise, other claims of the patent at issue, “both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term.” *Id.* (citation

⁴⁵ The claim constructions for the agreed upon and disputed claim terms are listed in Sections VII.A.3, VIII.A.2, and IX.A.2, *infra*.

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omitted).

With respect to claim preambles, a preamble may limit a claimed invention if it: (i) recites essential structure or steps; or (ii) is “necessary to give life, meaning, and vitality” to the claim. *Eaton Corp. v. Rockwell Int’l Corp.*, 323 F.3d 1332, 1339 (Fed. Cir. 2003) (citations omitted). The Federal Circuit has explained that a “claim preamble has the import that the claim as a whole suggests for it. In other words, when the claim drafter chooses to use both the preamble and the body to define the subject matter of the claimed invention, the invention so defined, and not some other, is the one the patent protects.” *Id.* (quoting *Bell Commc’ns Research, Inc. v. Vitalink Commc’ns Corp.*, 55 F.3d 615, 620 (Fed. Cir. 1995)). When used in a patent preamble, the term “comprising” is well understood to mean “including but not limited to,” and thus, the claim is open-ended. *CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007). The patent term “comprising” permits the inclusion of other unrecited steps, elements, or materials in addition to those elements or components specified in the claims. *Id.*

In cases where the meaning of a disputed claim term in the context of the patent’s claims remains uncertain, the specification is the “single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1321. Moreover, “[t]he construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Id.* at 1316. As a general rule, however, the particular examples or embodiments discussed in the specification are not to be read into the claims as limitations. *Id.* at 1323.

The prosecution history may also explain the meaning of claim language, although “it often lacks the clarity of the specification and thus is less useful for claim construction

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purposes.” *Id.* at 1317. The prosecution history consists of the complete record of the patent examination proceedings before the U.S. Patent and Trademark Office (“PTO”), including cited prior art. *Id.* It may reveal “how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

If the intrinsic evidence is insufficient to establish the clear meaning of a claim, a court may resort to an examination of the extrinsic evidence.⁴⁶ *Zodiac Pool Care, Inc. v. Hoffinger Indus., Inc.*, 206 F.3d 1408, 1414 (Fed. Cir. 2000). Extrinsic evidence may shed light on the relevant art, and “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Phillips*, 415 F.3d at 1317. In evaluating expert testimony, a court should disregard any expert testimony that is conclusory or “clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.” *Id.* at 1318. Expert testimony is only of assistance if, with respect to the disputed claim language, it identifies what the accepted meaning in the field would be to one skilled in the art. *Symantec Corp. v. Comput. Assocs. Int’l, Inc.*, 522 F.3d 1279, 1289 n.3., 1290-91 (Fed. Cir. 2008). Testimony that recites how each expert would construe the term should be accorded little or no weight. *Id.* Extrinsic evidence is inherently “less reliable” than intrinsic evidence, and “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Phillips*, 415 F.3d at 1318-19.

⁴⁶ “In those cases where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper.” *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996).

VII. U.S. PATENT NO. 7,779,011

A. Literal Infringement⁴⁷

1. Legal Standard

“Determination of infringement is a two-step process which consists of determining the scope of the asserted claim (claim construction) and then comparing the accused product . . . to the claim as construed.” *Certain Sucralose, Sweeteners Containing Sucralose, and Related Intermediate Compounds Thereof*, Inv. No. 337-TA-604, Comm’n Opinion at 36 (U.S.I.T.C., April 28, 2009) (citing *Litton Sys., Inc. v. Honeywell, Inc.*, 140 F.3d 1449, 1454 (Fed. Cir. 1998)).

An accused device literally infringes a patent claim if it contains each limitation recited in the claim exactly. *Litton*, 140 F.3d at 1454. Each patent claim element or limitation is considered material and essential. *London v. Carson Pirie Scott & Co.*, 946 F.2d 1534, 1538 (Fed. Cir. 1991).

A process or method claim is infringed only if each step of the claimed method is performed. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1317 (Fed. Cir. 2009); *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1328 (Fed. Cir. 2008). The mere sale or importation of an apparatus capable of performing the patented method does not constitute infringement. *In re Kollar*, 286 F.3d 1326, 1332 (Fed.Cir.2002) (recognizing “the distinction between a claim to a product, device, or apparatus, all of which are tangible items, and a claim to a process, which consists of a series of acts or steps. . . . [A process] consists of doing something, and therefore has to be carried out or performed.”); *Joy Techs., Inc. v. Flakt, Inc.*, 6 F.3d 770, 775 (Fed.

⁴⁷ Rovi did not argue that any of the asserted claims of the Asserted Patents are infringed under the doctrine of equivalents.

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Cir. 1993) (“The sale of the apparatus is not a sale of the method. A method claim is directly infringed only by one practicing the patented method.”).

“To prove an infringing ‘use’ of a system under § 271(a), a patentee must demonstrate ‘use’—that is, ‘control’ and ‘benefit’—of the claimed system by an accused direct infringer.” *Intellectual Ventures I LLC v. Motorola Mobility LLC*, 870 F.3d 1320, 1328 (Fed. Cir. 2017). The direct infringer must have obtained “benefit” from each and every element of the claimed system. *Id.* at 1329 (citing *Centillion Data Sys., LLC v. Qwest Comm’ns Int’l, Inc.*, 631 F.3d 1279, 1284 (Fed. Cir. 2011)). In addition, the required “control,” whether direct or indirect, “is the ability to place the system as a whole into service.” *Id.* (quoting *Centillion Data Sys.*, 631 F.3d at 1284).

In a Section 337 investigation, the complainant bears the burden of proving infringement of the asserted patent claims by a preponderance of the evidence. *Enercon GmbH v. Int’l Trade Comm’n*, 151 F.3d 1376, 1384 (Fed. Cir. 1998). If any claim limitation is absent, there is no literal infringement of that claim as a matter of law. *Bayer AG v. Elan Pharm. Research Corp.*, 212 F.3d 1241, 1247 (Fed. Cir. 2000).

2. Infringement Overview

Rovi has argued that when operating in the X1 System, the Accused 011 Products satisfy claims 1 and 9 of the ’011 patent. (*See, e.g.*, CBr. at 10.). *Litton*, 140 F.3d at 1454. Claims 1 and 9 require a method and system, respectively, that process unresolved, overloaded keystrokes, in which a key is in a fixed association with a number and at least one alphabetic character to identify an item in a set of items, in which each item is associated with information comprising one or more words, in accordance with the following limitations:

[1a, 9a] ***Indexing*** the items by associating subsets with strings of one or more

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unresolved keystrokes for the overloaded key such that the items are directly mapped to the strings of unresolved keystrokes for various search query prefix substrings.

[1b, 9b] **Determining**, for a subset of items, which letters and numbers in the information associated with items, caused the items to be associated with the strings of unresolved keystrokes that are directly mapped to the subset of items.

[1c, 9c] **Receiving** a user search query composed of unresolved keystrokes that comprises a prefix substring for at least one word in the information associated with the desired item.

[1d, 9d] **Identifying and displaying**, in response to each unresolved keystroke, the subsets of items and the associated information for the strings of unresolved keystrokes based on the direct mapping of strings of unresolved keystrokes to subsets for items.

[1e, 9e] **Highlighting**, as the identified items are displayed, the letters and numbers in the information that were determined to have caused the displayed items to be associated with the strings of unresolved keystrokes that are directly mapped to the items to show how the unresolved keystrokes entered match the information.

[1f, 9f] **Ordering** the displayed items in accordance with one or more criteria.

(JX-0001 at 8:40-9:13, 9:37-10:15 (emphases added); *see also* Tr. (Bovik) at 558:12-559:5; CDX-0008C.0024.).

Comcast contested that the Accused 011 Products practice the “determining” and “highlighting” limitations recited in 1[b]/9[b] and 1[e]/9[e], respectively, and the “displaying” limitation recited in 1[d]/9[d]. As discussed below in Sections V.A.4(a)-(g), Rovi presented testimony and documentary evidence supporting its assertion that the Accused 011 Products satisfy these limitations.

Accordingly, Rovi has met its burden and proven that the Accused 011 Products operating in the X1 System satisfy each and every limitation recited in claims 1 and 9 of the '011 patent, and that Comcast infringes these claims.

3. Relevant Claim Terms

The Private Parties agreed to the following construction of one of the claim terms recited

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in the asserted claims of the '011 patent, which this Court has adopted. (See *Markman* Order, App. A at 1.).

Table No. 6: Construction of Agreed Upon Claim Term Relevant to the '011 Patent

Claim Term	Adopted Construction
"prefix substring(s)" (Claims 1 and 9)	"a variable length string of characters that contains fewer than all the characters making up the word"

This Court construed the following constructions of the disputed claim terms.⁴⁸

(*Markman* Order, App. A at 2-14.).

Table No. 7: Constructions of the Disputed Claim Terms Relevant to the '011 Patent

Claim Term	Adopted Construction
Preamble (Claims 1 and 9)	The preamble is limiting, but it limits only the "environment" in which the invention operates and does not recite additional steps or components in the claimed invention, per <i>Advanced Software Design Corp. v. Fiserv, Inc.</i> , 641 F.3d 1368, 1375 (Fed. Cir. 2011) (holding that the preamble steps limit only the claimed environment, not the claimed method or system).
"a computer readable medium comprising instructions for causing a computer system to:" (Claim 9)	The preamble is limiting as explained above (limits only the "environment" in which the invention operates) per <i>Advanced Software Design Corp. v. Fiserv, Inc.</i> , 641 F.3d 1368, 1375 (Fed. Cir. 2011) (holding that the preamble steps limit only the claimed environment, not the claimed method or system).

⁴⁸ The Private Parties disputed the meaning of additional claim terms recited in claims that have been terminated from this Investigation. Those terms are not included in Table No. 7.

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Claim Term	Adopted Construction
	The proper construction is “one computer readable medium, or two or more computer-readable media, individually or collectively containing instructions for causing the computer system to perform the recited steps.”
“items” (Claims 1 and 9)	“information units, each with a name comprising one or more words”
“directly mapped” (Claims 1 and 9)	“each alphanumeric character of a prefix substring associated with an item is matched with its corresponding numeric key equivalent on an overloaded keypad”

4. When Operating in the X1 System, the Accused 011 Products Practice Claims 1 (Method) and 9 (System) of the '011 Patent⁴⁹

- a) **Preambles [1, 9]: “A method of [system for] processing unresolved keystroke entries by a user from a keypad with overloaded keys in which a given key is in fixed association with a number and at least one alphabetic character, said unresolved keystroke entries being directed at identifying an item from a set of items, each of said items being associated with information describing the item comprising one or more words, said method [system] comprising”**

Rovi’s expert, Dr. Bovik, opined that the Accused 011 Products that implement the X1 Platform operate in the recited environment by permitting users to perform searches for items (e.g., TV shows) with unresolved keystrokes on handheld remotes containing overloaded keys in

⁴⁹ Italicized text in brackets refers to: (i) language recited in claim 9 that differs slightly from corresponding language recited in claim 1, e.g., “method” (claim 1)/“system” (claim 9), “indexing” (claim 1)/“index” (claim 9); or (ii) language in claim 9 that is not recited in claim 1 (*see* [1e] and [9e]). Text in brackets that is not italicized refers to language in claim 1 that is not recited in claim 9 (*see* [1e] and [9e]).

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which numeric keys are associated with one or more letters.⁵⁰ (Tr. (Bovik) at 576:25-579:18.).

[REDACTED]
[REDACTED]. (*Id.* at 555:14-556:20.).

Comcast's expert, Dr. John Kelly,⁵¹ did not dispute that the Accused 011 Products satisfy the preamble language of claim 1 other than asserting the Accused 011 Products do not "display" the results of unresolved keystroke searches, because Comcast does not provide its customers with a television. (Tr. (Kelly) at 1770:3-1771:4.). However, as Dr. Bovik pointed out, the Accused 011 Products operate as part of a system, and no user can search Comcast's X1 Guide (or even see the guide) without an accused STB and display. (Tr. (Bovik) at 567:19-25 ("Q. Would a number search or overloaded key search work without a set-top box? A. Not in the consumer setting at all. Q. So if you remove the set-top box from the system, from the consumer's home, the user wouldn't be able to do an overloaded key search? A. That's correct.")).

With respect to the preamble language of claim 9 reciting "a computer-readable medium

⁵⁰ The preamble was found to be "limiting, but only as to the 'environment' in which the invention operates and does not recite additional steps or components in the claimed invention." (*Markman* Order, App. A at 2.).

⁵¹ When he testified during the Hearing on October 24, 2018, Dr. John Kelly was the President and CEO of the Santa Barbara Technology Group, Inc. (Tr. (Kelly) at 1676:3-6; RPSt. at Ex. C.). Comcast identified Dr. Kelly as an expert to: (1) testify about matters relating to, at least, the technical background of the Asserted Patents; the interpretation of the claims in those patents; issues relating to the alleged infringement of the Asserted Patents by the Accused Products and Comcast's Design Alternatives; the design, structure, function, and operation of the Accused Products and Design Alternatives; issues relating to the validity of the Asserted Patents; issues relating to whether the Rovi DI Products practice the Asserted Patents and whether Rovi satisfies the technical prong of the domestic industry for the Asserted Patents; and other issues in connection with the alleged infringement, validity, enforceability, and any other technical issue that may arise with respect to the Asserted Patents; and (2) rebut the testimony of Rovi's experts or fact witnesses regarding any of these issues. (RPSt. at 3.).

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comprising instructions for causing the computer system to” process the unresolved keystrokes, Dr. Bovik explained the [REDACTED]
[REDACTED], to which Dr. Kelly offered no response. (Tr. (Bovik) at 599:23-600:15; CDX-0008C.0100.).

With regard to claim 1, Comcast did not rebut the evidence Rovi adduced in its pre-hearing or post-hearing briefing. Thus, any argument as to the preamble recited in claim 1 is waived under Ground Rules 7.2 and 10.1. With respect to claim 9, Comcast failed to present any counterargument or evidence in its post-hearing briefing. Accordingly, any argument as to the preamble recited in claim 9 is waived under Ground Rule 10.1.

For these reasons, Rovi has proven by a preponderance of the evidence that the Accused 011 Products meet the preambles recited in claims 1 and 9 of the '011 patent.

- b) **1[a]/9[a]: “indexing [*index*] said items by associating subsets of said items with corresponding strings of one or more unresolved keystrokes for overloaded keys so that the subsets of items are directly mapped to the corresponding strings of unresolved keystrokes for various search query prefix substrings”**

Dr. Bovik testified that based on his review of relevant deposition testimony, source code, and screenshots, the Accused 011 Products, operating in the X1 System, practice the indexing limitations recited in claims 1 and 9. (Tr. (Bovik) at 584:11-15.). Specifically, Dr. Bovik explained that X1 associates subsets of items with corresponding strings of one or more unresolved keystrokes for overloaded keys so that the subsets of items are directly mapped to the corresponding strings of unresolved keystrokes for various search query prefix substrings. (*Id.* at 580:21-584:15.). Dr. Bovik testified that in this process, [REDACTED]
[REDACTED]

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[REDACTED]. (*Id.* at 582:17-583:7.). For example,

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (*Id.* at 582:17-

584:4; CDX-0008C.0060-61); *see also* JX-0107C (Kallurkar Dep. Tr. (June 21, 2018)) at

170:19-172:19; CDX-0008C.62.). Dr. Kelly did not dispute that the Accused 011 Products

satisfy this limitation. (Tr. (Kelly) at 1783:4-1784:2.).

Comcast did not rebut this evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

For the foregoing reasons, Rovi has proven by a preponderance of the evidence that the Accused 011 Products meet limitations 1[a] and 9[a] recited in claims 1 and 9 of the '011 patent.

- c) **1[b]/9[b]: “for at least one subset of items, determining [*determine*] which letters and numbers present in the information associated with and describing the indexed items of said subset caused said items to be associated with the strings of one or more unresolved keystrokes that are directly mapped to said subset”**

During the Hearing, Dr. Bovik persuasively testified that based on his review of Dr. Kelly’s expert report, relevant deposition testimony, source code, and screenshots, the Accused 011 Products, operating in the X1 System, practice the determining limitations recited in claims 1 and 9. (Tr. (Bovik) at 588:12-16.). Added during prosecution of the '011 patent, the inventors explained:

[This limitation] requires the determination of what letters and numbers in information describing particular items (e.g., letters in words of the titles) caused the items to be grouped in a particular subset that is directly mapped to a particular string of unresolved keystrokes. It is these letters and numbers that are later

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highlighted upon identification and display of the subsets of items, not simply any letters and numbers that correspond to the unresolved keystrokes. The Application provides an example of this feature in Fig. 6B and the description at ¶¶ 35-38, as filed. Specifically, if a user enters the unresolved keystrokes “866”, the system returns the subset of items shown in Fig. 6B that are directly mapped to that string. The item “Twelve Monkeys(1995)” [sic] is one of the items included in the subset directly mapped to “866”.

(*Id.* at 585:11-19; JX-0008.0882 ('011 file history)).

Based upon this understanding, Dr. Bovik opined that Comcast's [redacted]

[redacted]

[redacted]

[redacted]. (Tr.

(Bovik) at 586:13-587:2.). For instance, as part of the [redacted]

[redacted]

[redacted] (*Id.* at 582:17-583:1, 586:2-587:2;

CDX-0008C.0066-68.). Similarly, the [redacted]

[redacted]

[redacted]

[redacted] (*Id.* at 582:17-583:1, 586:2-587:2; CDX-0008C.0066-68.).

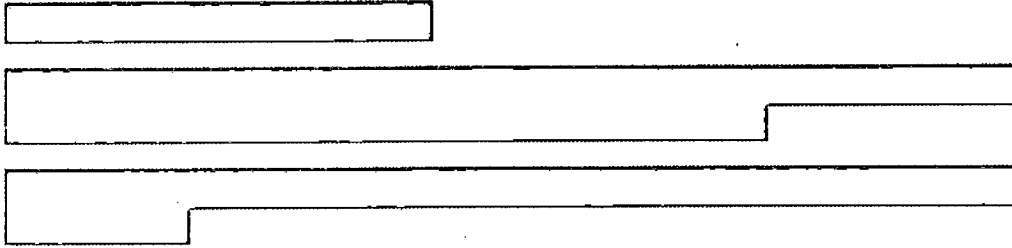
Dr. Bovik testified that the [redacted]

[redacted]

[redacted], as shown below in Figure 12.

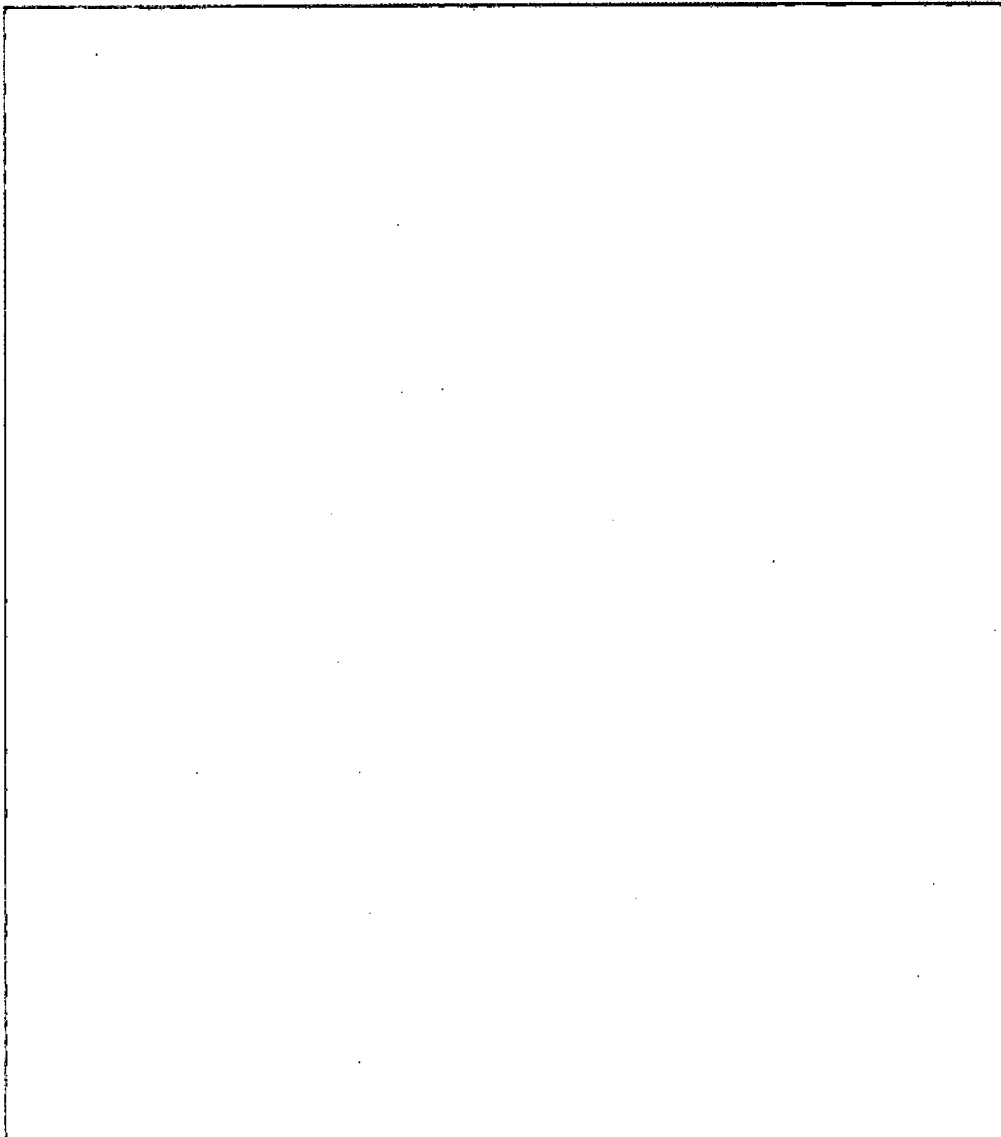
[redacted]

[redacted]



(Tr. (Bovik) at 586:13-587:2.).

Figure 12: “Determining” Step Performed by Comcast’s



(CDX-0008C.0068.).

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For the [redacted]

[redacted]

[redacted]

[redacted]. (Tr. (Bovik) at 586:13-

587:2.). Without the [redacted]

[redacted]

[redacted]

[redacted] (*Id.*).

Comcast's expert, Dr. Kelly, asserted that [redacted]

[redacted]

[redacted]

(Tr. (Kelly) at 1694:3-25.). Referencing the search query "5205205263," which yields, *inter*

alia, the title "La La Land," Dr. Kelly testified that [redacted]

[redacted]

[redacted]

[redacted]. (*Id.* at 1695:7-

1699:8; RX-1578C.0009 (Kelly Rebuttal Report Screenshots).). Dr. Kelly's position fails for the

following reasons.

In almost all searches, there was no dispute that the letters and number highlighted [redacted]

[redacted]

[redacted]

[redacted]. (Tr. (Bovik) at

597:8-16; Tr. (Kelly) at 1782:1-1784:2; CDX-0008C.0053 (citing CX-0952C.0040).). Dr.

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Kelly's examples involved:

[REDACTED]. (Tr. (Kelly) at 1695:7-1696:16, 1708:8-18.). Even in such instances, the source code reveals what caused the highlighting. (*Id.* at 1708:8-1709:3.). As Rovi noted, nothing in the claim language prohibits meeting the determining step by reviewing source code. (CBr. at 22.).

Dr. Kelly also based his non-infringement argument on a construction of “determining” that was not adopted. According to Dr. Kelly, the determining step has nothing to do with grouping items into subsets but rather, is part of highlighting such that the later “highlighting” step must be the “direct result of” the earlier determining step. (Tr. (Kelly) at 1804:7-1806:7 (“[T]he highlighting has to be as a result of the -- it says here quite clearly in the, let me see, ‘highlighting the letters and numbers present that were determined to have cause[d].’ So it has to be a direct result of that. It’s not sufficient that the determining happened at some point in the past and then now completely disconnected there is highlighting.”).).

However, nothing in either the “determining” or “highlighting” limitation, or the adopted claim constructions, require that the determining step *directly result in* the highlighting, with which Dr. Kelly agreed. (*Id.* at 1806:2-7 (“Q. Dr. Kelly, you just said that claim 1e requires, and I wrote it down, ‘the highlighting must be the direct result of determining.’ Those words, ‘the direct result of,’ don’t appear in 1e, do they? A. They do not.”).). The claims simply require that, “in response to each unresolved keystroke,” the highlighted letters and number are the same letters and numbers “that were determined to have caused” the association with the unresolved key strokes. (JX-0001 at 9:3-11, 10:4-13; Tr. (Bovik) at 597:8-17; Tr. (Kelly) at 1780:25-1781:14.).

Moreover, Dr. Kelly’s opinion that “[t]he determining step is not grouping,” which is

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incorrect for the reasons discussed directly above, conflicts with his application of the determining limitation to the prior art. For purposes of invalidity, Dr. Kelly acknowledged that the Gross and Smith references satisfy this limitation by grouping items into subsets with an inverted index, which is how X1's Solr/Lucene inverted index groups metadata items into subsets.

Q. And for the determining, you understand that Dr. Bovik reads that limitation differently?

A. I do indeed.

Q. And the way Dr. Bovik reads it, he reads it to apply -- in fact, if we can bring up 8C.65, and you showed testimony from Dr. Bovik. And the way that he reads this limitation is that it's talking about grouping in particular subsets that are directly mapped to particular screens of unresolved keys; right?

A. Yes. He says that the grouping is enough to provide the determination.

Q. And under that reading of this step, you believe that the Gross reference shows 1b through the use of an inverted index?

A. Gross and Smith in combination, I believe, renders this obvious with that type of interpretation.

Q. And you pointed out that Gross uses an inverted index; right?

A. It does.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(Tr. (Kelly) at 1772:11-24; *see also* Tr. (Bovik) at 587:8-588:11.).

For the reasons discussed above, Rovi has proven by a preponderance of the evidence that the Accused 011 Products meet limitations 1[b] and 9[b] recited in claims 1 and 9 of the '011 patent.

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- d) **1[c]/9[c]: subsequent to said indexing, receiving [receive] from a user a search query for desired items composed of unresolved keystrokes, said search query comprising a prefix substring for at least one word in information associated with the desired item”**

Dr. Bovik testified that the Accused 011 Products, operating in the X1 System, receives from a user (after indexing) a search query for desired items composed of unresolved keystrokes, comprising a prefix substring for at least one word in a title associated with a show or movie.

(Tr. (Bovik) at 588:17-590:16; CX-1054C.0005-7, 9 (Snapshot-011-1-2 Screenshots); CDX-0008C.0075-78.). Dr. Bovik explained that [REDACTED]

[REDACTED]. (Tr. (Bovik) at 569:4-570:10, 590:20-

591:10; CDX-0008C.0079.). Dr. Kelly did not contest that the Accused 011 Products satisfy this limitation.

Comcast did not rebut this evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

Accordingly, Rovi has proven by a preponderance of the evidence that the Accused 011 Products meet limitations 1[c] and 9[c] recited in claims 1 and 9 of the '011 patent.

- e) **1[d]/9[d]: “in response to each unresolved keystroke, identifying [identify] and displaying [display on a display device at least one of] the subsets of items, and information associated therewith, that are associated with the strings of one or more unresolved keystrokes received from the user based on the direct mapping of strings of unresolved keystrokes to subsets of items”**

Dr. Bovik provided persuasive testimony that the Accused 011 Products, operating in the X1 System, practice these limitations. (Tr. (Bovik) at 591:11-14, 596:1-16.). In response to each successive unresolved keystroke received by the Accused 011 Products, Dr. Bovik

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explained that [REDACTED]
[REDACTED]
[REDACTED]. (*Id.* at 591:11-592:11.). Dr. Bovik testified that [REDACTED]
[REDACTED]. (*Id.*) [REDACTED]
[REDACTED]. (*See* CX-1054C.0009 (Snapshot-011-1-2 Screenshots) (showing that [REDACTED]
[REDACTED])); *see also* CX-1054C.0005-11 (Snapshot-011-1-2 Screenshots); Tr. (Bovik) at 591:11-592:11; CDX-0008C.0075-86.).

Dr. Kelly asserted that the accused STBs do not meet these limitations because they do not “display.” (Tr. (Kelly) at 1714:9-11.). Dr. Kelly stated that the accused STBs [REDACTED]
[REDACTED]
[REDACTED]. (*Id.* at 1714:14-1715:4.). However, as Dr. Bovik opined, Comcast’s STBs [REDACTED]
[REDACTED]. (Tr. (Bovik) at 595:25-596:14.). Furthermore, the [REDACTED]
[REDACTED], which Comcast’s fact witnesses, Messrs. John McCann⁵² and Steven Allinson, confirmed. (Tr. (McCann) at 1432:3-9, 1433:5-11, 1434:4-6, 1435:11-14, 1435:23-1436:1, 1436:22-1437:3, 1440:18-24, 1441:1-4, 1443:10-1, 1444:11-18; Tr. (Allinson) at 1492:22-25, 1493:10-17, 1494:3-20, 1496:17-1498:11, 1499:25-

⁵² When he testified during the Hearing on October 23, 2018, Mr. John McCann was the Vice President of Software Development and Engineering at Comcast. (RPSt. at 4.). His role in this capacity was to “oversee software development, testing and operations of [Comcast’s] software services.” (Tr. (McCann) at 1398:25-1399:2.). Comcast identified Mr. McCann as a fact witness to testify about the X1 Platform and the [REDACTED] as they relate to the accused functionalities and Comcast’s design alternatives. (*Id.*)

1500:21.). Dr. Kelly also acknowledged that:

[REDACTED]. (Tr. (Kelly) at 1763:19-1764:9.).

For the reasons discussed above, Rovi has proven by a preponderance of the evidence that the Accused 011 Products meet limitations 1[d] and 9[d] recited in claims 1 and 9 of the '011 patent.

- f) **1[e]/9[e]: “in response to each unresolved keystroke, as the identified items are displayed, highlighting [*highlight on the display device*] the letters and numbers present in the one or more words in said information describing the identified items that were determined to have caused the displayed items to be associated with the [strings of] unresolved keystrokes [that are directly mapped to said items] [*received*] so as to illustrate to the user how the [*strings of*] unresolved keystrokes [*that are directly mapped to said items*] entered match the information associated with the displayed items”**

i. *Accused 011 Products*

Evidence and testimony adduced in this Investigation demonstrate that the Accused 011 Products, operating in the X1 System, meet these limitations by highlighting letters and numbers present in the displayed title that were determined to have caused the association between the unresolved keystrokes and the direct mapping to the titles of the content items. (Tr. (Bovik) at 596:17-597:24.).

Screenshots taken using the Accused 011 Products with the X1 System show the highlighting that results from entering overloaded keys on the STB remote. For example, as shown below in Figure 13, when the user presses the unresolved overloaded “3” key followed by the unresolved overloaded “4” key and then the unresolved overloaded “7” key, the search yields results with “Disney” in the first word of the title, with the letters “D,” “i,” and “s” bolded or highlighted.

Figure 13: Snapshot of Highlighted Search Results



(CX-1054C.0009) (Snapshot-011-1-2 Screenshots); *see also id.* at CX-1054C.0005, 11; Tr. (Bovik) at 596:21-597:24; CDX-0008C.0075-86.).

As Dr. Bovik testified, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(Tr. (Bovik) at 597:8-17.).

As discussed above in Section VII.A.4(c), Dr. Kelly contended that the Accused 011 Products operating in the X1 System do not satisfy the highlighting limitations because the

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highlighted letters and numbers are not necessarily the “direct result of” the earlier determining step. (Tr. (Kelly) at 1804:10-22, 1806:2-7.). Rovi’s expert, Dr. Bovik, acknowledged that in certain “*special cases*,”

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(Tr. (Bovik) at 571:8-572:16 (emphases added).).

Dr. Bovik also clarified, however, that Dr. Kelly mainly relied upon such “special cases” to support his non-infringement arguments.

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(*Id.* at 572:16-573:8 (emphases added); *see also* Tr. (Kelly) at 1695:7-1696:16, 1708:8-18.).

As discussed above in Section VII.A.4(c), Dr. Kelly conceded that nothing in the claim language requires the determining step to directly result in the highlighting. (Tr. (Kelly) at 1806:2-7.). Dr. Kelly also agreed that his interpretation of the “determining” and “highlighting” limitations not only conflicted with how he applied them in his invalidity analysis, but also required him to read requirements into the claim language that do not appear and were not part of any claim construction. (*Id.* at 1782:22-1785:22.). Additionally, as discussed in Section

VII.A.4(c), [REDACTED]

[REDACTED]

[REDACTED]. (Tr. (Bovik) at 573:22-574:1.).

Accordingly, Rovi has proven by a preponderance of the evidence that the Accused 011 Products meet limitations 1[e] and 9[e] recited in claims 1 and 9 of the '011 patent.

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ii. *Design Alternatives*

Comcast presented two (2) independent Design Alternatives that it claimed do not infringe the '011 patent: (1) Design Alternative; and (2) Design Alternative. (RPBr. at 6, 27; RRBr. at 44.). Dr. Kelly testified that the Design Alternatives eliminate any possibility of infringement by removing or preventing any highlighting in X1 search results. (Tr. (Kelly) at 1716:23-1722:17; RDX-0004C.0043-47.). According to Dr. Kelly and Comcast's fact witnesses, both alternatives have been completed, tested, and are ready for deployment. (Tr. (Kelly) at 1716:23-1722:17; see also Tr. (McCann) at 1422:10-16; JX-0107C (Kallurkar Dep. Tr.) at 201:20-202:1, 202:7-15, 203:11-204:3, 204:10-17; RPX-0198C (design alternative source code), RPX-0201C (design alternative source code); RPX-0202C (same); Order No. 42 at 7-9 (Oct. 15, 2018) (denying Rovi's MIL No. 4 to exclude the Design Alternatives).)

Dr. Kelly explained that the Design Alternative is implemented on the

. (Tr. (Kelly) at 1717:20-1719:16; RDX-0004C.0043-44; RPX-0198C (design alternative source code). Dr. Kelly and Mr. McCann

confirmed that

. (Tr. (McCann) at 1421:3-16; Tr. (Kelly) at 1718:16-21.).

Moreover, during the Hearing, Comcast demonstrated the effect of the design alternative by presenting examples that showed

. (RX-1589C (API response without design alternative) at 1; RX-1588C (API response with design alternative) at 1; Tr. (Kelly) at 1717:15-1718:21.).

Dr. Kelly and Mr. McCann explained that the Design Alternative implemented on

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[REDACTED]. (Tr. (McCann) at 1421:17-1424:6; Tr. (Kelly) at 1719:18-1722:17; RDX-0004C.0045-46; RPX-0201C (XRE design alternative source code); RPX-0202C (same). Specifically, [REDACTED]
[REDACTED]. (Tr. (Kelly) at 1719:18-1722:17; RDX-0004C.0045-46; RX-1589C (example API response) at 1.). As a result, there is no highlighting. (Tr. (McCann) at 1421:3-1422:9; Tr. (Kelly) at 1720:4-16.).

Rovi's own expert, Mr. Williams, confirmed that both Design Alternatives eliminate highlighting in X1 search results. (Tr. (Williams) at 365:9-367:13 ("I'm going to enter some searches here with overloaded keys. I will enter 3, 4, 7. And the distinction that used to exist between the white and the light blue coloration, these are light blue and these are all white, we no longer have the letters that correspond to the overloaded keys highlighted with the light blue. I'll do another search. 5, 3, 3. So that's an example of no highlighting."); *see also* CX-1128C (video of Mr. Williams entering searches with overloaded keys after the redesigns) at 0:30-1:16; CX-1045C (screenshots taken by Mr. Williams after the redesigns) at 1-2.).

Dr. Kelly testified that because Comcast's search functionality is based in the cloud, these Design Alternatives work regardless of the STB model (or other client device) being used. (Tr. (Kelly) at 1721:10-24 ("Q. Was there any difference in the operation of the different set-top boxes with respect to these redesigns? A. No, no. This -- all of this happens in the cloud. The set-top boxes would all behave the same way when it receives these -- these results to display.")). Dr. Kelly also explained that they operate independently of each other, and turning on either "will have the same effect of removing all of the highlighting." (*Id.* at 1722:10-17; *see also* RX-0547C (screenshots from a display attached to a model RNG150N STB) at 9 (showing no character highlighting after redesigns); RDX-0004C.0043-46.).

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Rovi bore the burden of proving that the Design Alternatives infringe if it sought a remedy that would encompass them. However, Rovi made no attempt to do so. *See Certain Elec. Digital Media Devices & Components Thereof*, Inv. No. 337-TA-796, Initial Determination at 163, 233-34, 310, 383-84 (Oct. 24, 2012) (“*Electronic Digital Media Devices*”) (finding that complainant did not address the design alternatives and thus “failed to prove by a preponderance of the evidence” that the design alternatives infringe). Rather than attempting to prove that the Design Alternatives do not infringe, Rovi instead sought to exclude evidence of them entirely. (See Motion Docket No. 1103-037 (Sept. 7, 2018); Order No. 42 at 7-8 (Oct. 15, 2018)). That motion was denied without prejudice because, *inter alia*, Rovi “had notice of Comcast’s alternative designs as early as June 2018” and Rovi’s expert “had an opportunity to inspect, observe testing, and discussed Comcast’s alternative designs in his expert rebuttal report.” (Order No. 42 at 9.).

In addition to failing to meet its burden of proof with respect to Comcast’s Design Alternatives, Rovi also waived its opportunity to do so by failing to address them in its Pre-Hearing or Initial Post-Hearing Briefs. (See G.R. 7.2, 10.1; *see also* n.38, *supra*). Furthermore, as explained above, Comcast’s expert and fact witness provided clear and convincing testimony that the Design Alternatives do not practice the “highlighting” limitation recited in claims 1 and 9 of the ’011 patent, which Mr. Williams confirmed.

Therefore, the Design Alternatives will be carved out of any remedy in this case. *See, e.g., GPS Chips Associated Software and Sys. and Prods. Containing Same*, Inv. No. 337-TA-596, Order No. 34 at 4 (Feb. 25, 2008).

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- g) 1[f]/9[f]: “ordering [order on the display device] the displayed items in accordance with one or more given criteria”

Dr. Bovik testified that the Accused 011 Products, operating in the X1 System, meet the ordering limitations by displaying items in accordance with a formula used to compute a value called [redacted] (Tr. (Bovik) at 597:25-598:24; RX-0541C (Comcast Source Code) at COMC_SDNY9278_SC000093; CDX-0008C.0095-96.). Dr. Kelly did not dispute that the Accused 011 Products, operating in the X1 System, satisfy these limitations.

Additionally, with regard to claim 1, Comcast did not rebut this evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue as to claim 1 is waived under Ground Rules 7.2 and 10.1. With respect to claim 9, Comcast did not present any counterargument or evidence in its post-hearing briefing. Accordingly, any argument on this issue as to claim 9 is waived under Ground Rule 10.1.

For the foregoing reasons, Rovi has proven by a preponderance of the evidence that the Accused 011 Products meet limitations 1[f] and 9[f] recited in claims 1 and 9 of the '011 patent.

B. Technical Prong of Domestic Industry

1. Legal Standard

A complainant in a patent-based Section 337 investigation must demonstrate that it is practicing or exploiting the patents at issue. See 19 U.S.C. § 1337(a)(2) and (3); *Certain Microsphere Adhesives, Process for Making Same, and Prods. Containing Same, Including Self-Stick Repositionable Notes*, Inv. No. 337-TA-366, Comm'n Op. at 8, Pub. No. 2949 (U.S.I.T.C. Jan. 16, 1996) (“*Microsphere Adhesives*”). “In order to satisfy the technical prong of the domestic industry requirement, it is sufficient to show that the domestic industry practices any claim of that patent, not necessarily an asserted claim of that patent.” *Certain Ammonium*

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Octamolybdate Isomers (“*Certain Isomers*”), Inv. No. 337-TA-477, Comm’n Op. at 55 (U.S.I.T.C. Jan. 5, 2004).

The test for claim coverage for purposes of the technical prong of the domestic industry requirement is the same as that for infringement. *Certain Doxorubicin and Preparations Containing Same*, Inv. No. 337-TA-300, Initial Determination at 109, 1990 WL 710463 (U.S.I.T.C. May 21, 1990), *aff’d*, Views of the Commission at 22 (October 31, 1990) (“*Doxorubicin*”). “First, the claims of the patent are construed. Second, the complainant’s article or process is examined to determine whether it falls within the scope of the claims.” *Id.* The technical prong of the domestic industry can be satisfied either literally or under the doctrine of equivalents. *Certain Dynamic Sequential Gradient Devices and Component Parts Thereof*, Inv. No. 337-TA-335, Initial Determination at 44, Pub. No. 2575 (U.S.I.T.C. Nov. 1992).

“[T]o satisfy the technical prong with regard to a method claim, it must be shown the method is in fact practiced by someone.” *Certain Elec. Devices, Including Mobile Phones and Tablet Computs., and Components Thereof*, Inv. No. 337-TA-847, 2013 WL 5822559, at *131 n.33 (U.S.I.T.C. Sept. 23, 2013) (“*Electronic Devices*”).

2. Technical DI Overview

Rovi asserted that two (2) of its products, the Veveo AS&R and Rovi’s Next-Gen Platform (“011 DI Products”), practice claims 1 and 9 of the ’011 patent. (CPBr. at 52; CBr. at 32.). Veveo AS&R is licensed to [REDACTED]. (Tr. (Koenig) at 435:21-438:2.). As discussed in more detail below, Rovi has proven by a preponderance of the evidence that Veveo AS&R practices claim 9 but not claim 1. The former (system claim 9) is drawn to capabilities possessed by Veveo AS&R, whereas the latter (method claim 1) requires actual performance of the recited steps. The Private Parties agreed that the latter has not occurred.

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Additionally, Rovi has proven by a preponderance of the evidence that its Next-Gen DI product (pertaining to a domestic industry in the process of being established) practices claims 1 and 9 of the '011 patent.

3. Rovi's Veveo AS&R DI Product Practices Claim 9 and Its Next-Gen DI Product Practices Claims 1 and 9

a) Veveo AS&R Does Not Practice Claim 1 (Method)

Claim 1 of the '011 patent is a method claim. (JX-0001 at 8:40-9:13.). To satisfy the technical prong of a method claim, each step of the claimed method must be performed by the alleged DI product. *See Elec. Devices*, 2013 WL 5822559, at *131 n.33; *see also cf. Lucent Techs., Inc.*, 580 F.3d at 1317 (method claim is infringed only if each step of the claimed method is performed).

Rovi conceded that Altice does not implement the overloaded key search feature. Specifically, Mr. Koenig, Rovi's Vice President of Business Development, confirmed not only that Altice's "end customers" do not use the overloaded key search as required by the claim 1 of the '011 patent, but also that the Altice "user interface and the remote controls are not implementing the number search at this time." (Tr. Koenig) at 436:24-437:9 ("Q. With the Altice acquisition, do you know whether the number search feature is still utilized by -- by customers? A. The end customers, the user interface and the remote controls are not implementing the number search at this time, to the best of our knowledge.")).

Rovi contended that the technical prong of the DI requirement is met nevertheless because Veveo AS&R code despite the fact that Altice does not implement the claimed feature and lacks a user interface or remote control for doing so. (CBr. at 35; Tr. (Koenig) at 437:12-21.). Even if, *arguendo*, this is the case, and Veveo would not have

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to do “anything if Altice decided to permit their customers to [REDACTED] [REDACTED] as Mr. Koenig stated (Tr. (Koenig) at 437:22-438:2), it is not sufficient for purposes of infringement for the device to be *capable* of performing the overloaded key search without actually performing it. *See Elec. Devices*, 2013 WL 5822559, at *131 n.33; *see also cf. Lucent Techs., Inc.*, 580 F.3d at 1317; *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1318 (Fed. Cir. 2005), *abrogated on other grounds, IRIS Corp. v. Japan Airlines Corp.*, 769 F.3d 1359, 1361 n. 1 (Fed.Cir.2014) (“A method or process consists of one or more operative steps, and, accordingly, ‘[i]t is well established that a patent for a method or process is not infringed unless all steps or stages of the claimed process are utilized.’”) (citation omitted).

Because Veveo AS&R does not perform every step of the method claim, Rovi’s infringement contention and argument fails as a matter of law.

b) Veveo AS&R Practices Claim 9 (System)

Claim 9 of the ’011 patent is a system claim, which does not require the performance of any method steps. (JX-0001 at 9:37-10:15.). *See, e.g., NTP, Inc.*, 418 F.3d at 1318 (“[T]he use of a process necessarily involves doing or performing each of the steps recited. This is unlike use of a system as a whole”). Thus, as discussed below, the fact that Veveo AS&R does not actively perform every limitation of claim 9 does not thwart Rovi’s argument that Veveo AS&R practices claim 9 for purposes of the technical prong of the domestic industry requirement.

Based upon the testing that Mr. Williams conducted, the simulation of the Veveo AS&R code [REDACTED] that Dr. Bovik reviewed, and Mr. Koenig’s testimony that the AS&R code [REDACTED], Rovi argued that it satisfied the technical prong of DI requirement for claim 9 notwithstanding that Altice does not implement the overloaded key searching feature. (CBr. at 35; Tr. (Koenig) at 435:21-438:2; Tr. (Bovik) at 608:8-609:11.). Rovi is correct. *See*

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Finjan, Ltd. v. Secure Computing Corp., 626 F.3d 1197, 1204 (Fed. Cir. 2010) (noting that “to infringe a claim that recites capability and not actual operation, an accused device ‘need only be capable of operating’ in the described mode,” and that “an accused device may be found to infringe if it is reasonably capable of satisfying the claim limitations, even though it may also be capable of noninfringing modes of operation”) (quoting *Intel Corp. v. Int’l Trade Comm’n*, 946 F.2d 821, 832 (Fed. Cir. 1991); *Hillgraeve Corp. v. Symantec Corp.*, 265 F.3d 1336, 1343 (Fed. Cir. 2001)).

Claim 9 is directed to a computer-readable medium with a specific capability: “instructions for causing a computer system to” perform several functions. (JX-0001 at 9:37-10:15.). The relevant computer-readable medium here appears to be [REDACTED]. [REDACTED]. The critical issue for purposes of the technical prong analysis is whether the Veveo AS&R code contains instructions for executing the recited functions so that the Altice product is *capable* of performing them. *See, e.g., Finjan*, 626 F.3d at 1204.

Rovi presented un rebutted evidence that the Veveo AS&R code possesses the capability (in the form of computer code instructions) to execute all of the functions recited in claim 9. (Tr. (Bovik) at 669:14-671:5; Tr. (Koenig) at 436:23-438:2.). Dr. Bovik explained in detail that for indexing, Veveo AS&R can [REDACTED] [REDACTED]. (Tr. (Bovik) at 620:22-621:7; CDX-0008C.0124, 126.). He also explained that subsequent to indexing, Veveo AS&R can [REDACTED] [REDACTED] [REDACTED]. (See Tr. (Bovik) at 661:6-665:9; CDX-0008C.0133-35.). Veveo AS&R can then [REDACTED]

[REDACTED]

[REDACTED], as

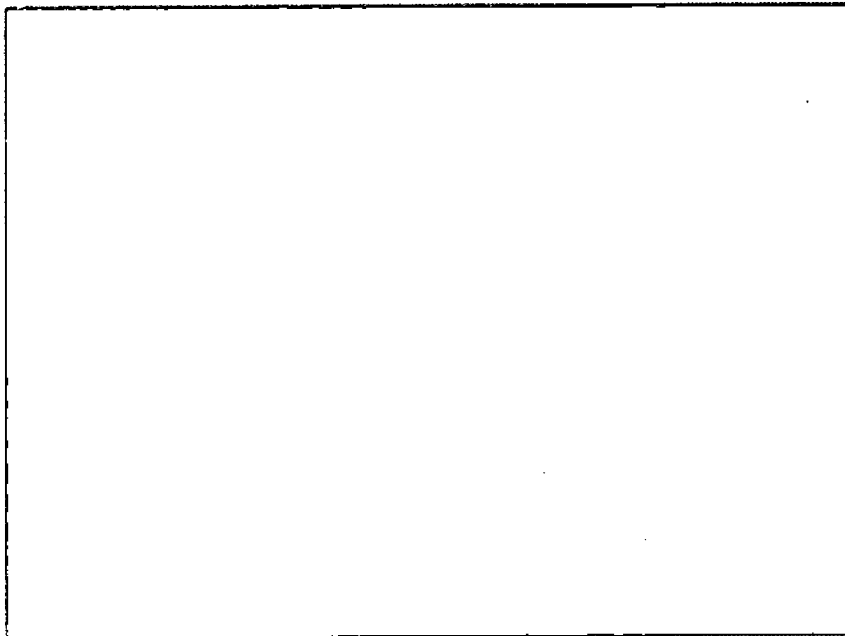
shown in Figure 14 below. (Tr. (Bovik) at 665:10-668:10; Fig. 14 (showing [REDACTED]

[REDACTED] respectively.).

Dr. Bovik testified that Veveo AS&R can also [REDACTED]

[REDACTED]. (Tr. (Bovik) at 668:17-22; CDX-0008C.0154-55.).

Figure 14: Screenshot of the Veveo AS&R Highlighting Search Results Based on Unresolved Keystroke Search Queries



(CX-1048C.0011; *see also* CDX-0008C.0145-151.).

Comcast did not rebut the evidence that confirmed Veveo AS&R's capabilities. Instead, Comcast focused on the overloaded key search capability Altice chose not to implement. Relying upon Mr. Koenig's testimony that "[t]he end customers, the user interface and the remote controls are not implementing the number search at this time," and that at least one of the remote controls associated with the Altice product does not have overloaded keys, Comcast

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argued that Veveo AS&R does not practice claim 9 because the Altice product does not implement, and its customers do not actually use, the searching feature. (RRBr. at 46-47; Tr. (Koenig) at 436:24-437:9, 482:18-483:5.).

However, as explained above, claim 9 is a system claim directed to the capabilities of a computer-readable medium, not a method claim that requires a particular recitation of steps.

The Federal Circuit's *Finjan* decision explicitly contrasted method and system claims, finding that "Finjan's non-method claims describe capabilities without requiring that any software components be 'active' or 'enabled.'" *Finjan*, 626 F.3d at 1204-05. Specifically, the Court found that Finjan's "system claims recite software components with specific purposes: 'a logical engine for preventing execution[,] . . . 'a communications engine for obtaining a Downloadable[,] . . . or 'a linking engine . . . for forming a sandbox package[.]'" *Id.* at 1205. Similarly, system claim 9 of the '011 patent recites "a computer-readable medium comprising instructions for" accomplishing specific purposes: "index[ing] said items"; "determin[ing] which letters and numbers"; "receiv[ing] from a user a search query"; "identif[ing] and display[ing] on a display device"; "highlighting the letters and numbers"; and "ordering the displayed items[.]" (JX-0001 at 9:37-10:15.). However, there is no language anywhere in claim 9 that requires "a computer-readable medium" that actively performs these functions. Therefore the holding in *Finjan* is germane and supports Rovi's DI contention.

By contrast, Comcast's reliance on *Microsoft Corp. v. International Trade Commission*, 731 F.3d 1354 (Fed. Cir. 2013), is misplaced. (RRBr. at 46-47.). Comcast argued that "*Microsoft* stands for the proposition that the DI technical prong requires an 'actual article' that implements the patent." (*Id.* at 49.). Comcast's interpretation of *Microsoft* is obviously and without doubt wrong. As Rovi pointed out, in *Microsoft*, the complainant failed to produce any

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evidence showing that the practicing source code in question was actually implemented into the alleged domestic industry product. (CBr. at 35.).

Although [Microsoft's expert] purported to identify "client applications" in an *example application* that Microsoft provides to *third-party phone manufacturers*, Microsoft failed to show that any such "client applications" are actually implemented on any third-party mobile device. According to the ALJ, *because Microsoft did not point to evidence that its expert examined client applications in fact running on third-party mobile phones or confirmed how they operated*, Microsoft failed to show that there is a domestic industry product that actually practices the [asserted] patent.

* * *

[T]he evidence he cited in support of his opinion that Windows Mobile phones practice the "client applications" limitation is the source code that Microsoft provides to mobile-phone manufacturers, *rather than specific code actually installed and run on a particular third-party mobile device*. Moreover, Microsoft provided no evidence that "Windows Mobile" phones always contain the entirety of Windows Mobile, rather than only portions.

Id. at 1361 (emphases added) (internal citation omitted).

That does not appear to be the case here. Dr. Bovik testified that he reviewed the Veveo AS&R code *on* the Altice servers by means of a simulation on a laptop computer.

Q. And what did you do to review AS&R?

A. Well, I operated the ASR system using a simulation. In that simulation, you had to interact using a regular keyboard.

[REDACTED]

Q. When you said you used a simulation in a keyboard, was that on a computer?

A. That's correct, the keyboard, laptop.

(Tr. (Bovik) at 608:8-17.).

That the Veveo AS&R code Dr. Bovik tested was not from an actual Altice product is not, as Comcast argued, analogous to the evidentiary deficiency in *Microsoft*, where the code that Microsoft's expert analyzed was an "example application" sent to third-party manufacturers.

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Microsoft, 731 F.3d 1361. Here, the Veveo AS&R code Dr. Bovik accessed through an on-screen interface using a laptop keypad was *present in the Altice servers*. (Tr. (Koenig) at 436:23-438:2.). Thus, the holding in *Microsoft* is inapposite.

For the reasons discussed above, Rovi has proven by a preponderance of the evidence that the activities associated with the licensing of Veveo AS&R to Altice satisfies the technical prong of the DI requirement.

c) Rovi's Next-Gen Platform Practices Claims 1 (Method) and 9 (System)⁵³

Relying on Mr. Williams' and Dr. Bovik's examination of Rovi's Next-Gen Platform ("Next-Gen"), and testimony from Ms. Gaeta regarding the development of Next-Gen, Rovi contended that this DI product practices claims 1 and 9 of the '011 patent. (CBr. at 32-33.). Specifically, Dr. Bovik testified that Next-Gen contains software performs searches for program content through an IPG using unresolved overloaded keys in accordance with the limitations of the asserted claims, which Dr. Kelly did not dispute. (*See, e.g.*, Tr. (Bovik) at 616:24-617:15, 621:17-622:20, 623:3-10, 661:6-668:10, 668:23-671:5.).

In rebuttal, Dr. Kelly only asserted that Next-Gen cannot satisfy the technical prong because it does not [REDACTED] [REDACTED]. (Tr. (Kelly) at 1788:1-19.). Based on this understanding, Dr. Kelly did not analyze Next-Gen's code or compare it with the elements of the asserted claims. (*Id.* at 1788:20-24.).

⁵³ Text in brackets that is not italicized refers to: (i) language recited in claim 9 that differs slightly from corresponding language recited in claim 1, e.g., "method" (claim 1)/"system" (claim 9), "indexing" (claim 1)/"index" (claim 9); or (ii) language in claim 9 that is not recited in claim 1 (*see* [1e] and [9e]). Text in brackets that is italicized refers to language in claim 1 that is not recited in claim 9 (*see* [1e] and [9e]).

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Contrary to Dr. Kelly's view of the law, Section 337 covers patented articles that either exist or are "in the process of being established." 19 U.S.C. § 1337(a)(2). The legislative history of Section 337(a)(2) that describes the purpose of the "in the process of establishing" language of the statute.

[T]here may be situations where, under the ['in the process of being established'] definition an industry does not 'exist' but a party should be entitled to bring a 337 action. For example, if a *new product* is developed in the United States and is protected by a U.S. intellectual property right, the *owner of the intellectual property right would not have to wait to bring an action under section 337 until he can satisfy the definition of industry if he can demonstrate that he is taking the necessary steps to establish such an industry in the United States.*

H.R. Rep. 100-40, Pt. 1 at 157 (Apr. 6, 1987) (emphases added).

Accordingly, "there is no rigid rule that the Commission must consider only . . . the investments in a domestic industry at the time of the filing of a complaint." *Certain Digital Cameras, Software, & Components Thereof*, Inv. No. 337-TA-1059, Order No. 52, at 3-4 (Feb. 20, 2018). Rather, a two-part test controls whether "an industry in the process of being established." *Certain Stringed Musical Instruments & Components Thereof*, Inv. No. 337-TA-586, Comm'n Op. at 13 (May 16, 2008) ("*Stringed Instruments*"). The Commission has determined that an industry is "in the process of being established" if: (1) the patent owner "can demonstrate that he is taking the necessary tangible steps to establish such an industry in the United States"; and (2) there is a "significant likelihood that the industry requirement will be satisfied in the future." *Id.* (quoting S. Rep. 100-71 at 130, H. Rep. 100-40 at 157). Both prongs can be analyzed not only at the time the complaint is filed, but also at the close of fact discovery. *See Certain Digital Cameras, Software, & Components Thereof*, Inv. No. 337-TA-1059, Initial Determination at 45-48 (Aug. 17, 2018) ("*Digital Cameras*").

At the close of fact discovery, Rovi adduced evidence that

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[REDACTED]

[REDACTED]. (Tr. (Gaeta) at 249:15-250:21; CX-0776C (Hydra-7615)). Dr. Bovik also provided testimony that he observed the [REDACTED]

[REDACTED]. (Tr. (Bovik) at 609:12-616:23; *see also* JX-0096C (Denney Dep. Tr.) at 73:13-75:17.). Comcast did not dispute these facts.

For the reasons discussed below, Rovi has met its burden and demonstrated by a preponderance of the evidence that Next-Gen practices claims 1 and 9 of the '011 patent. Thus, Rovi has satisfied the technical prong of the DI requirement.

- i. Preambles [1, 9]: "A method of [system for] processing unresolved keystroke entries by a user from a keypad with overloaded keys in which a given key is in fixed association with a number and at least one alphabetic character, said unresolved keystroke entries being directed at identifying an item from a set of items, each of said items being associated with information describing the item comprising one or more words, said method [system] comprising"*

Dr. Bovik provided persuasive, unrebutted testimony that Next-Gen operates in the environment recited in the preambles of claims 1 and 9 by accepting and processing unresolved overloaded keystrokes directed at identifying a television program from a set of programs, with each program associated with a program title, which Comcast did not dispute. (Tr. (Bovik) at 661:21-662:4; CX-1034C.0002 (Screenshot)). Next-Gen [REDACTED]

[REDACTED], as shown below on the right of

Figure 15.

Figure 15: Screenshot of Next-Gen's [REDACTED]



(CX-1034C.0002 (Screenshot of [REDACTED] on the right).).

For claim 9, Dr. Bovik described the locations of media containing instructions for overloaded key searching for Next-Gen, including the head-end servers. (Tr. (Bovik) at 669:14-671:5.).

Because Comcast did not rebut this evidence in its pre-hearing or post-hearing briefing, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

Accordingly, Rovi has proven by a preponderance of the evidence that Next-Gen practices the preambles recited in claims 1 and 9 of the '011 patent.

- ii. *1[a]/9[a]: “indexing [index] said items by associating subsets of said items with corresponding strings of one or more unresolved keystrokes for overloaded keys so that the subsets of items are directly mapped to the corresponding strings of unresolved keystrokes for various search query prefix substrings”; 1[b]/9[b]: “for at least one subset of items, determining [determine] which letters and numbers present in the information associated with and describing the indexed items of said subset caused said items to be associated with the strings of one or more unresolved keystrokes that are directly*

mapped to said subset”

Dr. Bovik provided compelling, un rebutted testimony that Next-Gen uses

as recited in the indexing limitation. (Tr. (Bovik) at 621:17-622:20; CDX-0008C.0127.). Dr.

Bovik also explained that Next-Gen

(Tr. (Bovik) at 623:8-14; CDX-

0008C.0130.).

Because Comcast failed to rebut this evidence in its pre-hearing or post-hearing briefing any argument on this issue is waived under Ground Rules 7.2 and 10.1.

For the foregoing reasons, Rovi has proven by a preponderance of the evidence that Next-Gen meets limitations 1[a]/9[a] and 1[b]/9[b] recited in claims 1 and 9 of the '011 patent.

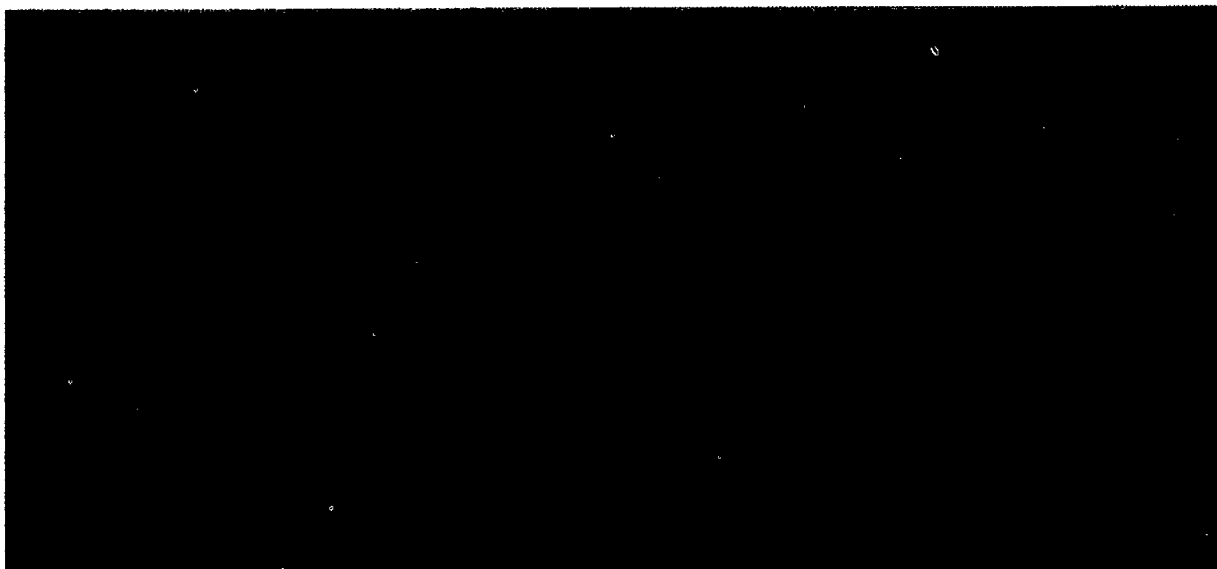
- iii. *1[c]/9[c]: subsequent to said indexing, receiving [receive] from a user a search query for desired items composed of unresolved keystrokes, said search query comprising a prefix substring for at least one word in information associated with the desired item”; 1[d]/9d]: “in response to each unresolved keystroke, identifying [identify] and displaying [display on a display device at least one of] the subsets of items, and information associated therewith, that are associated with the strings of one or more unresolved keystrokes received from the user based on the direct mapping of strings of unresolved keystrokes to subsets of items”*

Dr. Bovik testified that subsequent to indexing, Next-Gen can receive unresolved keystroke search queries in the form of a numerical prefix substring for a word in a program title, and then identify and display subsets of program titles than can be selected to access the program content, as shown in Figure 16 below. (Tr. (Bovik) at 661:6-663:19, 664:16-665:9; CX-

1034C.0002-5 (Screenshots of search results for

██████████).).

Figure 16: Screenshot of Next-Gen's Display of Search Results



(CX-1034C.0004.).

Comcast did not rebut this evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

Accordingly, Rovi has proven by a preponderance of the evidence that Next-Gen meets limitations 1[c]/9[c] and 1[d]/9[d] of claims 1 and 9 of the '011 patent.

- iv. *1[e]/[9e]: "in response to each unresolved keystroke, as the identified items are displayed, highlighting [highlight on the display device] the letters and numbers present in the one or more words in said information describing the identified items that were determined to have caused the displayed items to be associated with the [strings of] unresolved keystrokes [that are directly mapped to said items] [received] so as to illustrate to the user how the [strings of] unresolved keystrokes [that are directly mapped to said items] entered match the information associated with the displayed items"*

Evidence adduced in this Investigation demonstrates that Next-Gen incrementally yields the identified program results, highlighting the letters and numbers in the program title that were

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determined to have caused the displayed results to be associated with the string of overloaded keystroke entries that mapped to the program metadata. (Tr. (Bovik) at 665:10-18, 666:15-668:10; CX-1034C.0002-5, 8 (Next-Gen Screenshots); CX-0972C.0014 (Next-Gen code); CDX 0008C.0148-51.).

Comcast did not rebut this evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

For these reasons, Rovi has proven by a preponderance of the evidence that Next-Gen meets limitations 1[e] and 9[e] recited in claims 1 and 9 of the '011 patent.

v. ***1[f]/9[f]: “ordering [order on the display device] the displayed items in accordance with one or more given criteria”***

Dr. Bovik provided persuasive testimony that Next-Gen

. (Tr. (Bovik) at 668:23-669:13; CX-0972C.0014 (Next-Gen code); CDX 0008C.0155.).

Comcast did not rebut this evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

Accordingly, Rovi has proven by a preponderance of the evidence that Next-Gen meets limitations 1[f] and 9[f] recited in claims 1 and 9 of the '011 patent.

C. Invalidity

1. Legal Standard: Obviousness

Under 35 U.S.C. § 103(a), a patent is valid unless “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made” to a person having ordinary skill in the art. 35 U.S.C. § 103(a). The ultimate question of obviousness is a question of law, but “it is well

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understood that there are factual issues underlying the ultimate obviousness decision.”

Richardson-Vicks, 122 F.3d 1476, 1479 (Fed. Cir. 1997) (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966)).

After claim construction, “[t]he second step in an obviousness inquiry is to determine whether the claimed invention would have been obvious as a legal matter, based on underlying factual inquiries including: (1) the scope and content of the prior art, (2) the level of ordinary skill in the art, (3) the differences between the claimed invention and the prior art, and (4) secondary considerations of non-obviousness.” *Smiths Indus. Med. Sys., Inc. v. Vital Signs, Inc.*, 183 F.3d 1347, 1354 (Fed. Cir. 1999) (citing *Graham*, 383 U.S. at 17). The existence of secondary considerations of non-obviousness does not control the obviousness determination; a court must consider “the totality of the evidence” before reaching a decision on obviousness. *Richardson-Vicks*, 122 F.3d at 1483.

The Supreme Court clarified the obviousness inquiry in *KSR Int’l. Co. v. Teleflex Inc.*, 550 U.S. 389 (2007). The Supreme Court said:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. *Sakraida* and *Anderson’s-Black Rock* are illustrative—a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

Following these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement. Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to

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determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.

* * *

The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents. The diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way. In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends. Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility.

KSR, 550 U.S. at 417-19.

The Federal Circuit has since held that when a patent challenger contends that a patent is invalid for obviousness based on a combination of several prior art references, “the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so.”

PharmaStem Therapeutics, Inc. v. ViaCell, Inc., 491 F.3d 1342, 1360 (Fed. Cir. 2007) (citations omitted).

The TSM⁵⁴ test, flexibly applied, merely assures that the obviousness test proceeds on the basis of evidence--teachings, suggestions (a tellingly broad term), or motivations (an equally broad term)--that arise before the time of invention as the statute requires. As *KSR* requires, those teachings, suggestions, or motivations need not always be written references but may be found within the knowledge and creativity of ordinarily skilled artisans.

Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc., 520 F.3d 1358, 1365 (Fed. Cir. 2008).

⁵⁴ TSM is an acronym that stands for teaching, suggestion, motivation.

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2. The Combination of Gross (RX-0180) and Smith (RX-0174) Does Not Render Obvious Claims 1 and 9 of the '011 Patent

a) Invalidity Overview

Comcast's expert, Dr. Kelly, testified that it would have been obvious at the time of the alleged invention to combine the incremental prefix searching disclosed in Gross with Smith's teachings regarding unresolved overloaded keystrokes and an inverted index, and that a person of ordinary skill in the art would have expected that combination to succeed. (Tr. (Kelly) at 1731:25-1732:22, 1736:14-23.).

The main dispute is whether the prior art references disclose the term "directly mapped"⁵⁵ recited in the "indexing," "determining," "identifying and displaying," and "highlighting" steps of claims 1 and 9 of the '011 patent.⁵⁶ (CRBr. at 4-8.). For the reasons discussed below, Gross in combination with Smith teaches all the limitations recited in claims 1 and 9. However, Comcast failed to demonstrate that a person of ordinary skill in the art would have had a motivation to combine the references. *See, e.g., Dome Patent L.P. v. Lee*, 799 F.3d 1372, 1380 (Fed.Cir.2015) (noting that even "[i]f all elements of a claim are found in the prior art, as is the case here, the factfinder must further consider the factual questions of whether a person of ordinary skill in the art would be motivated to combine those references, and whether

⁵⁵ The term "directly mapped" was construed to mean "each alphanumeric character in a prefix substring associated with an item is matched with its corresponding numeric key equivalent on an overloaded keypad." (*Markman* Order, App. A at 10-14.). The Parties' agreed construction for the term "prefix substring," as "a variable length string of characters that contains fewer than all the characters making up the word," was also adopted. (*Id.*, App. A at 1.).

⁵⁶ In its Pre-Hearing Brief, Rovi argued that Gross in combination with Smith does not render claims 1 and 9 obvious because, *inter alia*, Gross does not disclose unresolved overloaded keys. (CPBr. at 55.). Rovi failed to discuss this argument with regard to any of the claim limitations in its post-hearing briefing. (CRBr. at 4.). Thus, any argument on this issue as to all claim limitations is waived under Ground Rule 10.1.

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in making that combination, a person of ordinary skill would have had a reasonable expectation of success”). Thus, claims 1 and 9 of the ’011 patent are not invalid in view Gross and Smith.

b) The Combination of Gross and Smith Teaches “Directly Mapped” as Recited in the “Indexing” 1[a]/9[a], “Determining” 1[b]/9[b], “Identifying and Displaying” 1[d]/9[d], and “Highlighting” 1[e]/9[e] Limitations of Claims 1 and 9

As an initial matter, Rovi asserted that during Dr. Kelly’s cross-examination, he “unambiguously testified that he does *not* rely on Gross (the primary reference) to satisfy the ‘directly mapped’ claim requirement.” (CRBr. at 5 (emphasis in original)). Rovi also pointed out that during his deposition, Dr. Kelly “ma[de] no claim that Gross provides the direct mapping of the unresolved keystrokes and to the various search query prefix substrings.” (*Id.* (citing Tr. (Kelly) at 1806:8-23, 1792:18-1793:9)). Rovi thus concluded that the record is “devoid of *any* evidence . . . that Gross discloses the ‘directly mapped’ limitation[.]” (*Id.* (emphasis in original)). Rovi’s arguments are unavailing. For the reasons discussed below, as Dr. Kelly consistent testified, the “directly mapped” limitation is disclosed by the combination of Gross and Smith.

With regard to the Smith reference, Rovi contended that Comcast’s sole reliance on this reference concerns the “directly mapped” limitation recited in the asserted claims. (*Id.* at 6.). Specifically, Rovi argued that because Dr. Kelly “admitted that Smith does not disclose prefix substrings under the parties’ agreed construction of ‘prefix substring,’” the combination of Gross and Smith cannot meet the construction for this claim term, as it requires “each alphanumeric character *in a prefix substring* associated with an item is matched with its corresponding numeric key equivalent on an overloaded keypad.” (*Id.* (emphasis in original) (citing Tr. (Kelly) at 1793:24-1794:3; *Markman* Order, App. A at 10-14)). However, as discussed below, Rovi

cannot evade obviousness in view of the combination by attacking the references individually. *See, e.g., In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (“Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.”).

As Comcast asserted, Dr. Kelly testified, consistent with his expert report and deposition testimony, that the “directly mapped” limitation is disclosed by the *combination* of references. (Tr. (Kelly) at 1805:4-17; *see also id.* at 1739:16-1740:15, 1745:15-1746:19.). In particular, Dr. Kelly opined that the prefix substring part of “directly mapped” is taught by Gross and the overloaded keys aspect of “directly mapped” is taught by Smith. (Tr. Kelly) at 1805:4-17 (“Q. Where do you look for the prefix substring part of that? A. The [p]refix substring comes from Gross. Q. Where do you look for the overloaded keys? A. To the secondary reference, either Smith or King.”); RX-0180 (Gross) at 7:26-37; RX-0174 (Smith) at Abstract, 1:20-30, 5:7-9, Fig. 5B.).

Thus, Dr. Kelly established that the combination of Gross and Smith teaches every aspect of the “directly mapped” term. For the same reasons, the combination of Gross and Smith meets the “directly mapped” requirements of the “determining,” “identifying and displaying,” and “highlighting” limitations.

c) The Combination of Gross and Smith Teaches the Remaining Limitations of Claims 1 and 9⁵⁷

- i. Preambles [1, 9]: “A method of [system for] processing unresolved keystroke entries by a user from a keypad with overloaded keys in which a given key is in fixed association**

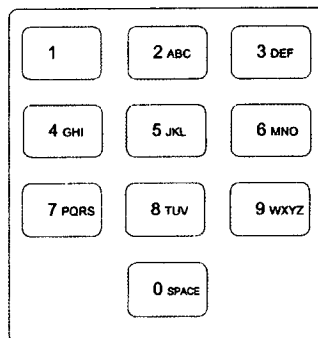
⁵⁷ Text in brackets that is not italicized refers to: (i) language recited in claim 9 that differs slightly from corresponding language recited in claim 1, e.g., “method” (claim 1)/“system” (claim 9), “indexing” (claim 1)/“index” (claim 9); or (ii) language in claim 9 that is not recited in claim 1 (*see* [1e] and [9e]). Text in brackets that is italicized refers to language in claim 1 that is not recited in claim 9 (*see* [1e] and [9e]).

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with a number and at least one alphabetic character, said unresolved keystroke entries being directed at identifying an item from a set of items, each of said items being associated with information describing the item comprising one or more words, said method [system] comprising”

Comcast provided compelling testimony and evidence that Gross in combination with Smith discloses the preambles recited in claims 1 and 9, which Rovi did not dispute. (Tr. (Kelly) at 1739:5-8; RX-0180 at 1:29-31, 3:34-36, 4:9-12, 9:14-18, 11:34-36, 12:39-48, 29:15-18; RX-0174 at Abstract, 1:20-30, 4:26-31, 5:1-42, Figs. 5A-5B.). Gross teaches “incremental or reactive searching of a variety of search targets,” such as emails or files, in which the items (e.g., the emails or files) are associated with information describing them that comprises one or more words, such as words in the title or subject line of an email. (RX-0180 at 2:9-13, 11:1-7; Tr. (Kelly) at 1737:13-22.). Smith discloses that the data input interface may “correspond to more than one alphanumeric character,” as shown below in Figure 17. (Tr. (Kelly) at 1737:13-22, 1744:19-23; RX-0174 at Abstract, 1:20-30, 5:7-9.).

Figure 17: Diagram for Mapping Alphanumeric Information to Numeric Information



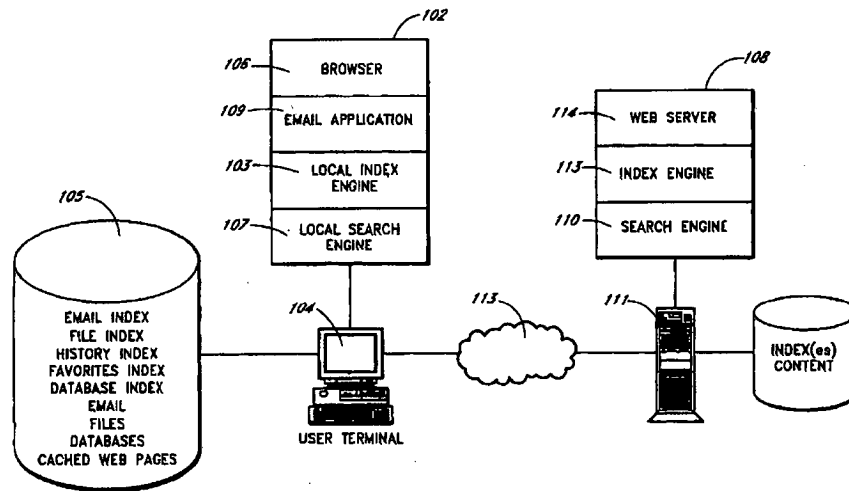
(RX-0174 at Fig. 5B.).

With respect to the preamble of claim 9, which requires “a computer-readable medium comprising instructions for causing a computer system to” perform the claimed limitations,

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Gross teaches a user terminal with a local search engine, a local index engine, and a browser, and discloses that servers in the cloud may have search engines, index engines, and web servers, as shown in Figure 18 below. (Tr. (Kelly) at 1745:22-1746:10.).

Figure 18: Example Computer System Used in Accordance with One Embodiment



(RX-0180 at Fig. 1.).

Rovi did not present any rebuttal to Comcast's evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

For the foregoing reasons, Comcast has met its burden and proven by clear and convincing evidence that the combination of Gross and Smith discloses the preambles recited in claims 1 and 9 of the '011 patent.

- iii. ***1[a]/9[a]: "indexing [index] said items by associating subsets of said items with corresponding strings of one or more unresolved keystrokes for overloaded keys so that the subsets of items are directly mapped to the corresponding strings of unresolved keystrokes for various search query prefix substrings"***

Comcast provided compelling testimony and evidence that Gross in combination with

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Smith discloses the remaining aspects of the “indexing” limitations, which Rovi did not dispute. (Tr. (Kelly) at 1740:12-15; RX-0180 at 4:63-66, 5:16-23, 6:3-16, 6:57-60, 7:26-32, 12:49-59, 22:47-55; RX-0174 at Abstract, 4:32-36, 4:41-5:62, Figs. 3, 4A-B, 5A-C.). Gross teaches that the index stores “prefix entries” such as “d” or “do” in addition to complete words such as “dog.” (Tr. (Kelly) at 1739:16-22; RX-0180 at 7:26-32.). Smith teaches an alphanumeric index which may be used to generate an index for overloaded keys. (Tr. (Kelly) at 1739:16-1740:11; RX-0174 at Figs. 4A, 5C.). For instance, the word “bar,” which corresponds to one document, and “car,” which corresponds to a second document, may be indexed as the overloaded keys “227,” which corresponds to both documents, as shown below (in red) in Figure 19. (Tr. (Kelly) at 1739:16-1740:11; RX-0174 at Figs. 4A, 5C.).

Figure 19: Illustrations Depicting Three Documents

TERM	LOCATION (DOCUMENT)	TERM	LOCATION (DOCUMENT)
3	DOCUMENT 1	3	DOCUMENT 1
BAR	DOCUMENT 3	227	DOCUMENTS 1 AND 3
CAR	DOCUMENT 1	242672463	DOCUMENT 3
CHAMPAGNE	DOCUMENT 3	48367	DOCUMENT 3
ITEMS	DOCUMENT 3	736825	DOCUMENTS 1 AND 2
RENTAL	DOCUMENTS 1 AND 2	737247	DOCUMENTS 1
REPAIR	DOCUMENT 1	84336	DOCUMENT 2
VIDEO	DOCUMENT 2	8483	DOCUMENT 3
WINE	DOCUMENT 3		

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(RX-0174 at Figs. 4A, 5C (annotated)).

Rovi did not rebut this evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

For these reasons, Comcast has met its burden and proven by clear and convincing evidence that the combination of Gross and Smith discloses limitations 1[a] and 9[a] recited in claims 1 and 9 of the '011 patent.

- iv. ***1[b]/9[b]: “for at least one subset of items, determining [determine] which letters and numbers present in the information associated with and describing the indexed items of said subset caused said items to be associated with the strings of one or more unresolved keystrokes that are directly mapped to said subset”***

Comcast adduced persuasive testimony and evidence that Gross in combination with Smith teaches the remaining aspects of the determining limitations, which Rovi did not dispute. (Tr. (Kelly) at 1740:16-1741:1; RX-0180 at 3:34-36, 5:16-23, 22:47-55; RX-0174 at Abstract, 1:20-30, 5:1-42, Figs. 4A-B, 5A-C.). Smith teaches grouping entries such as “bar” and “car” to the overloaded keys “227.” (Tr. (Kelly) at 1740:16-1741:1; RX-0174 at Figs. 4A, 5C (Fig. 19, *supra*)).

Dr. Kelly explained that this is an example of an inverted index. (Tr. (Kelly) at 1741:13-23; *see also* Tr. (Bovik) at 720:25-721:6.). Gross also discloses the inclusion of in an index prefix substrings for words describing items in the index, as described above. (Tr. (Kelly) at 1739:16-22; RX-0180 at 7:26-32.). Thus, Smith’s ambiguous, numeric inverted index with Gross’s teaching of prefix substrings disclose the remaining aspects of the “determining” limitation. (Tr. (Kelly) at 1739:16-1741:4.).

Rovi did not present any rebuttal argument to this evidence in its pre-hearing or post-

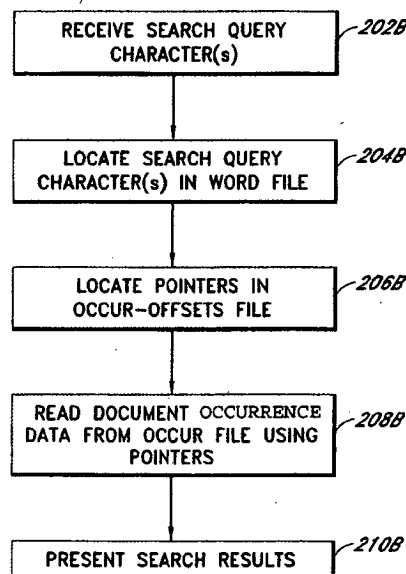
hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

For these reasons, Comcast has met its burden and proven by clear and convincing evidence that the combination of Gross and Smith discloses limitations 1[b] and 9[b] recited in claims 1 and 9 of the '011 patent.

- v. *1[c]/9[c]: subsequent to said indexing, receiving [receive] from a user a search query for desired items composed of unresolved keystrokes, said search query comprising a prefix substring for at least one word in information associated with the desired item”*

Evidence adduced in this Investigation demonstrates that Gross in combination with Smith discloses these claim limitations, which Rovi did not contest. (Tr. (Kelly) at 1742:8-11; RX-0180 at 5:16-23, 6:15-29, 6:56-67, 22:56-23:7, 28:15-29, Figs. 2B, 2C; RX-0174 at Abstract, 4:26-31, 5:1-42, Fig. 5A.). For example, Gross teaches “receiv[ing] search query character(s)” where such search queries are incrementally sent to the server, as shown below in Figure 20. (Tr. (Kelly) at 1741:24-1742:7; RX-0180 at 28:23-27.).

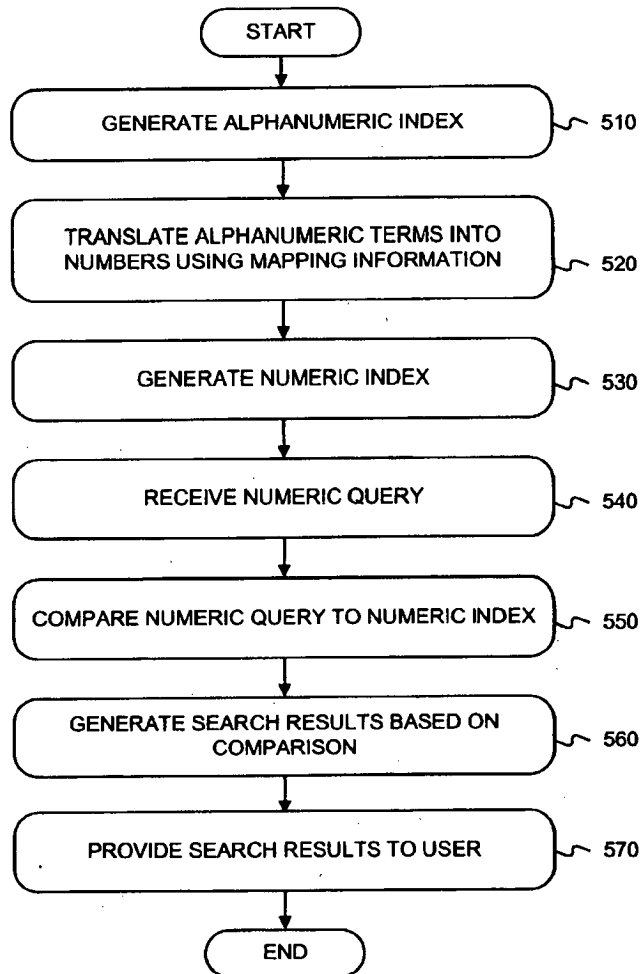
Figure 20: Example Search Process Using an Index



(RX-0180 at Fig. 2B.).

Smith also teaches “receiv[ing] numeric query” as a step in its search process, as shown in Figure 21 below. (Tr. (Kelly) at 1741:24-1742:11.).

Figure 21: Flow Diagram for Providing Search Results in Response to Numeric Search Query



(RX-0174 at Fig. 5A.).

Rovi did not rebut this evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

Rovi only contended that Smith does not teach the use of “prefix substrings.” (CPBr. at

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55.). However, as Dr. Kelly convincingly testified, Gross discloses prefix substrings. Tr. (Kelly) at 1739:16-22; RX-0180 (Gross) at 7:26-32; *see also* Section VII.C.2(c)(ii), *supra*.).

Accordingly, Comcast has met its burden and proven by clear and convincing evidence that the combination of Gross and Smith discloses limitations 1[c] and 9[c] recited in claims 1 and 9 of the '011 patent.

- vi. ***1[d]/9[d]: “in response to each unresolved keystroke, identifying [identify] and displaying [display on a display device at least one of] the subsets of items, and information associated therewith, that are associated with the strings of one or more unresolved keystrokes received from the user based on the direct mapping of strings of unresolved keystrokes to subsets of items”***

Comcast presented unrebutted testimony and evidence that Gross in combination with Smith discloses the remaining aspects of the “identifying and displaying” limitation. (Tr. (Kelly) at 1744:7-11; RX-0180 at 4:56-60, 6:57-67, 8:65-66, 10:9-13, 16:20-39, Fig. 2B; RX-0174 at Abstract, 1:20-30, 4:32-36, 4:41-5:62, Figs. 3, 4A-4B, 5A-5C.). Gross teaches a user interface with a list area that “lists the search results” and a view area that “displays an item or contents of an item.” (Tr. (Kelly) at 1742:15-1744:6; RX-0180 at 4:56-60.). For example, Gross discloses a list of emails, a web search, and a collection of favorites. (Tr. (Kelly) at 1742:15-1744:6; RX-0180 at Figs. 3C, 3E, 3G.).

Because Rovi did not rebut this evidence in its pre-hearing or post-hearing briefing, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

For the foregoing reasons, Comcast has met its burden and proven by clear and convincing evidence that the combination of Gross and Smith discloses limitations 1[d]/9[d] of claims 1 and 9 of the '011 patent.

- vii. ***1[e]/9[e]: “in response to each unresolved keystroke, as the***

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identified items are displayed, highlighting [highlight on the display device] the letters and numbers present in the one or more words in said information describing the identified items that were determined to have caused the displayed items to be associated with the [strings of] unresolved keystrokes [that are directly mapped to said items] [received] so as to illustrate to the user how the [strings of] unresolved keystrokes [that are directly mapped to said items] entered match the information associated with the displayed items”

Comcast provided persuasive testimony and evidence that Gross in combination with Smith discloses the remaining aspects of the highlighting limitations, which Rovi did not dispute. (Tr. (Kelly) at 1744:24-1745:2; RX-0180 at 15:66-16:4, 17:16-19, Fig. 3C; RX-0174 at Abstract, 1:20-30, 4:32-36, 4:41-5:62, Figs. 3, 4A-B, 5A-C.). Gross teaches that “search terms will be highlighted.” (Tr. (Kelly) at 1744:12-18; RX-0180 at 15:66-16:4 (“The user can optionally select a highlight process, wherein search terms will be highlighted in the list pane or area search results and/or in the view pane or area content display. The highlighting can be in the form of a different coloring, the use of different fonts, blinking test, and/or the like.”), Fig. 3C.).

Rovi did not rebut this evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

Accordingly, Comcast has met its burden and proven by clear and convincing evidence that the combination of Gross and Smith discloses limitations 1[e] and 9[e] recited in claims 1 and 9 of the '011 patent.

viii. ***1[f]/9[f]: “ordering [order on the display device] the displayed items in accordance with one or more given criteria”***

Compelling evidence adduced in this Investigation, which Rovi did not dispute, establishes that Gross in combination with Smith discloses these claim limitations. (Tr. (Kelly) at 1745:3-14; RX-0180 at 6:9-14, 7:38-8:28, 16:5-13.). Gross teaches that “sort files are cached

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sort orders for the documents or files in the fixed index,” such as sorting and ordering emails “according to date/time received.” (Tr. (Kelly) at 1745:3-14; RX-0180 at 7:38-40, 7:50-56.).

Rovi did not rebut this evidence in its pre-hearing or post-hearing briefing. Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

For the reasons discussed above, Comcast has met its burden and proven by clear and convincing evidence that the combination of Gross and Smith discloses limitations 1[f] and 9[f] recited in claims 1 and 9 of the '011 patent.

3. Comcast Has Not Proven by Clear and Convincing Evidence That a Person of Ordinary Skill in the Art Would Have Been Motivated to, or Had a Reason to, Combine Gross and Smith

Comcast contended that the motivation to combine Gross with Smith is evidenced by Dr. Kelly's testimony because Gross and Smith “are in the same field of art, they are related to searching, indexing, presenting information.” (Tr. (Kelly) at 1732:7-9; *see also* RBr. at 12.).

Contrary to Comcast's argument, the mere fact that two references are in the same “field of art” is not a sufficient basis to show that a person of ordinary skill in the art would have been motivated to combine the two references to prove obviousness.

When the references are in the same field as that of the applicant's invention, knowledge thereof is presumed. However, the test of whether it would have been obvious to select specific teachings and combine them as did the applicant must still be met by identification of some suggestion, teaching, or motivation in the prior art, arising from what the prior art would have taught a person of ordinary skill in the field of the invention.

In re Dance, 160 F.3d 1339, 1343 (Fed. Cir. 1998); *see also Intelligent Bio-Systems, Inc. v. Illumina Cambridge, Ltd.*, 821 F.3d 1359, 1368 (Fed. Cir. 2016) (“When an obviousness determination relies on the combination of two or more references, there must be some suggestion or motivation to combine the references.”) (quoting *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1355 (Fed. Cir. 1999)).

Comcast's reliance upon Gross's reference to a “computer networkable wireless phone”

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as one of the possible input “terminals” in order to assert that “a person of ordinary skill in the art would have recognized that wireless phones frequently feature overloaded keypads” is also misguided. (RBr. at 12 (citing RX-0180 at 9:14-21)).

As an initial matter, Comcast appears to have conveniently omitted the term “unresolved” in its description of Gross’s disclosure of wireless phones having overloaded keys in (*Id.*). Comcast presented no evidence demonstrating that its “wireless phones” accepts *unresolved overloaded keystrokes* using an overloaded keypad, which is the relevant inquiry for the asserted claims of the ’011 patent. Specifically, Gross fails to describe indexing unresolved, overloaded keystrokes associated with characters in a prefix substring and receiving unresolved overloaded keystrokes as input search queries. Comcast’s expert, Dr. Kelly, also failed to provide any credible testimony that Gross discloses, or even suggests, the use of unresolved overloaded keystrokes. (Tr. (Kelly) at 1792:13-17 (“Q. Now when you looked at Gross, you would agree that Gross does not disclose direct mapping under this limitation; right? A. Well, it discloses-- it doesn’t have overloaded keys.”)).

To the contrary, Rovi’s expert, Dr. Bovik, testified that in 2003, when Gross filed his patent application, persons of ordinary skill in the art understood that “multi-tap” could be used to input resolved overloaded keystrokes using overloaded keypads, such as those on “wireless phones.” (Tr. (Bovik) at 549:10-550:1 (describing pre-existing methods of using overloaded keypads, like those on a “wireless phone” that do not include unresolved overloaded keys as claimed)). The ’011 patent specification discloses the inconvenience of the “multi-tap” method, which requires a user to press a particular key multiple times in quick succession in order to select a desired character. (JX-0001 at 1:46-50.). Without an explicit disclosure of unresolved overloaded keystrokes in Gross—and the availability in 2003 of, for example, multi-tap to use

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overloaded keypads to input resolved keystrokes—a person of ordinary skill in the art would not have readily understood Gross’s bare reference to “wireless phones” to disclose the use of unresolved overloaded keystrokes. (*See generally* Tr. (Bovik) at 549:10-550:1; JX-0001 at 1:46-50.).

Thus, Gross’s disclosure of a “computer networkable wireless phone” as a possible input terminal, without more, is not clear and convincing evidence that a person of ordinary skill in the art would have been motivated to combine Gross with Smith to arrive at the invention claimed in the ’011 patent.

4. Rovi Failed to Meet Its Burden to Show Secondary Considerations of Non-Obviousness

Rovi asserted two (2) secondary considerations: long-felt but unsolved need and copying. (CPBr. at 57-58; CRBr. at 10-13.). Even assuming, *arguendo*, that Comcast met its clear and convincing burden of proving that a person of ordinary skill in the art would have been motivated to combine the Gross and Smith references, which this ID finds it has not, Rovi has not met its burden of showing secondary considerations of non-obviousness for the reasons set forth below. *See, e.g., ZUP, LLC, v. Nash Mfg., Inc.*, 896 F.3d 1365, 1373 (Fed. Cir. 2018).

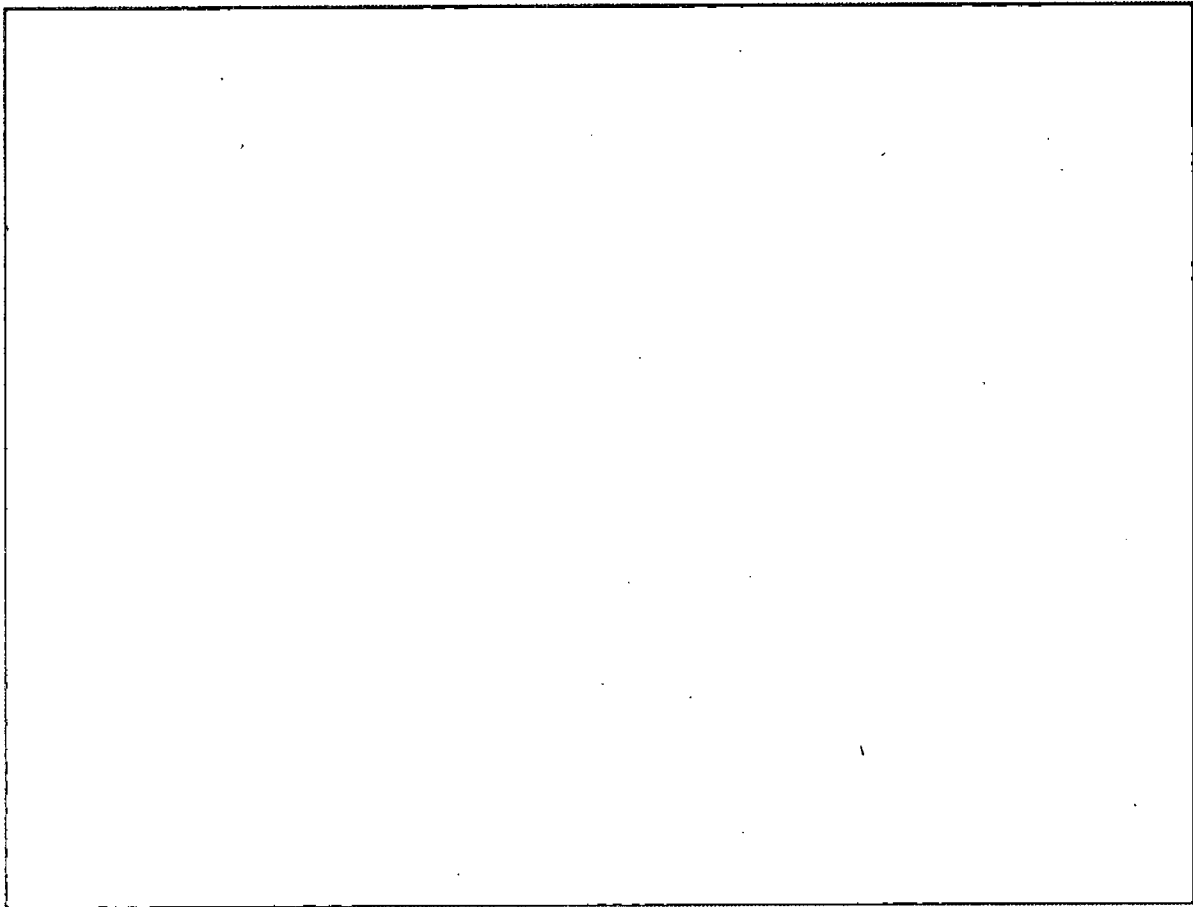
a) Rovi Failed to Show Long-Felt but Unsolved Need

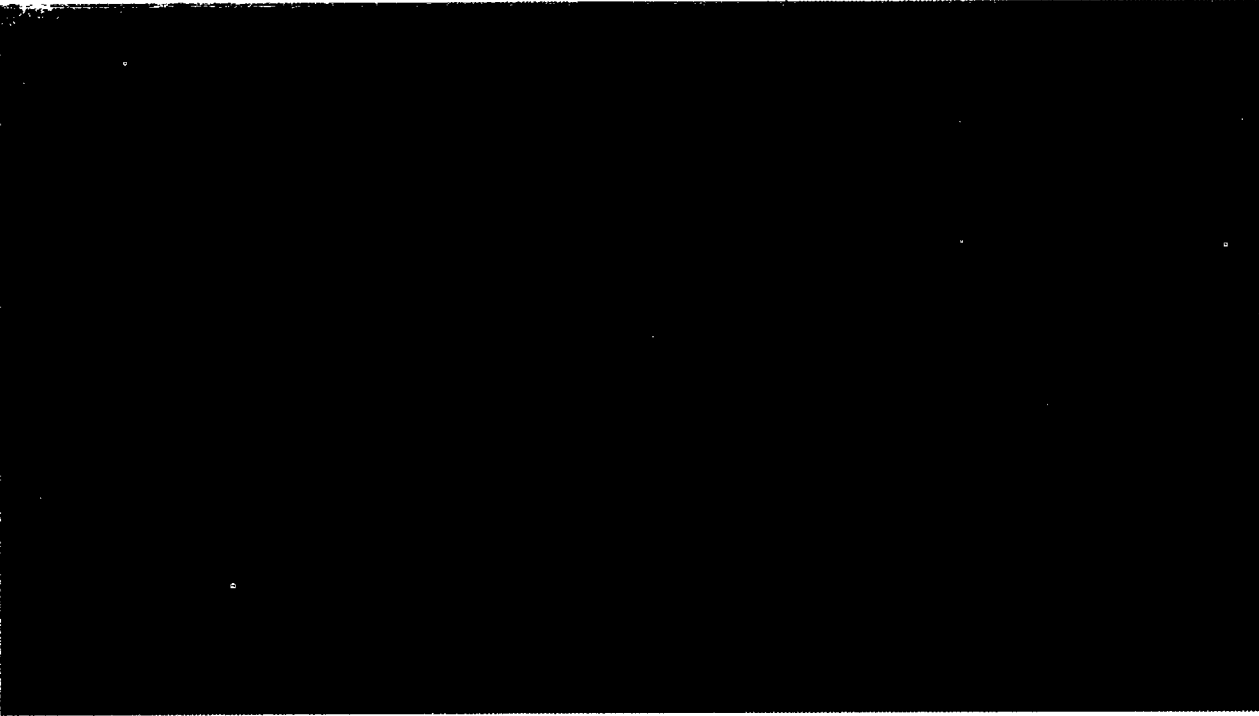
According to Rovi, the ’011 patent fulfilled a long-felt need for searches for television content using an overloaded keypad that required fewer steps than prior searches that also used an overloaded keypad. (CRBr. at 11; CPBr. at 57.). Rovi relied upon, *inter alia*, two (2) documents that appear to be from two (2) Comcast internal PowerPoint presentations to show “the importance of searching using overloaded keys and highlighting[.]” (Tr. (Bovik) at 574:11-575:16; CX-0392C.0003; CX-0395C.0002; CRBr. at 12.).

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However, as Comcast noted, and shown below in Figure 22, neither document addresses the claimed invention of the '011 patent, which is narrower than simply "searching using overloaded keys and highlighting." (Fig. 22 ([redacted] [redacted] [redacted] [redacted]).).

Figure 22: Comcast Presentations Regarding [redacted]
[redacted]





(CX-0392C.0003; CX-0395C.0002.).

“For objective evidence [of secondary considerations] to be accorded substantial weight, its proponent must establish a nexus between the evidence and the merits of the *claimed invention.*” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010) (emphasis added) (quoting *In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995)). Thus, Rovi’s broad contention lacks the necessary nexus to the asserted claims, which Rovi did not rebut. (Tr. (Kelly) at 1752:12-1753:17.).

Moreover, “searching using overloaded keys and highlighting” was known in the prior art before the ’011 patent. (*See, e.g.*, Tr. (Kelly) at 1727:18-1728:23, 1729:5-15; RDX.0004C.0054-56; Tr. (Kotay) at 506:3-21, 507:11-509:5 (discussing the invention of T9 search and text entry by a company known as Tegic); JX-0001 at 1:50-53, Fig. 1 (acknowledging T9 and overloaded keypads as prior art); JX-0008 (’011 patent prosecution history) at 17, 154, 424, 477, 519, 567,

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875-77, 882 (amendments narrowing claim scope in view of rejections of attempts to broadly claim searching using overloaded keys and highlighting).). Rovi's evidence does not support the proposition that any need for such a feature generally was "unsolved" until the '011 patent issued.

Accordingly, Rovi failed to demonstrate that there was a long-felt but unsolved need for "searching using overloaded keys and highlighting," or that there was any need for the specific kind of indexing, searching, determining, highlighting, and display that the '011 patent claims.

b) Comcast Did Not Copy Veveo's Search Technology

There is no dispute that Comcast contracted with Veveo to provide number-key search results for Comcast's nascent X1 Platform and entered into a software license agreement with Veveo in 2010. (JX-0034C (Veevo-Comcast Software License Agreement); Tr. (Koenig) at 439:1-8, 454:13-455:23.). However, Rovi's own witnesses agreed that Comcast never had access to or saw any Veveo source code and that Comcast did not copy any Veveo source code. (Tr. (Koenig) at 468:8-22 ("Q. You didn't say that Veveo gave Comcast any source code; right? A. Correct. . . . Q. Okay. And Rovi doesn't contend that Comcast copied any Veveo source code; right? A. Correct."); Tr. (Bovik) at 696:18-25; JX-0108C (Koenig Dep. Tr. (June 14, 2018)) at 71:6-11; *see also* JX-0099C (Fennelly Dep. Tr. (June 12, 2018))⁵⁸ at 45:1-8, 48:13-16, 49:11-16 ("Q. So during this project that we've been discussing between Veveo and Comcast

⁵⁸ At the time of his deposition on June 12, 2018, Mr. Timothy Fennelly was a senior engineer for production service at Rovi Guides. ((JX-0099C (Fennelly Dep. Tr. (June 12, 2018)) at 19:12-16.). His role was to "set up, install our production services, manage those -- manage the infrastructure that hosts those services, assist in the design and architecture of those services, and support our customers who are using those services." (*Id.* at 19:21-20:4.). Prior to Rovi's acquisition of Veveo, Mr. Fennelly worked for Veveo in various positions. (*Id.* at 20:22-21:10.). Rovi designated Mr. Fennelly as a corporate representative to provide testimony on certain topics as well as personal testimony regarding Rovi and Veveo. (*Id.* at 11:1-15.).

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roughly in the time of 2010 to 2013, are you aware of any time when Veveo disclosed any source code to 15 Comcast? A. Not that I'm aware of.”), 49:22-50:5 (“Q. And similarly, during this time from roughly 2010 to 2013, are you aware of anyone at Veveo disclosing or discussing any search algorithms with anyone at Comcast? . . . A. Not that I'm aware of.”), 51:20-52:7, 52:10-11 (Veevo’s primary liaison with Comcast confirming Comcast never saw or discussed any Veveo source code or search algorithms).).

Comcast’s expert, Dr. Kelly, performed his own analysis of both codebases and found no evidence that Comcast copied any code from Veveo.

I believe that there's been no technical evidence of copying. And what did I was I understand that the cutover from the Veveo Search to [redacted] happened in 2013. And I have looked at the Veveo code that was provided, produced in discovery, that Rovi has told us represents the search technology that was in place. And then the first versions of [redacted] in 2013. I've looked -- compared those two.

(Tr. (Kelly) at 1755:3-24.).

Dr. Kelly also explained that there is no evidence that Comcast decompiled or reverse-engineered Veveo object code. (*Id.* at 1757:18-1758:8.). Rovi did not contend in its Pre-Hearing Brief, Post-Hearing Reply Brief or through any witness that any such reverse-engineering occurred. (CPBr. at 44-45, 58.). Thus, any argument on this issue is waived under Ground Rules 7.2 and 10.1.

Moreover, there is ample evidence of a number of key technical differences between the Comcast and Veveo systems that also clearly demonstrate that Comcast did not copy the Veveo system. For example, the systems are written in different computer languages: Veveo’s system [redacted]; Comcast’s [redacted] system [redacted]. (Tr. (Kelly) at 1758:9-13.). They also involve different underpinning search technologies, architectures, and data structures. Veveo’s system is based on [redacted]

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[redacted],⁵⁹ while [redacted]. (*Id.* at 1758:14-1759:1, Tr. (Bovik) at 568:9-14, 587:6-24, 620:22-25, 696:12-17; Tr. (Koenig) at 467:21-23 (noting Veveo [redacted])). Additionally, the Veveo and Comcast systems operate differently in several key areas. Veveo uses [redacted]
[redacted],

further indicating that Comcast did not replicate or match Veveo.

[redacted]

* * *

[redacted]

[redacted]

[redacted]

[redacted]

(Tr. (Kotay) at 528:16-529:9; CX-0347C (email regarding search relevance) at 1.).

The “black box” manner through which Comcast accessed Veveo’s search service also rules out any inference of copying. (Tr. (Kotay) at 517:18-518:16 (“Their software is a complete black box to us. . . . Q. What view, if any, did Comcast have into how this black box solution at Veveo worked? A. Very little.”); Tr. (Kelly) at 1759:2-13 (“[I]t’s a black box. Provide these inputs, get these outputs. How it happens, what’s the algorithm underneath, you just don’t

⁵⁹ Dr. Bovik explained that [redacted]
[redacted] (Tr. (Bovik) at 620:22-621:7; CDX-0008C.0125 (illustration of tree structure)).

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know.”). Mr. Kotay testified that throughout the Comcast-Veevo relationship, Comcast exclusively interacted with Veevo’s search software through application programming interfaces (APIs). (Tr. (Kotay) at 494:3-17, 516:7-12, 517:18-24.). He explained that an API, which functions as a conduit or translator, permits one computer system or piece of software to call another and request certain outputs while the underlying algorithms and source code involved in supplying those outputs stay hidden and protected. (*Id.* at 516:7-517:24; *see also* Tr. (Kelly) at 1759:2-13.).

For the foregoing reasons, evidence adduced in this Investigation demonstrates that Comcast did not copy the Veevo search technology claimed in the ’011 patent.

VIII. U.S. PATENT NO. 7,827,585

A. Literal Infringement

1. Infringement Overview

Rovi argued that, when operating in the X1 System, the Accused 585 Products practice each limitation of asserted claims 1, 8, 11, 15, and 22 of the ’585 patent. (CBr. at 39.). As shown below in Table No. 8, Comcast disputed whether the Accused 585 Products satisfied only two (2) limitations found in the asserted claims. (RRBr. at 56.).

First, Comcast asserted that the Accused 585 Products [redacted] [redacted] and thus that the “interactive television program guide” was not “*implemented on* user television equipment.” (*Id.*). Second, Comcast argued that the Accused 585 Products lacked a “storage option that relates to at least one storage setting configured to control *how* programs are to be digitally stored” because “all of the ‘options’ Rovi accuses dictate *what* gets recorded or kept, not *how* it is to be digitally stored.” (*Id.* (emphasis added).).

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As explained below, Rovi has met its burden of proving by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy claims 1, 8, 11, 15, and 22 of the '585 patent.

Table No. 8: Disputed Terms for Infringement of Claims 1, 8, 15 and 22 of the '585 Patent

Element	Limitation	Resolution
1[pre]	“A method for allowing a user to select storage options for storing programs using <u>an interactive television program guide implemented on user television equipment</u> , the method comprising”	<p>Rovi satisfied its burden of proof.</p> <p>Claims 1 and 8 cover local and distributed IPGs implemented, at least in part, on user television equipment.</p>
8[pre]	“A method for recording programs using <u>an interactive television program guide implemented on user television equipment</u> , the method comprising”	
1[a] 8[c] 15[d] 22[f]	“providing the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to <u>at least one storage setting configured to control how programs are to be digitally stored on a random access digital storage device</u> ” ⁶⁰	<p>Rovi satisfied its burden of proof.</p> <p>The accused Auto Pad Recording option relates to <i>how</i> programs are stored on a random access digital storage device.</p>

(JX-0001 ('356 patent) at 20:43-61, 22:11-27.).

Rovi also contended that Comcast directly infringes⁶¹ the asserted claims. (CBr. at 39.).

⁶⁰ While this exact language comes from limitation 1[a], Comcast acknowledged that “[e]ach asserted claim of the '585 Patent substantively contains the [same] requirement.” (RRBr. at 57.).

⁶¹ Without citation to legal authority, Rovi wrote: “Comcast directly infringes the Asserted Claims through its importation of each Accused Product. ... Comcast also directly infringes each of the Asserted Claims by selling the Accused Products in the U.S. after importation by charging customers for unreturned STBs. In addition, following importation of the STBs into the U.S., Comcast and its customers directly infringe the Asserted Claims of the '585 Patent by practicing the methods of claims 1 and 8 and by building the system of claims 11, 15, 22 (as directed and instructed by Comcast).” (CBr. at 39.). Rovi failed to explain how Comcast can directly infringe method and system claims by importing and selling the Accused 585 Products. Those acts are usually associated with the infringement of apparatus claims.

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Comcast denied this contention. (RRBr. at 73.). According to Comcast, while it provides Accused 585 Products to customers, it does not “supply televisions to its customers” and thus “cannot display anything, let alone a program guide, as the claims require.” (*Id.*). Comcast, however, acknowledged (as it rightly should have) Rovi’s argument “that Comcast instructs its customers to use display devices.” (*Id.* at 74.). However, Comcast rebutted this argument by asserting that it “would go to whether Comcast’s customers directly infringe, not Comcast.” (*Id.*). As explained below, Rovi has not met its burden of proving by a preponderance of the evidence that Comcast directly infringed claims 1, 8, 11, 15, and 22 of the ’585 Patent.

Comcast also denied Rovi’s allegation that Comcast indirectly infringes the asserted claims. (*Id.* at 21-26.). According to Comcast, it does not possess the specific intent to induce infringement. (*Id.* at 21-24.). Comcast argued that instead of citing to “evidence to show that Comcast’s customers actually performed the claim steps” in response to Comcast’s inducement, “Rovi [mistakenly] argues [in a circumstantial manner] that because the customers allegedly make use of the accused features, the customers must be practicing the claims.” (*Id.* at 75.). Comcast contended that a single entity must perform all steps of an asserted method claim, which Comcast cannot happen here given that a number of required steps are performed not by users, but instead by Comcast’s servers. (*Id.* at 25.).

As for the remaining asserted system claims, Comcast asserted that “Comcast’s customers cannot be said to ‘control’” the accused Comcast system (especially its server-based operations) as required by law to show direct infringement. (*Id.* at 26.). As explained below, Rovi has not met its burden of proving by a preponderance of the evidence that Comcast indirectly infringed claims 1, 8, 11, 15, and 22 of the ’585 patent.

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2. Relevant Claim Terms

The Private Parties agreed to the following construction of the preamble recited in one of the asserted claims of the '0585 patent, which this Court has adopted. (*See Markman Order*, App. A at 14.).

Table No. 9: Construction of Agreed Upon Claim Terms Relevant to the '585 Patent

Claim Term	Adopted Construction
Preamble (Claim 1)	The preamble is limiting.

This Court construed the following constructions of the disputed claim terms.⁶²
(*Markman Order*, App. A at 14-35.).

Table No. 10: Constructions of the Disputed Claim Terms Relevant to the '585 Patent

Claim Term	Adopted Construction
“random access digital storage device” (Claims 1, 8, 15, and 22)	“a digital storage device that can access memory locations in a non-sequential manner”
Preamble (Claim 8)	The preamble is limiting, but it limits only the “environment” in which the invention operates and does not require additional steps or components in the claimed invention, per <i>Advanced Software Design Corp. v. Fiserv, Inc.</i> , 641 F.3d 1368, 1375 (Fed. Cir. 2011) (holding that the preamble steps can limit only the claimed environment, not the claimed method or system).
“interactive television program guide” (Claims 1, 8, 15, and 22)	“an application that generates a display of television program listings on user television equipment and that allows users to navigate

⁶² The Private Parties disputed the meaning of additional claim terms recited in claims that have been terminated from this Investigation. Those terms are not included in Table No. 10.

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Claim Term	Adopted Construction
	through and interact with television program listings based on user commands”
“implemented on user television equipment” (Claims 1 and 8)	“implemented, at least in part, at a user site on television equipment for receiving and processing television program listings and program data”
“storage setting configured to control how [programs are/the program is] to be digitally stored” in context of “providing the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on a random access digital storage device”	“storage setting configured to control how [programs are/the program is] to be digitally stored”
“circuitry” in context of “an interactive television program guide implemented at least partially on circuitry, wherein the interactive television program guide is programmed to”	“circuitry”

3. When Operating in the X1 System, the Accused 585 Products Practice Claims 1, 8, 11, 15, and 22 of the '585 Patent


As shown below in Figure 23, the asserted claims naturally divide into two (2) groups in terms of required claim limitations. The first group, consisting of claims 1 and 15, pertain to the global selection of “storage options” controlling “how” “programs” (plural) selected from the IPG⁶³ are stored. (JX-0004 ('585 patent), cls. 1, 15; CDX-0006C.0007.). The second group,

⁶³ As explained above, IPG stands for “interactive program guide.” For example, Comcast’s XRE guide “displays to the customer the shows that are available on live TV, the shows that are available on the DVR and on-demand.” (Tr. (Allinson) at 1432:4-6.).

consisting of claims 8, 22, and 11, pertain to the program-specific selection of “storage options” controlling “how” a “program” (singular) selected from the IPG is stored. (JX-0004 ('585 patent), cls. 8, 22, 11; CDX-0006C.0007.). The asserted claims remain in these two (2) groups for the infringement and technical prong of domestic industry analyses that follow.

Figure 23: Rovi’s Depiction of Groupings for the Asserted Claims ('585 Patent)

'585 Patent: Claims 1/15 and 8/22 Have Different Scopes

	Global (1/15)	Program Specific (8/22)
 <p style="text-align: center;">JX-0004</p>	<p>1. A method for allowing a user to select storage options for storing programs using an interactive television program guide implemented on user television equipment, the method comprising:</p> <p style="background-color: yellow;">providing the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on a random access digital storage device;</p> <p>in response to a user selection of the at least one storage option, modifying the at least one storage setting; displaying in the interactive television program guide at least one program listing related to at least one program; providing the user with an opportunity to select a program listing from the at least one displayed program listing for recording on the random access digital storage device; and recording the program on the random access digital storage device based on the modification of the at least one storage setting.</p>	<p>8. A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:</p> <p>displaying in a display screen at least one program listing relating to at least one program;</p> <p>providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;</p> <p style="background-color: yellow;">providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;</p> <p>in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.</p>
	<p>“programs” Plural</p>	<p>“the program” Singular</p>

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(CDX-0006C at 8 (introduced during the testimony of Dr. Balakrishnan).).

a) Claims 1 (Method) and 15 (System)

As shown below in Figure 24, claims 1 and 15 are parallel in structure. (Tr. (Balakrishnan) at 787:12-792:12 (discussing CDX-0006C.0081-93 and similarities between claims 1 and 15).). For the most part, when operating in the X1 System, the Accused 585 Products practice claim 15 for the same reasons, and based upon the same evidence, as set forth for claim 1. (*Id.* at 788:3-20.). In addition to the limitations of claim 1, claim 15 requires only “a display screen” and “an IPG implemented at least partially on circuitry.” (*Id.* at 787:12-792:12.).

Figure 24: Rovi's Depiction of the Similarity Between Claims 1 and 15

'585 Patent, Claim 1 and Claim 15 Comparison	
<p>1. A method for allowing a user to select storage options for storing programs using an interactive television program guide implemented on user television equipment, the method comprising:</p> <p>providing the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on a random access digital storage device;</p> <p>in response to a user selection of the at least one storage option, modifying the at least one storage setting;</p> <p>displaying in the interactive television program guide at least one program listing related to at least one program;</p> <p>providing the user with an opportunity to select a program listing from the at least one displayed program listing for recording on the random access digital storage device; and</p> <p>recording the program on the random access digital storage device based on the modification of the at least one storage setting.</p>	<p>15. A system for allowing a user to select storage options for storing programs, the system comprising:</p> <p>a display screen;</p> <p>a random access digital storage device; and</p> <p>an interactive television program guide implemented at least partially on circuitry, wherein the interactive television program guide is programmed to:</p> <p>provide the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein said at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on the random access digital storage device;</p> <p>in response to a user selection of the at least one storage option, modify the at least one storage setting;</p> <p>display in the display screen at least one program listing related to at least one program;</p> <p>provide the user with an opportunity to select a program listing from the at least one displayed program listing for recording on the random access digital storage device; and</p> <p>record the program on the random access digital storage device based on the modification of the at least one storage setting.</p>

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(CDX-0006C.0082 (introduced during the testimony of Dr. Balakrishnan)).

- i. **Preamble [claim 1]:** “A method for allowing a user to select storage options for storing programs using an interactive television program guide implemented on user television equipment, the method comprising”; **Preamble [claim 15]:** “A system for allowing a user to select storage options for storing programs, the system comprising”; **15[a]:** “a display screen”; **15[c]:** “an interactive television program guide implemented at least partially on circuitry, wherein the interactive television program guide is programmed to”

The Private Parties appeared to agree that the preambles of claims 1 and 15 are limiting. (Order No. 41 (Claim Construction) at 28; CBr. at 39; RRBr. at 70.). However, the Private Parties disputed whether, when operating in the X1 System, the Accused 585 Products satisfy all of the elements found in the preambles of claims 1 and 15 in addition to limitations 15[a] and 15[c]. Rovi contended that the Accused 585 Products satisfy all of these elements. (CBr. at 39-47, 51-52.). Comcast asserted that “there is no interactive television program guide

as required by the preamble of

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claim 1 and limitation 15[c]. (RRBr. at 70-71.).

The evidence proves otherwise. For the reasons stated below, Rovi has satisfied its burden of proving by a preponderance of the evidence that the Accused 585 Products implement such a guide. The remaining, undisputed limitations⁶⁴ set forth in the preambles of claims 1 and 15, in addition to limitations 15[a] and 15[c], are also satisfied.

The Accused 585 Products are STBs (including hardware and software) that facilitate the running of Comcast's X1 Guide. (Tr. (Balakrishnan) at 737:4-738:15, 745:9-19 (describing the Accused Products); Tr. (Allinson) at 1494:3-7 (Comcast engineer confirming that the STBs are Comcast-specific)). As shown below in Figure 25,

. (Balakrishnan Tr. 739:12-740:6.). Hardware and software found on each of the Accused 585 Products is present in the Accused 585 Products at importation. (*Id.*). The Private Parties' dispute here focuses only on the software.

⁶⁴ Comcast's only non-infringement argument here was that "no interactive television program guide [is] implemented, even in part, on X1 STBs[.]" Pursuant to Ground Rule 10.1, Comcast waived argument on whether, when operating in the X1 System, the 585 Accused Products satisfy the remaining elements found in the preambles of claims 1 and 15 as well as limitations 15[a] and 15[c].

Figure 25: Comcast's [REDACTED] the X1 STBs



(CDX-0006C.0015 (introduced during the testimony of Dr. Balakrishnan)).

As shown below in Figure 26, each 585 Accused Product [REDACTED]

[REDACTED]. (CX-0443C.0009 (Xfinity X1 Architecture Presentation); Tr.

(Allinson) at 1481:13-23.). [REDACTED]

[REDACTED]. (Tr. (Allinson) at 1482:8-17.). [REDACTED]

[REDACTED]

[REDACTED]. (*Id.* at 1482:18-1483:16.). [REDACTED]

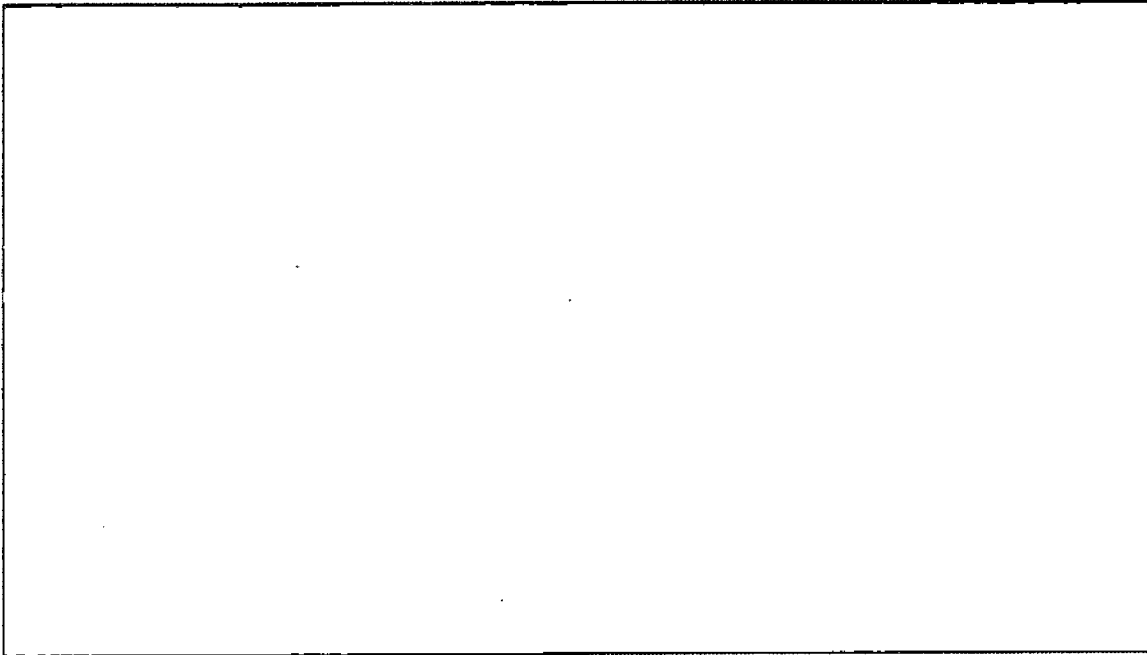
[REDACTED]

[REDACTED] (*Id.* at 1479:25-1480:5,

⁶⁵ RDK stands for “reference design kit.” (Tr. (Allinson) at 1479:18-1480:8.). A “reference design kit” is a “collection of open source components developed by community members for a variety of consumer premise equipment.” (*Id.*). There are over 300 members of the RDK community. (*Id.*)

1481:5-12, 1483:20-22.).

Figure 26: Software Architecture of Comcast's X1 System



(CX-0443C.0009 (Xfinity X1 Architecture Presentation)).

The Private Parties' dispute appears to implicate [redacted]

[redacted]. (Tr. (Allinson) at 1483:23-1484:7.). [redacted]

[redacted]. (*Id.* at 1484:8-13.3). [redacted]

[redacted] (Tr. (McCann)⁶⁶ at 1433:5-11, 1404:23-1405:10; Tr. (Allinson) at

1471:21-1472:5, 1486:2-12.). As shown below in Figure 27, [redacted]

[redacted]. (Tr.

(Allinson) at 1484:14-1487:11.). In other words, [redacted]

⁶⁶ When he testified at the Hearing on October 23, 2018, Mr. McCann was “vice president of product engineering at Comcast.” (Tr. (McCann) at 1398:20-21.). In that role, he “overs[aw] software development, testing and operations of our software services.” (*Id.* at 1399:1-2.). Comcast identified Mr. McCann as a witness testifying about “the X1 platform and the XRE Server as they relate to the accused functionalities and Comcast’s design alternatives.” (RPS_t. at 4.).

[REDACTED]

[REDACTED]. (Tr. (McCann) at 1406:19-1407:5 ([REDACTED]
[REDACTED]), 1455:17-1456:13, 1488:25-1489:5 ([REDACTED])).

Figure 27: Architecture of Comcast's X1 System with Highlighting from Rovi



(CDX-0006C.0017 (introduced during the testimony of Dr. Balakrishnan)).

According to Dr. Balakrishnan, [REDACTED]

[REDACTED]

[REDACTED]. (Tr. (Balakrishnan) at
741:4-746:21, 750:16-752:5, 754:7-758:20, 761:1-762:18; *see also* CX-0718C.0006-7.).

Comcast's expert agreed that [REDACTED] (Tr. (David
Albonesi)⁶⁷ at 1928:19-20.). Comcast engineers Mr. McCann and Mr. Allinson testified

⁶⁷ When he testified during the Hearing on October 24, 2018, Dr. David H. Albonesi was a "full professor of EC at Cornell University." (Tr. (Albonesi) at 1811:5-6.). Comcast identified Dr. Albonesi as an expert witness testifying about "the technical background of the Asserted Patents; the interpretation of the claims

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collectively that [REDACTED]
[REDACTED]
[REDACTED]. (Tr. (McCann) at 1432:3-9,
1440:18-24, 1444:15-19; Tr. (Allinson) at 1492:22-25; *see also* Tr. (Balakrishnan) at 741:4-
746:21, 750:16-752:5; 754:7-16 (testifying that [REDACTED]
[REDACTED])). Comcast engineers also testified that [REDACTED]
[REDACTED]
[REDACTED]. (Tr. (McCann)
at 1448:16-1449:7, 1449:15-22; Tr. (Allinson) at 1496:17-1498:11, 1499:25-1500:21.).

As compared with Rovi's description, Comcast characterized [REDACTED]
[REDACTED]. Comcast engineer Mr. Allinson testified that [REDACTED]
[REDACTED]. (Tr. (Allinson) at
1485:7-21, 1486:13-1487:11.). [REDACTED]
[REDACTED]
[REDACTED]. (*Id.*)

Allinson's point, and indeed Comcast's *raison d'être* for asserting non-infringement, was
that, for the Accused 585 Products, [REDACTED].

For example, [REDACTED]
[REDACTED]. (Tr. (McCann) at 1407:22-1408:19 (testifying that [REDACTED])

in those patents; issues relating to the alleged infringement of the Asserted Patents by the accused products and Comcast's design alternatives; the design, structure, function, and operation of the accused products and Comcast's design alternatives; issues relating to the validity of the Asserted Patents; issues relating to whether the Rovi DI products practice the Asserted Patents and, relatedly, whether Rovi satisfies the technical prong of the domestic industry for the Asserted Patents; other issues in connection with the alleged infringement, validity, enforceability, and any other technical issue that may arise with respect to the Asserted Patents." (RPSst. at 1-2.).

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[REDACTED]

[REDACTED]). Similarly, [REDACTED]

[REDACTED]. (Tr. (Allinson) at 1475:20-23.). [REDACTED]

[REDACTED]

[REDACTED] (RRBr. at 8 (citing Tr. (Karger) at 1532:23-1533:13, 1534:9-22).). [REDACTED]

[REDACTED]

[REDACTED]. (Tr. (McCann) at 1420:23-1421:5; Tr.

(Allinson) at 1477:9-19 ([REDACTED]

[REDACTED])).).

However, in its depiction of [REDACTED]

[REDACTED], Comcast appeared to read “interactive television program guide implemented on user television equipment” too narrowly. Comcast attempted to import claim limitations not mandated by the ’585 patent, such as requiring the performance of sophisticated IPG operations, onto the STB. The *Markman* Order explained that the “specification of the ’585 patent teaches a *distributed* ‘interactive television program guide system’ in which ‘television distribution facility,’ separated from user television equipment, provides display components in the form of ‘television program listings and additional data.’” (Order No. 41, App. A at 27 (citing (JX-0004 (’585 patent) at 3:18-19)) (emphasis added)).

The *Markman* Order illuminated that “the ’585 patent treats ‘interactive television program guide’ in a holistic manner, inclusive of functions that occur within ‘[a]n interactive television program guide system’ but not necessarily on user television equipment.” (*Id.* at 28.). In so doing, the *Markman* Order appeared to draw a favorable comparison between, and expressly not distinguish, the “interactive television program guide implemented on user

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television equipment” found in the ’585 patent, on the one hand, and [redacted]
[redacted] found in the Accused 585 Products, on
the other hand.

Comcast’s argument that the accused [redacted]
[redacted] is a red
herring. (RRBr. at 71.). Claims 1 and 15 of the ’585 patent cover a centralized or distributed
“interactive television program guide” “application that generates a display of program listings
on user television equipment[.]” As discussed above, and explained in the *Markman* Order, the
claims do not require that the “interactive television program guide” application reside solely on
a STB or that that the particular “generates a display” function necessarily occur on the STB.


Here, the evidence appears to show that [redacted]
[redacted]
[redacted]. That is enough to satisfy the claim
language in question.

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1
System, the Accused 585 Products practice an “interactive television program guide”
“implemented, at least in part, at a user site on television equipment for receiving and processing
television program listings and program data.” Unrebutted evidence above proves that [redacted]
[redacted]
[redacted]
[redacted] functions depicted in the screenshots of the Comcast X1 System’s user interface
displayed immediately below in Figure 28.

Figure 28: Rovi's Screen Shots of Comcast's X1 System's User Interface

'585 Patent, Claim 1[pre]: User Selection of Auto Pad Storage Option

Claim 1[pre]
A method for allowing a user to select storage options for storing programs using an interactive television program guide implemented on user television equipment, the method comprising:

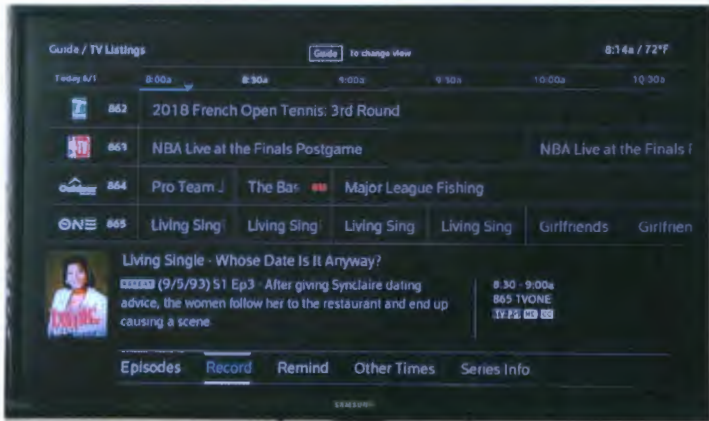


CX-1051C.1 (XG1v1); see also CX-1056C.1 (XG1v3), CX-1063C.1 (XG2v2), CX-1066C.1 (XID)

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'585 Patent, Claim 1[pre]: "Interactive Television Program Guide"

Claim 1[pre]
A method for allowing a user to select storage options for storing programs using an interactive television program guide implemented on user television equipment, the method comprising:



CX-1051C.20 (XG1v1); see also CX-1056C.22 (XG1v3); CX-1063C.18 (XG2v2); CX-1066C.28 (XID)

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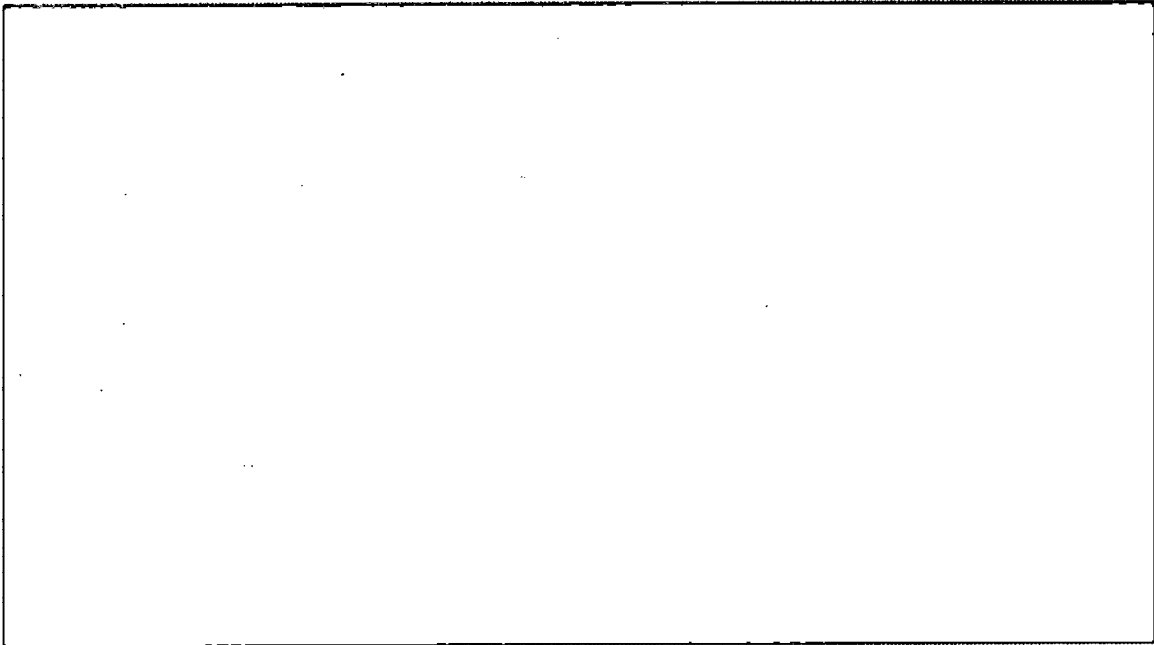
(CDX-0006C.0024-25 (introduced during the testimony of Dr. Balakrishnan).).

As reiterated below in Figure 29, Comcast engineer John Robinson⁶⁸ stated very clearly

⁶⁸ When he testified during his deposition on August 29, 2016, Mr. Robinson was a Comcast engineer

that, [REDACTED]
[REDACTED]. (CX-1302C at 166:2-22.):

Figure 29: Rovi's Depiction of the Importance of [REDACTED] to the X1 System



(CDX-0006C.0037 (introduced during the testimony of Dr. Balakrishnan)).

When operating in the X1 System, the Accused 585 Products also satisfy the remaining limitations presented in this section. The limitations “a display device” and “allowing a user to select storage options” are evident from the screen shots displayed above in Figure 28. The first screen shot in Figure 28 shows a display screen interface that presents a user with the storage options of “Auto Pad Recordings,” such that “recordings will be scheduled with a little extra

who worked “for Labeeb Ismail, which he owns all of the CPE software development for all of the RDK devices.” (CX-1302C at 42:9-11.). In this role, Mr. Robinson had a “fairly broad engineering responsibility. So, I have the XRE native receiver. I have like all of the IP video playback components. I have pretty much all of the application runtimes that have, you know, been on the device.” (*Id.* at 42:12-20.). Mr. Robinson was not called to testify at the Hearing.

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time at the start and end.” Collectively, the screen shots in Figure 28 show Comcast’s X1 System implemented on user television equipment (including a STB and a display screen) at a user site (in the most common use case, a user’s home). (Tr. (Balakrishnan) at 741:4-746:21, 750:16-756:22, 824:5-833:7; Tr. (Albonesi) at 1909:5-10 (Comcast expert agreeing that “each of the XG1, XG2 and XiD [REDACTED] [REDACTED]”); Tr. (McCann) at 1432:7-9 (same).).

Consequently, Rovi has satisfied its burden of proving by a preponderance of the evidence that the Accused 585 Products satisfy the preambles of claims 1 and 15 in addition to limitations 15[a] and 15[c].

- ii. ***1[a]: “providing the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on a random access digital storage device”; 15[b]: “a random access digital storage device”; 15[d]: “provide the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein said at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on the random access digital storage device”***

Rovi alleged that, when operating in the X1 System, that the Accused 585 Products satisfy claim limitations 1[a], 15[b], and 15[d]. (CBr. at 41-47 (emphasis added)). These limitations permit a user to select a storage option that pertains to *how* programs are stored on a random access digital device. (*Id.* (emphasis added)). In rebuttal, Comcast argued that the Accused 585 Products fail to practice a “storage option that relates to at least one storage setting configured to control *how* programs are to be digitally stored” because “all of the ‘options’ Rovi accuses dictate *what* gets recorded or kept, not *how* it is to be digitally stored.” (RRBr. at 56 (emphasis added)). Comcast did not raise additional arguments with respect to these limitations

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in its Post-Hearing brief and has thus waived any such arguments pursuant to Ground Rule 10.1.

As an initial matter, there is no dispute that the Accused 585 Products provide users with program storage options and facilitate the storage of programs. As shown above in Figure 28, each 585 Accused Product presents users with a Comcast's X1 IPG, including a "Settings/Preferences/General" screen that permits users to toggle the "Auto Pad Recordings" setting "On" or "Off." (Tr. (Balakrishnan) at 763:16-766:16 (discussing this evidence)). Dr. Balakrishnan explained that, when the "Auto Pad Recordings" is set to "On," recordings of programs will be scheduled with extra time before the scheduled start time and after the scheduled end time. (*Id.* at 764:17-766:6 (discussing how the Auto Pad Recording function will globally add time before and after all scheduled recordings); CX-0156.0002 (X1 Web Page instructing how to "Turn on Auto Pad Recordings")). "Auto Pad Recordings" is a storage option applied globally to *all* recordings of programs selected for recording by the user. (Tr. (Balakrishnan) at 764:2-10 (emphasis added)).

Dr. Balakrishnan also explained the relationship between the user's selection of the Auto Pad Recording "storage option" and the resulting modification of an underlying "storage setting." (*Id.* at 765:1-766:16.). Specifically, "storage options are what the user selects on the -- on the guide. Like here, for example, in this example I've chosen, the user would select that auto pad recording storage option to either on or off. And then subsequently, when the program is actually recorded, the recording part of the system will check for what these options and what they have been set to. And based on those option settings, will actually do the storage according to those settings." (*Id.* at 916:9-919:1; CX-0156.0002.). In other words, based on his use of the Comcast X1 System's IPG and his general expertise in this field, Dr. Balakrishnan concluded that the user's selection of an Auto Pad Recordings "storage option" results in modification of a

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“storage setting” in the X1 System. (*Id.* at 776:18-780:25, 916:9-919:1; CX-1051C.0021.).

Comcast characterized Dr. Balakrishnan’s testimony in this regard as an inference, not formal proof, of a “storage setting.” Comcast is correct that Dr. Balakrishnan inferred the presence of a “storage setting” for the “Auto Pad Recordings” feature. Dr. Balakrishnan did not examine source code for the X1 System. (Tr. (Balakrishnan) at 849:21-853:19.).

However, Dr. Balakrishnan’s inference as a technical expert, in conjunction with his explanation of the user experience of turning the “Auto Pad Recordings” options on and off, is adequate circumstantial evidence of a “storage setting” related to Comcast’s Auto Pad Recordings feature. Comcast could have rebutted Dr. Balakrishnan’s circumstantial evidence of a “storage setting” with direct evidence from the source code or expert testimony about the same. Comcast did not do so. Instead, it offered evidence that bolsters Balakrishnan’s inference.

For example, Comcast offered evidence that, in the X1 System, [REDACTED]

[REDACTED]

[REDACTED]. (Tr. (McCann) at 1408:35-1409:21; Tr. (Allinson) at 1487:21-1488:6.). In other words, [REDACTED]

[REDACTED]. (CX-1051C.0001 [REDACTED])

[REDACTED]; *see also* Tr. (Albonesi) at 1889:5-21; Tr.

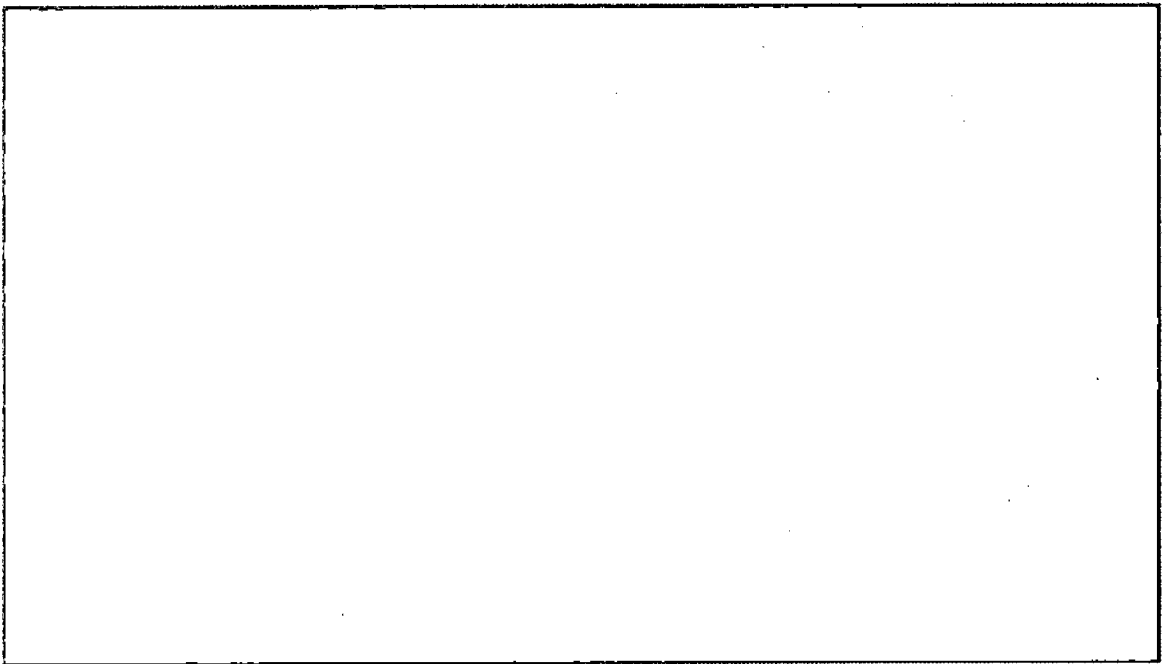
(Balakrishnan) at 765:12-22.). Consequently, Rovi has proven by a preponderance of the evidence that Comcast’s X1 System satisfies the “storage setting” limitation.

Next, there is no dispute that, in Comcast’s X1 System, “programs are to be digitally stored on the random access digital storage device.” Dr. Balakrishnan testified that each of the

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Accused 585 Products makes use of a “random access digital storage device”⁶⁹ that “can access memory locations in a non-sequential manner,” as shown below in Figure 30, to record program(s) according to user-selected storage options. (Tr. (Balakrishnan) at 770:18-25, 771:1-776:12.). Comcast’s expert, Dr. Albonesi, agreed that hard drives are “random access digital storage devices.” (Tr. (Albonesi) at 1908:11-14, 1913:10-14.).

Figure 30: Rovi’s Depiction of the “Random Access” Feature of Comcast’s Hard Drives



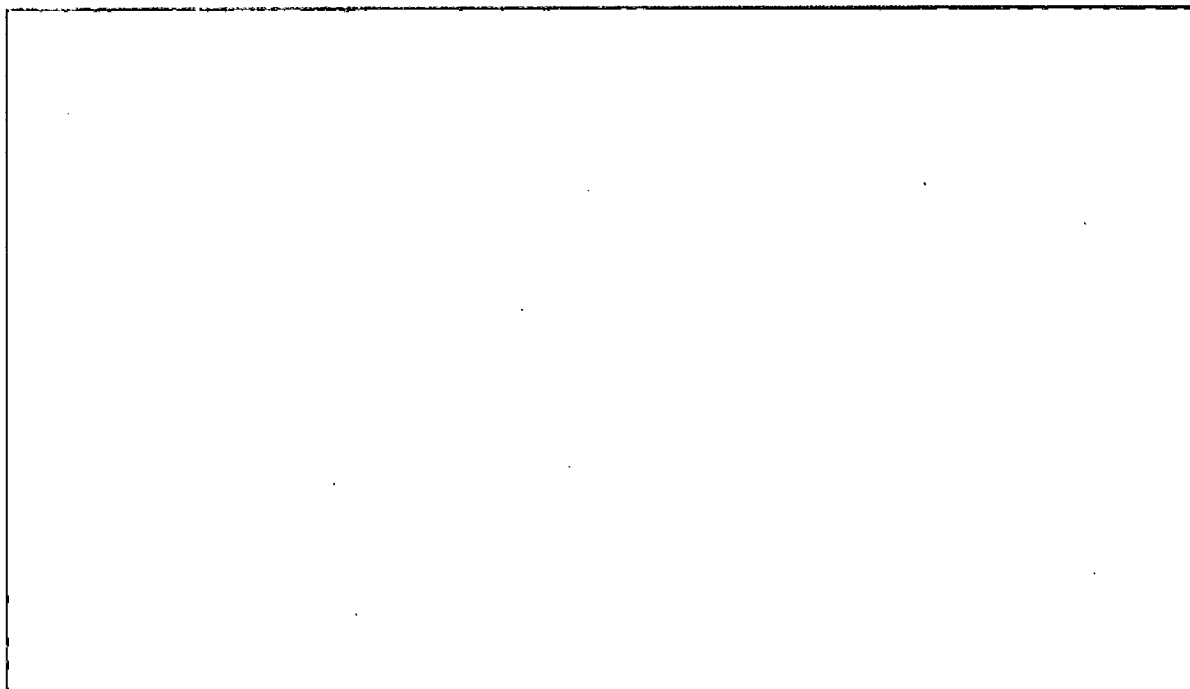
(CDX-0006C at 53 (introduced during the testimony of Dr. Balakrishnan)).

That said, the Accused 585 Products do differ in terms of the location of hard drives within the X1 System. As shown below in Figure 31, Accused 585 Products include either a local hard drive (in the case of the representative XG1 or representative XiD paired with an XG1) _____

⁶⁹ Based on the *Markman* Order, hard drives utilized by the 585 Accused Products are “random access digital storage devices” because they “can access memory locations in a non-sequential manner.” (Markman Order, App. A at 15.).

[REDACTED]). (Tr. (Balakrishnan) at 746:4-21, 768:12-770:24, 767:19-23, 771:1-776:12; Tr. (Albonesi) at 1909:8-10, 1913:4-21, 1917:16-1918:1; JX-0133C (Young Dep. Tr.) at 33:5-9 (Comcast engineer testifying about [REDACTED] [REDACTED])).).

Figure 31: Rovi's Depiction of Location of Hard Drives in X1 System



(CDX-0006C.0056 (introduced during the testimony of Dr. Balakrishnan)).

Comcast contended, unpersuasively, that the location of the hard drives affects Rovi's infringement analysis. Comcast asserted that the representative XG2 and the XiD (when paired with an XG2) STBs do not meet this limitation because there is no hard drive physically present in the XG2 STB. (RRBr. at 76; Tr. (Albonesi) at 1902:17-1903:4.). However, Rovi is correct that "no part of any Asserted Claim limits the scope of infringement (including post-importation induced infringement) to STBs that physically contain hard drives." (CBr. at 46-47 (citing Tr. (Balakrishnan) at 746:4-21, 768:12-770:24)).

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As mentioned above, the specification of '585 patent “teaches a *distributed* ‘interactive television program guide system’ in which ‘television distribution facility,’ separated from user television equipment, provides display components in the form of ‘television program listings and additional data.’” (Order No. 41, App. A at 27 (citing (JX-0004 ('585 patent) at 3:18-19 (“Television distribution facility 16 distributes the television program listings and additional data to multiple users via communications paths 20. Each user has user television equipment 22 for displaying[.]”)) (emphasis added)). The '585 patent also suggests that programs recorded for users are sometimes stored in a distributed fashion: “digital storage device 31 can be contained in STB 28” (as it is with the XG1) “or it can be an external device connected to the STB 28 via an output port and appropriate interface” (as it is with the XG2). (JX-0004 ('585 patent) at 4:1-3.). Contrary to Comcast’s assertion, from the perspective of the '585 patent, the location of the claimed hard drive (whether local to the user on a STB or situated “in the cloud”) appears irrelevant to whether, when used as intended, the Accused 585 Products satisfy claims 1 and 15.

With respect to the primary dispute in this section, the Private Parties contested the scope of “storage setting configured to control *how* programs are to be digitally stored.” Rovi contended that the “Auto Pad Recordings” option (recording additional, padded time on both ends of a scheduled program) satisfied this limitation. (CBr. at 43.). In rebuttal, Comcast asserted that the “Auto Pad Recordings” option pertains to the selection of what will be recorded (i.e., more content before and after the scheduled program), not *how* the selected programs will be recorded (i.e., actually store that data onto a hard drive). (RRBr. at 59.). To emphasize this distinction, Comcast offered two examples of storage settings that allegedly affect *how* a program is recorded: (1) “‘recording quality’ option which has a related setting of ‘megabits per second;’” and (2) “an encryption option, which would cause the 1s and 0s to be stored in a

different manner depending on whether or not a user chose to encrypt the recording.” (*Id.* at 63-64.).

Comcast cited the prosecution history in support of its narrow interpretation of “storage setting configured to control *how* programs are to be digitally stored.” Comcast is correct that this claim language was added to claims 1 and 15 to allow the applicants to overcome a rejection of existing claims in view of the prior art, as shown below in Figure 32. Before amendment, precursors to issued claims 1 and 15 recited a “storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting” with no mention of controlling “how” to store a program. (See JX-0010.0109-16 (’585 patent prosecution history) (original claims 106, 113, 120, 127 issued as claims 1, 8, 15, and 22)).

Figure 32: “How” Language Added to Claim 1 to Overcome Prior Art (September 1, 2010)

providing the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on a random access digital storage device;

(*Id.* at 5271.).

Those claims were rejected by the examiner as obvious in view of the prior art, as shown below in Figure 33. Specifically, the examiner rejected the applicants’ argument that the Young prior art reference addressed program speeds for pre-recorded programs and failed to teach user selection of “a storage option for storing a program to be recorded.” (*Id.* at 5271.). The examiner explained that Figure 13 of Young disclosed multiple recording speeds and that “a selection must have been made in order to record at that [speed and] quality level.” (*Id.* at

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5271.). In response, the applicants made the above-mentioned amendment requiring a “storage setting configured to control *how* programs are to be digitally stored on a random access digital storage device.” (*See id.* at 5256-60.).

On this basis alone, Comcast concluded that the “limitation requiring a storage setting that controls ‘how’ a program is to be digitally stored on a random access storage device is ... the only reason [the ’585 patent] issued.” (RRBr. at 57.). Comcast is mistaken. As shown below in Figure 33, in making their amendment, the applicants explicitly stated that Young in combination with prior art reference Barton would not disclose “the provision of a storage option that relates to ... storage of programs on a *random access digital storage device*.” (JX-0010.5280 (’585 patent prosecution history) (emphasis added).). The claim requirement of storage on a random access digital storage device, and not controlling how programs are stored, could have been the reason why the amended claims issued. This is because the applicants added the “random access digital storage device “ language by amendment at the same time they added “control *how* programs are to be digitally stored,” without identifying one limitation over the other, or the two in combination, as the decisive point of novelty over the prior art.

Figure 33: Examiner's Rejection of Claims (March 25, 2010)

Applicant argues that independent claims 106/120 are directed to allowing a user to carry out global configuration of storage settings for programs to be recorded. (Page 2) Young at figure 13 and column 8, lines 40-43 refers to program speeds for programs already recorded and fails to show "providing the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein at least one storage option relations to at least one storage setting." "In response to a user selection of at lease one storage option, modifying the at least one storage setting," and "recording the program on the digital storage device based on the modification of the at least one storage setting." (Page 3).

The Examiner respectfully disagrees. The Examiner notes that figure 13 shows the availability multiple recording speeds (EP=Extended Play=4 hours per tape at lower quality, SP=Standard Play =2 hours per tape, higher quality). Figure 12 shows an express recording screen which includes recording speed. As the playback figure 13 shows that multiple playback speeds are available, a selection must have been made in order to record at that quality level.

(JX-0010.5271 ('585 patent prosecution history)).

Comcast nevertheless has a valid point here that a claim scope disavowal of some sort occurred with respect to amendment of the claims at issue to include "storage setting configured to control *how* programs are to be digitally stored." The critical inquiry is what the applicants disavowed. A careful examination of the prosecution history shows that the applicants underlined text in their "Reply to Office Action" filed on August 4, 2005, in order to highlight two reasons why they amended rejected claims. (JX-0010.5280 ('585 patent prosecution history)). As shown below in Figure 34, and as mentioned briefly above, it appears that the first

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reason, indicated by the underlining of “random access,” was to distinguish the “random access digital storage device” of the invention from the “sequential access storage device” of the prior art. (*Id.*) It appears that the second reason for the amendment, indicated by the underlining in “control storage of programs,” was to distinguish “control[ling] the recording speed at which programs are stored” from “control[ling] storage of programs[.]” (*Id.*)

The applicants appear to associate the latter, “control[ling] storage of programs on a ... digital storage device,” with “*how* programs are to be digitally stored.” (*Id.*) In other words, the applicants juxtapose: (1) a setting that relates to the speed (and, by implication, quality) at which a program records on a “sequential access storage device” with (2) a setting that pertains to the particulars of actually storing the recording on a random access digital storage device. The applicants appear to retain coverage of the latter while disavowing the former.

What also appears clear, as both Private Parties noted in their briefing, is that, based on the prosecution history of the '585 patent, mere specification of the program to record and store, without more, does not satisfy the “setting configured to control how programs are to be digitally stored” limitation required by the claims. (CRBr. at 15 (“the '585 Patent makes an explicit distinction between what is being recorded (e.g., the program or programs to be recorded) and user-selectable storage options related to how those program(s) are digitally stored on a hard drive.”); RRBr. at 58 (“both Rovi’s and Comcast’s experts agreed that the ‘control how’ language of the claims cannot be met by the selection of what data to record”).).

Figure 34: Reply to Office Action (September 1, 2010)

Applicants respectfully submit that Young and Barton, whether taken alone or in combination, fail to show or suggest selection of a storage option that relates to a storage setting configured to control how programs are to be digitally stored on a random access digital storage device, as defined by applicants' amended independent claims 106, 113, 120 and 127. In particular, taking the Examiner's combination of applying digital storage to the teachings of Young, the digital recording mode disclosed in Young, would enable a user to control the recording speed at which programs are stored on a digital video tape or other sequential access storage device. The amended independent claims require the digital storage device to be a random access digital storage device. Therefore, even if Young were modified with the digital storage of Barton, the modified device would not disclose the provision of a storage option that relates to a storage setting configured to control storage of programs on a random access digital storage device.

(JX-0010.5280 ('585 patent prosecution history)).

The above interpretation of claim scope disavowal does not comport with Comcast's non-infringement argument. Whereas the applicants differentiated between recording speed on a "sequential access storage device" and storage options on a random access digital storage device, Comcast's non-infringement argument attempted to differentiate between two types of storage options on a random access digital storage device: (1) non-program buffer storage (e.g., padding before and after a program in the X1 System); and (2) the manner in which it is stored (e.g., high v. low quality, encryption options). (RRBr. at 61 (Comcast taking the word "how" out of context to assert that [redacted]

[redacted]), 63-64.). Contrary to Comcast's position, the applicants

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did not clearly disavow either of these examples of “control[ling] storage of programs on a ... digital storage device.”

Comcast’s position was also at odds with the specification of the ’585 patent. The ’585 patent accords broad treatment to “how” in the context of program storage options. With respect to “providing the user with the ability to define selectable options,” the specification teaches, as shown below in Figure 35: “FIG. 16 ... At step 424, the program guide provides the user with the opportunity to define storage options. If language, video format, enforcement of parental control, and auto-erase storage options are provided (FIG. 15), the program guide stores the programs and associated program data on digital storage device 49 according to *how* the storage options are defined as set forth in steps 426, 428, 430, and 432 respectively.”⁷⁰ (*Id.* at 16:28-36 (emphasis added)). Likewise, as shown below in Figure 36, Figure 14 of the ’585 patent presents a “set-up screen” with “storage option area 122” that “allows the user to select options relating to storage” that correspond to “storage options” set forth in Figure 16. (*Id.* at Fig. 14.).

⁷⁰ Comcast is technically correct that the statement “*how* the storage options are defined as set forth in steps 426, 428, 430, and 432,” on its face, relates to how users define storage options, not necessarily “how programs are to be digitally stored” as required by claims 1 and 15. (RRBr. at 65.). However, these two uses of “how” are inextricably linked. For example, if a user chooses the HDTV video format option shown in Figure 35, the system will store the recorded program in high-definition (“HD”) format. Tellingly, Comcast has already admitted that such a “‘recording quality’ option” (e.g., HD versus standard definition (“SD”)) affects “*how* programs are to be digitally stored,” even under Comcast’s narrow construction of “how” as meaning “the manner in which.” (*Id.* at 63-64 (emphasis added)).

Figure 35: Figure 16 of the '585 Patent

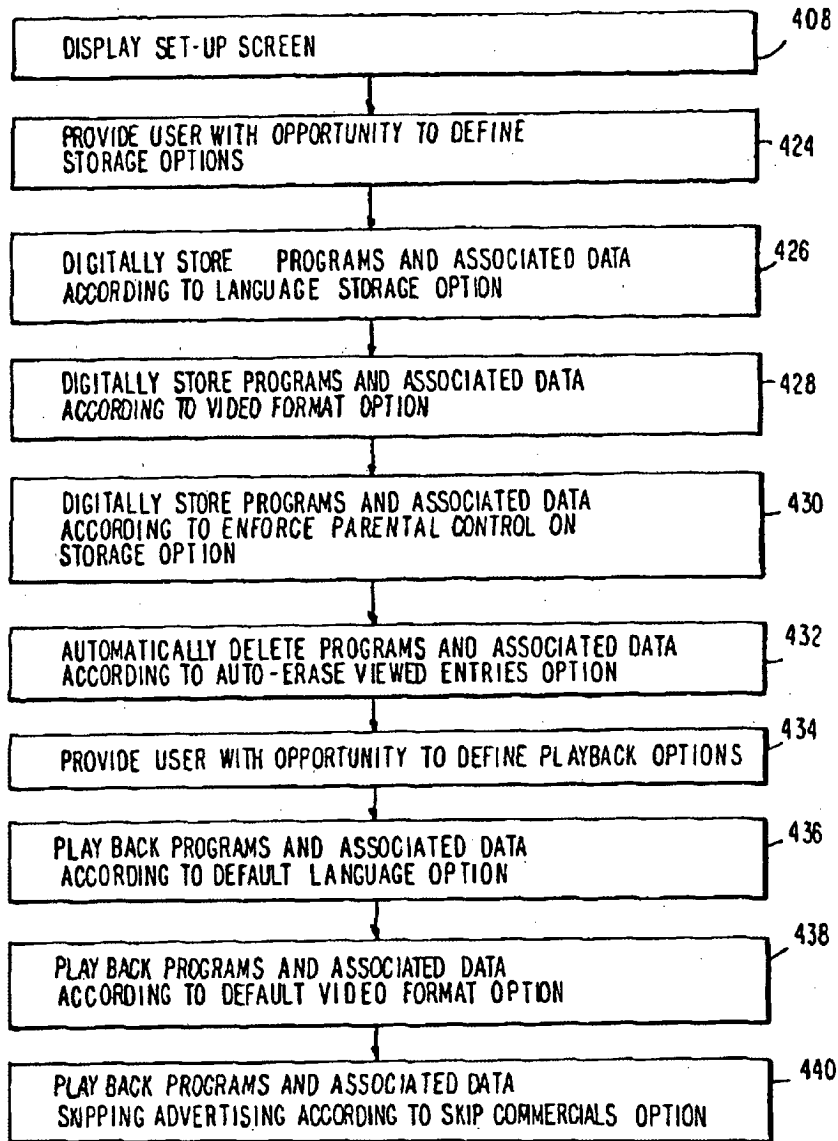


FIG. 16

(JX-0004 ('585 patent) at Fig. 16.).

Figure 36: Figure 14 of the '585 Patent

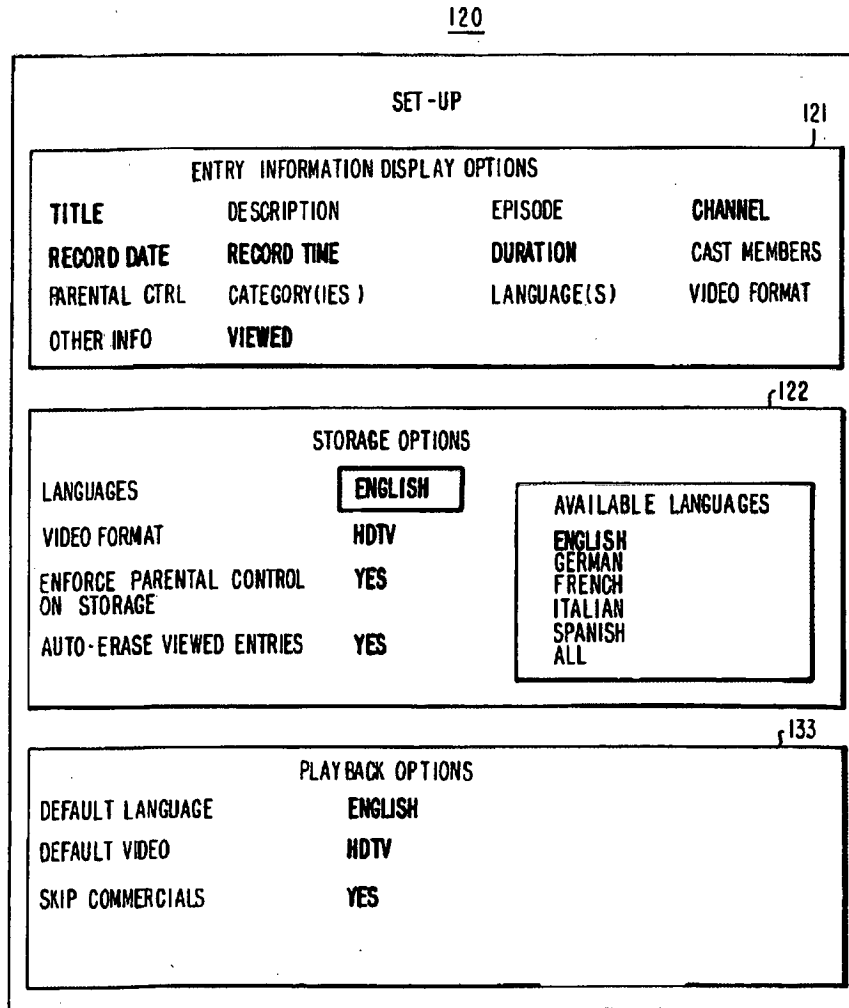


FIG. 14

(*Id.* at Fig. 14.).

Comcast was correct that embodiments or features of a purported “invention” disclosed in a patent specification might be disavowed during patent prosecution by applicants seeking to overcome the prior art. (RRBr. at 64-65.). However, that is not the case here. As discussed above, during the prosecution of the '585 patent, the applicants disavowed recording speed of a

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program on a “sequential access storage device,” not “control[ling] storage of programs” on a random access digital storage device. (JX-0010.5280 ('585 patent prosecution history)). The applicants appear to have retained within the scope of claims 1 and 15 of the '585 patent settings that pertain to storage of programs of interest on a digital storage device. Examples include storage options presented in Figures 14 and 16 of the '585 patent.

Based on the discussion of prosecution history and the discussion above, the Auto Pad Recordings feature of Comcast's X1 System is clearly a “storage option [that] relates to at least one storage setting configured to control how programs are to be digitally stored on a random access digital storage device.” As Comcast acknowledged, Auto Pad Recordings “allows a user to select what is to be recorded” and stored, along with the program of interest, on the front and tail ends of the program of interest. (RRBr. at 63.). As Dr. Balakrishnan explained: “It's basically telling the user, if you use this auto pad, the way in which the program will be stored, how it's going to be stored, will include a little extra time before and after.” (Tr. (Balakrishnan) at 765:12-766:1.).

Another way to conceptualize the Auto Pad Recordings feature is to ask, “How is the program of interest stored when Auto Pad Recordings is ‘on’?” The answer: it is stored in a digital recording sandwich, with padding as bread slices and the program of interest as the sandwich filling. That is enough to satisfy the “configured to control how programs are to be digitally stored” claim requirement. That the Auto Pad Recordings option is also enlarging *what* to store is of no consequence.

Thus, based on the above, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, Comcast's X1 System's satisfy limitations 1[a], 15[b], and 15[d] of the '585 patent.

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- iii. ***1[b]: “in response to a user selection of the at least one storage option, modifying the at least one storage setting”;***
15[e] “in response to a user selection of the at least one storage option, modify the at least one storage setting”

Rovi argued that, when operating in the X1 System, the Accused 585 Products satisfy these limitations. (CBr. at 47-49.). Comcast disputed only whether Rovi had proven that user selection of the Auto Pad Recordings option resulted in the modification of a storage setting, an issue discussed and resolved above in relation to limitations 1[a] and 15[d]. (RRB. at 65-66.). Comcast did not raise additional arguments with respect to limitations 1[b] and 15[e] in its Post-Hearing Briefs and has thus waived any such argument pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

As explained above, the record contains ample evidence that user selection of the Auto Pad Recordings option results in the modification of a storage setting. The screen shots set forth in Figures 37 and 38 below constitute persuasive evidence that Comcast’s X1 System modifies a setting when a user toggles the Auto Pad Recordings option from “on” to “off” and vice versa. To provide useful evidence, Dr. Balakrishnan did need not review Comcast source code and point to a specific variable or flag in the code as proof of modification of a “storage setting” corresponding to user selection of the Auto Pad “storage option.” (*Id.* at 917:3-918:1 (explaining that he “[d]id [not] need to see the code because [REDACTED]

[REDACTED]
[REDACTED]).

Moreover, in addition to Dr. Balakrishnan’s expert inference that a setting modification occurs, Comcast engineers elaborated that the X1 System [REDACTED]
[REDACTED]. (Tr.

(McCann) at 1408:35-1409:21; Tr. (Allinson) at 1487:21-1488:6).

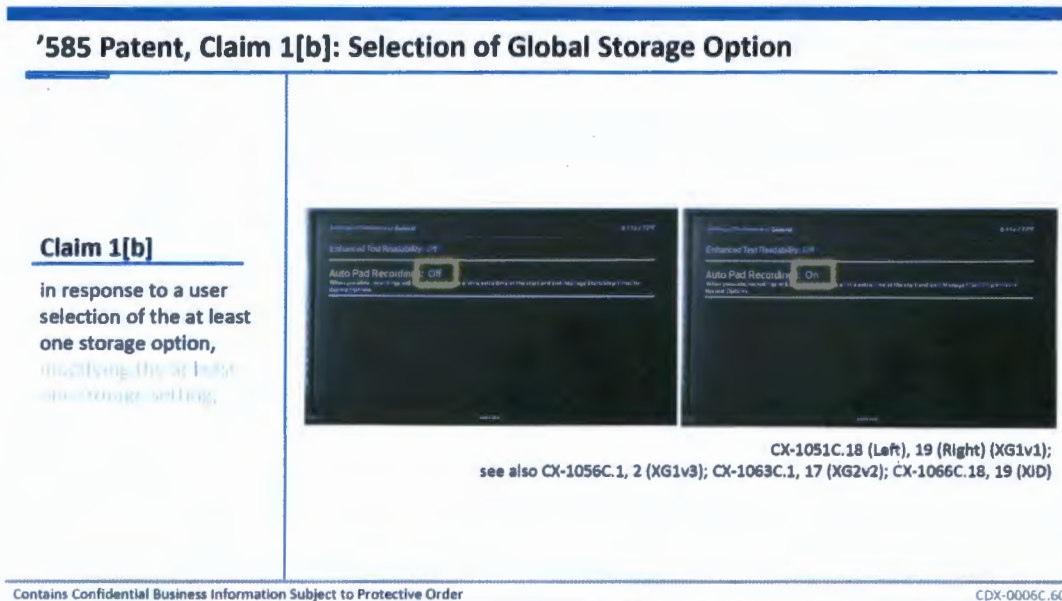
. (Tr. (McCann) at 1409:14-1411:1).

. (CX-1051C.0001 (X11M-585-1-26 Screenshots); Tr. (Albonesi) at 1889:5-21; Tr.

(Balakrishnan) at 765:12-22.). In this context, it is clear that these the start and end variables

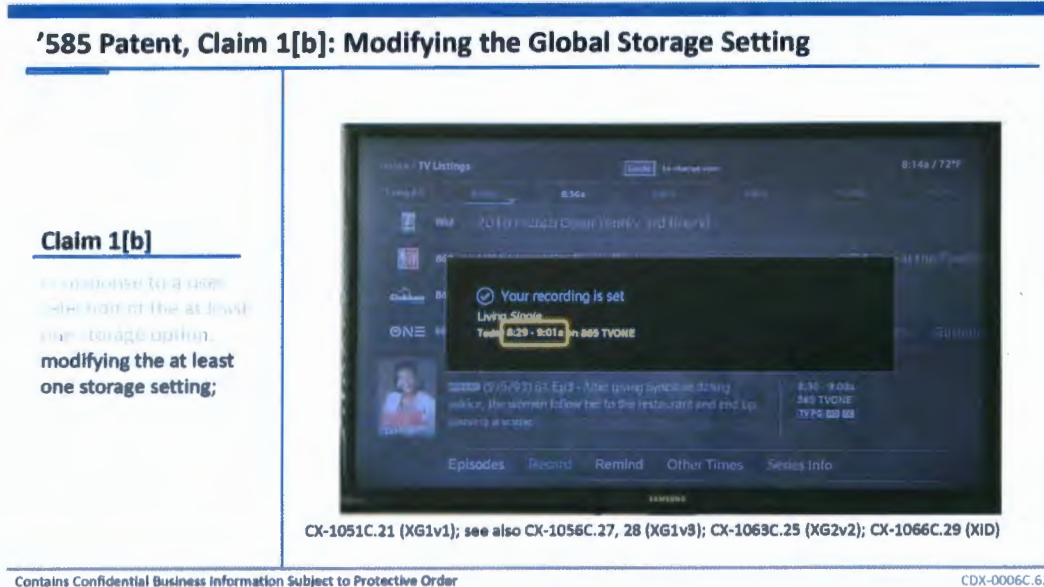
correspond to the modified “storage settings” of the asserted claims.

Figure 37: Rovi’s Depiction of Toggling the Auto Pad Recordings Option in the IPG of the X1 System



(CDX-0006C.0060 (introduced during the testimony of Dr. Balakrishnan)).

Figure 38: Rovi Depicting Modification of the Auto Pad Recordings Setting (When a User Turns “On” the Auto Pad Recordings Option) in the IPG of the X1 System



(CDX-0006C.0062 (introduced during the testimony of Dr. Balakrishnan)).

Comcast attempted to resuscitate its “lack of storage settings” argument by citing to case law about the perils of inferring the presence of a claim limitation in an accused product. (RRBr. at 66.). Most of the cases to which Comcast cites are non-binding. The one Federal Circuit case Comcast cited is inapplicable here. That is because the expert in the Federal Circuit case, who addressed infringement under the doctrine of equivalents, “did not supply any of the details necessary to identify an infringing device.” *Intellectual Sci. and Tech., Inc. v. Sony Elecs., Inc.*, 589 F.3d 1179, 1186 (Fed. Cir. 2009). The expert in that case failed to state whether a “signal selector” was a multiplexer that possessed a specific feature required by the asserted claims, that is, whether the “signal selector” outputted a signal that “simultaneously transmitted a plurality of information sets,” as required for infringement. (*Id.* at 1185.).

Here, by contrast, in the context of Comcast’s alleged literal infringement, Dr. Balakrishnan specifically addressed the presence of the claimed modified “storage setting,”

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offered observed evidence of its existence, and effectively stated, “I know as a computer scientist that the system must contain this setting.” Moreover, unlike in *Intellectual Science and Technology*, here engineers of the accused infringer, Comcast, have bolstered an already adequate evidentiary record by revealing specific variables of the Auto Pad Recordings feature modified within the X1 System that correspond to the claimed “storage settings.”

Against this backdrop, it is apparent that Comcast’s “lack of storage settings” argument is illusory. Comcast did not dispute Rovi’s screenshot, in Figure 37, showing the Auto Pad Recordings option. (*See also* CX-1051C.0018-21; CX-1056C.0001-2, 22, 27-28; CX-1063C.0001, 17-18, 25; CX-1066C.0018-19, 28-29.). Comcast did not dispute Rovi’s screenshot, in Figure 38, showing that, when a user turns “on” the Auto Pad Recordings option, the IPG verifies that extra recording time is added to the start and end of the program targeted for recording. Comcast did not dispute that start and end variables are settings that change when a user toggles the Auto Pad Recordings option from “one” to “off” and vice versa. Thus, Comcast cannot reasonably dispute that the weight of the evidence proves, by a preponderance of the evidence, that, when operating in the X1 System, the Accused 585 Products satisfy limitations 1[b] and 15[e].

- iv. ***1[c]: “displaying in the interactive television program guide at least one program listing related to at least one program”;
15[f]: “display in the display screen at least one program listing related to at least one program”***

Dr. Balakrishnan testified that, when operating in the X1 System, the Accused 585 Products satisfy this limitation. (Tr. (Balakrishnan) at 781:1-782:19.). Screenshots in evidence show display, in the IPG, of at least one program listing related to at least one program. (*Id.* at 781:16-782:15; *see also* CX-0161; CX-1051C.0020; CX-1056C.0022; CX-1063C.0018; CX-

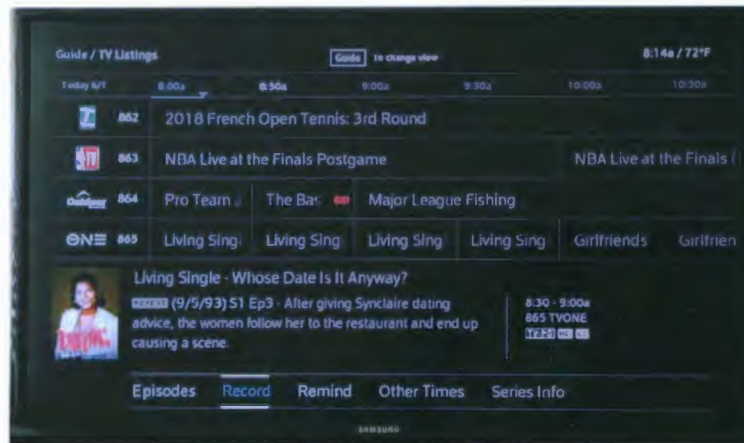
1066C.0028.).

Figure 39: Rovi's Depiction of Displaying At Least One Program Listing in X1 System

'585 Patent, Claim 1[c]: The Display of Program Listings in the Guide

Claim 1[c]

displaying in the interactive television program guide at least one program listing related to at least one program;



CX-1051C.20 (XG1v1); see also CX-1056C.22 (XG1v3); CX-1063C.18 (XG2v2); CX-1066C.28 (XID)

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CDX-0006C.66

(CDX-0006C.0066 (introduced during the testimony of Dr. Balakrishnan)).

Comcast did not offer rebuttal arguments or evidence with respect to limitations 1[c] and 15[f] in its Post-Hearing Briefs and has thus waived any such argument pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy limitations 1[c] and 15[f] of the '585 patent.

- v. **1[d]: “providing the user with an opportunity to select a program listing from the at least one displayed program listing for recording on the random access digital storage device”;**
15[g]: “provide the user with an opportunity to select a program listing from the at least one displayed program listing for recording on the random access digital storage device”

Dr. Balakrishnan testified that, when operating in the X1 System, the Accused 585 Products satisfy this limitation. (Tr. (Balakrishnan) at 782:20-784:18. Screenshots in evidence

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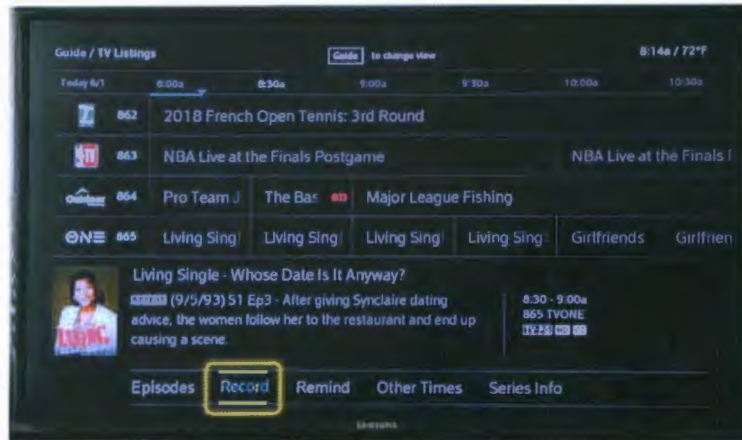
show that the Accused 585 Products provide a user with an opportunity to select a program listing (“Living Single-Whose Date Is It Anyway?”) for recording on the hard drive from the program listings displayed in the grid guide. (*Id.* at 783:11-784:14; CX-1051C.0020; CX-1056C.0022; CX-1063C.0018; CX-1066C.0028.). Screenshots in evidence also show that the selected program is recorded on the hard drive. (Tr. (Balakrishnan) at 783:14-22 (“If the user selects that record button, that record option, recording will occur off that listing”); CX-1051C.0018-21; CX1056C.0001-2, 22, 27-28; CX-1063C.0001, 17-18, 25; CX-1066C.0018-19, 28-29.). The recording—including with the additional user-specified time added before and after the scheduled broadcast time in connection with the “Auto Pad Recordings” storage option—is performed on a hard drive (which is random access digital storage device): either locally on an XG1 STB or remotely in the case of the XG2 STB. (*Id.* at 784:3-14 (testifying regarding the location and functionality of recording programs on hard drives on an XG1 STB or in the cloud).).

Figure 40: Rovi's Depiction of Selection of Program Listing in X1 System

'585 Patent, Claim 1[d]: Selection of Program Listing for Recording

Claim 1[d]

providing the user with an opportunity to select a program listing from the at least one displayed program listing for recording



CX-1051C.20 (XG1v1); see also CX-1056C.22 (XG1v3); CX-1063C.18 (XG2v2); CX-1066C.28 (XiD)

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CDX-0006C.70

(CDX-0006C.0070 (introduced during the testimony of Dr. Balakrishnan)).

Comcast did not offer rebuttal arguments or evidence with respect to limitations 1[d] and 15[g] in its Post-Hearing Briefs and has thus waived any such argument pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy limitations 1[d] and 15[g] of the '585 patent.

- vi. ***1[e]: “recording the program on the random access digital storage device based on the modification of the at least one storage setting”; 15[h]: “record the program on the random access digital storage device based on the modification of the at least one storage setting”***

Dr. Balakrishnan testified that, when operating in the X1 System, the Accused 585 Products meet this limitation. (Tr. (Balakrishnan) at 784:19-787:6 (discussing CX-1051C.0020-21 (XG1), CX-1063C.0018, 25 (XG2), CX-1066C.0028-29 (XiD)).). Screenshots in evidence show that the normal broadcast time of the “Living Single” program is from 8:30 a.m. to 9:00

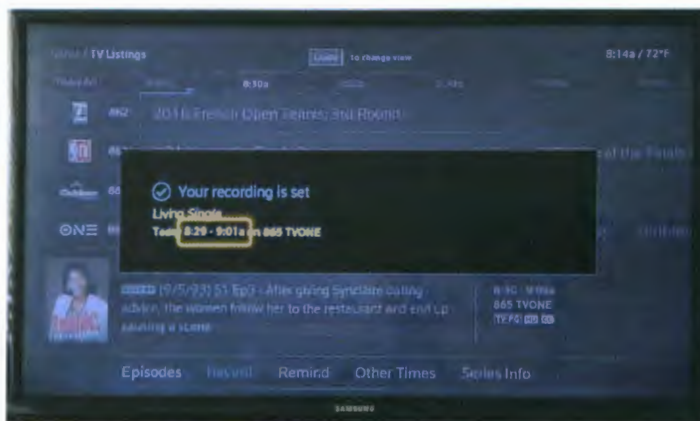
a.m. and, that after the “Auto Pad Recordings” option is selected, the recording time changes to be from 8:29 to 9:01 a.m. (Tr. (Balakrishnan) at 785:12-786:13; CX-1051C.0018-21; CX-1056C.0001-2, 22, 27-28; CX-1063C.0001, 17-18, 25; CX-1066C.0018-19, 28-29.). The X1 system performs the recording with user-selected padding on a hard drive (random access digital storage device) either locally on an XG1 STB or remotely. (Tr. (Balakrishnan) at 784:3-14.).

Figure 41: Rovi’s Depiction of Selection of Program Listing in X1 System

'585 Patent, Claim 1[e]: Recording Based on Modification of Storage Settings

Claim 1[e]

recording the program on the digital storage device based on the modification of the at least one storage setting.



CX-1051C.21 (XG1v1); see also CX-1056C.27, 28 (XG1v3); CX-1063C.25 (XG2v2); CX-1066C.29 (X1D)

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CDX-0006C.76

(CDX-0006C.0076 (introduced during the testimony of Dr. Balakrishnan)).

Comcast did not offer rebuttal arguments or evidence with respect to limitations 1[e] and 15[h] in its Post-Hearing Briefs and has thus waived any such argument pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy limitations 1[e] and 15[h] of the '585 patent.

Based on the discussion of the evidence and the weight of the evidence, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585

Products satisfy claims 1 and 15 of the '585 patent.

b) Claims 8 (Method) and 22 (System)

As shown below in Figure 42, claims 8 and 22 are parallel in structure. (Tr. (Balakrishnan) at 819:2-921:19 (discussing similarities between claims 8 and 22 and evidence supporting both).). As discussed below, for the most part, the Accused 585 Products satisfy claim 22 for the same reasons, and based upon the same evidence, as set forth for claim 8. (*Id.* at 788:3-20.). In addition to the limitations of claim 8, claim 22 requires “a display screen” and “an IPG implemented at least partially on circuitry.” (*Id.* at 819:12-24.).

Figure 42: Rovi’s Depiction of the Similarity Between Claims 8 and 22

'585 Patent, Claim 8 and Claim 22 Comparison	
<p>8. A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:</p> <ul style="list-style-type: none">displaying in a display screen at least one program listing relating to at least one program;providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; andrecording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.	<p>22. A system for recording programs, the system comprising:</p> <ul style="list-style-type: none">a display screen;a random access digital storage device; andan interactive television program guide implemented at least partially on circuitry, wherein the interactive television program guide is programmed to:<ul style="list-style-type: none">display in the display screen at least one program listing related to at least one program;provide a user with the opportunity to indicate a program to be recorded on the random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;provide the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;modify said at least one storage setting in response to said user selection;in response to receiving the user selection of the at least one storage option, modify the at least one storage setting for the program to be recorded; andrecord the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

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CDX-0006C.132

(CDX-0006C.0132 (introduced during the testimony of Dr. Balakrishnan)).

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- i. ***Preamble [claim 8]: “A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising”; Preamble [claim 22]: “A system for recording programs, the system comprising”; 22[a]: “a display screen”; 22[c]: “and an interactive television program guide implemented at least partially on circuitry, wherein the interactive television program guide is programmed to”***

Claim 8’s preamble is satisfied by the Accused 585 Products for the same reasons as the Accused Products satisfy claim 1’s preamble. (Tr. (Balakrishnan) at 794:21-796:20 (discussing CX-1063C.0002 (XG2), CX-1051C.0020 (XG1), CX-1056C.0022 (same), and CX-1066C.0002 (XiD))). The preamble of claim 22 and limitations 22[a] and 22[c] are satisfied by the Accused 585 Products for the same reasons as articulated with respect to claim 8 and as described above in the context of system claim 15. (*Id.* at 819:12-24 (discussing CDX-0006C.0131-43)).

With respect to these limitations, Comcast did not offer additional rebuttal arguments or evidence in its Post-Hearing Briefs and has thus waived any such argument pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy the preambles of claims 8 and 22, and limitations 22[a] and 22[c], of the ’585 patent.

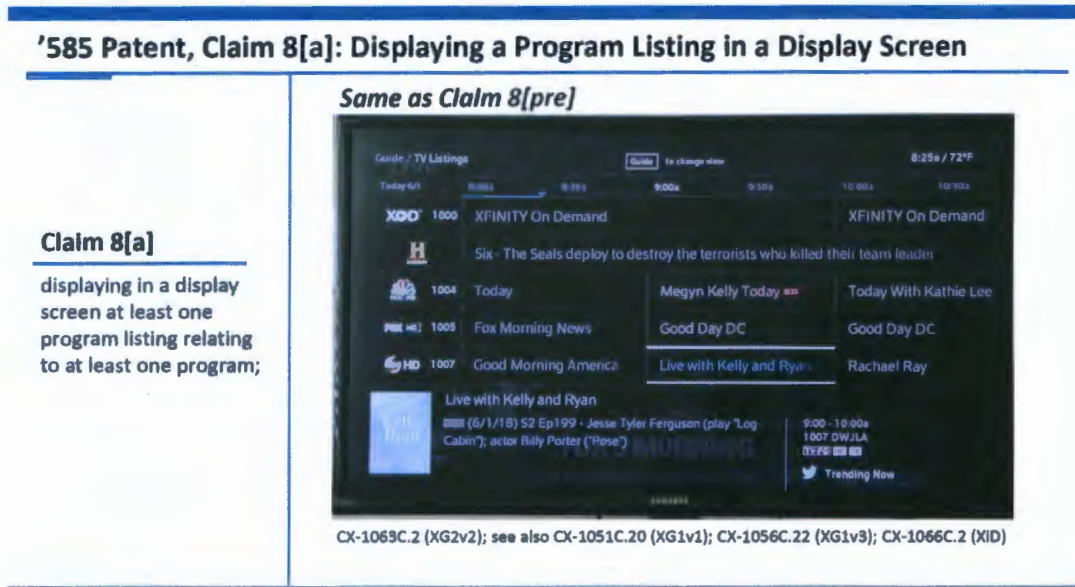
- ii. ***8[a]: “displaying in a display screen at least one program listing relating to at least one program”; 22[d]: “display in the display screen at least one program listing related to at least one program”***

When operating in the X1 System, the Accused 585 Products satisfy these limitations for the same reasons as discussed above for claim 1[c]. (Tr. (Balakrishnan) at 794:21-797:17 (discussing CX-1063C.0002 (XG2), CX-1051C.0020 (XG1), CX-1056C.0022 (same), CX-1066C.0002 (XiD))). Figure 43 below shows the program listing “Live with Kelly and Ryan,”

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is related to the program “Live with Kelly and Ryan,” that is displayed on a display screen. (*Id.* at 793:21-797:17.).

Figure 43: Rovi’s Depiction of Displaying Program Listing in X1 System



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CDX-0006C.102

(CDX-0006C.0102 (introduced during the testimony of Dr. Balakrishnan)).

With respect to these limitations, Comcast did not offer rebuttal argument in its Post-Hearing Briefs and has thus waived any such argument pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy limitations 8[a] and 22[d] of the '585 patent.

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- iii. ***8[b]: “providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded”; 22[e] “provide a user with the opportunity to indicate a program to be recorded on the random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded”***

When operating in the X1 System, the Accused 585 Products satisfy these limitations for the same reasons discussed above with respect to limitation 1[d]. (*Id.* at 797:18-799:21 (discussing CX-1063C.0003 (XG2), CX-1051C.0022 (XG1), CX-1056C.0023 (same), CX-1066C.0003 (XiD))).

Figure 44 below shows that Comcast Grid Guide users have the option to select a program for recording, in this case “Live with Kelly and Ryan.” (*Id.* at. 765:12-766:6, 798:10-799:6, 800:21-808:3, 809:12-812:17.). Once selected, the program records to a hard disk locally on a STB (e.g., XG1 STB) or remotely to a XRE server (e.g., hard drives in Comcast’s cloud). (*Id.* at 799:7-21.).

Figure 44: Rovi's Depiction of Indicating a Program to Record in X1 System

'585 Patent, Claim 8[b]: Indicating Program to Be Recorded

Claim 8[b]

providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;



CX-1063C.3 (XG2v2); see also CX-1051C.22 (XG1v1); CX-1056C.23 (XG1v3); CX-1066C.3 (XID)

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CDX-0006C.106

(CDX-0006C.0106 (introduced during the testimony of Dr. Balakrishnan).).

With respect to these limitations, Comcast did not offer rebuttal arguments in its Post-Hearing Briefs and has thus waived any such argument pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy limitations 8[b] and 22[e] of the '585 patent.

- iv. **8[c]:** “providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;”; **22[b]:** “a random access digital storage device”; **22[f]:** “provide the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device”

The Accused 585 Products satisfy these limitations for many of the same reasons

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discussed above with respect to limitations 1[a], 1[b], and 1[d]. (Tr. (Balakrishnan) at 799:22-913:7 (discussing CX-1063C.0005, 7, 11, 13 (XG2), CX-1051C.0005-7, 10, 12, 25-26 (XG1), CX-1056C.0006-8, 10, 12, 29-30 (same), CX-1066C.0005-8, 11, 13 (XiD)).).

Here, however, “storage options” are not “global” in terms of applying to multiple programs, as they were in the context of claim 1. Instead, limitations 8[c] and 22[b] require program specific storage options. (JX-0004 (’585 patent) at cls. 1(“control how *programs* are to be digitally stored”), 8(control how the *program* is to be digitally stored) (emphasis added)).


Dr. Balakrishnan testified that the “Start” (specified start time), “Stop” (specified stop time), “Keep” (kept until the time expires) and “HD Preferred” (recording a HD stream) are user-selectable, program-specific “how” storage options in the Accused 585 Products. (Tr. (Balakrishnan) at 765:12-766:6, 800:21-808:3, 809:12-812:17; CX-1063C.0005, 7, 11, 13.).

Figure 45 below provides an example of the “Start” and “Stop” options.

Figure 45: Rovi’s Depiction How Storage Option Selection Pertaining to One Program in X1 System

'585 Patent, Claim 8[d]: User Selection of the “How” Storage Option

Claim 8[d]
In response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and




CX-1063C.12 (left), 13 (right) (XG2v2);
see also CX-1051C.11, 12 (XG1v1); CX-1056C.11, 12 (XG1v3); CX-1066C.12, 13 (XG1)

Same rationale applies to other storage options shown for Claim 8[c]

'585 Patent, Claim 8[d]: Modification of the "How" Storage Setting

Claim 8[d]
in response to receiving the user selection of the at least one storage option, **modifying the at least one storage setting for the program to be recorded; and**



The screenshot shows a TV recording interface. At the top, it says 'Sound / Scheduled' and '0:27a / 72°F'. Below that are 'View Recordings' and 'Series Priority' buttons. The main content area shows 'Live with Kelly and Ryan' with a recording time of '8:58 - 10:03a' highlighted in a yellow box. Below the recording time, it says 'Recording today at 8:07 DWJLA' and '05min'. At the bottom, there are buttons for 'Episodes', 'Options', 'Cancel', 'Remind', 'Other Times', and 'Set'.

CX-1069C.16 (XG2v2)

Same rationale applies to other storage options shown for Claim 8[c]

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(CDX-0006C.0121, 123 (introduced during the testimony of Dr. Balakrishnan)).

In rebuttal, Comcast argued that these are “what” storage options, not “how” storage options. (RRBr. at 67-70.). Comcast also asserted that Rovi “failed to show that there are any storage settings to which these storage options relate.” (*Id.* at 70.). For this second point, Comcast appears to resurrect its argument that Rovi and Dr. Balakrishnan must examine source code to prove the existence of a storage setting that relates to a storage option. (*Id.*; CBr. at 54.).

Comcast’s non-infringement arguments here are not persuasive. For example, Comcast acknowledges the “Start” and “Stop” storage options as “similar to ‘Auto Pad Recordings’ in that they can be used to change the start and stop time of a particular recording.” (RRBr. at 67.). As explained above in Section VIII.A.3(a)(ii), Auto Pad Recordings is both a “what” and “how” storage option and thus the “Start” and “Stop” options identified by Dr. Balakrishnan satisfy limitations 8[c] and 22[f] of the ’585 patent. Likewise, recording a stream in HD versus another video format is a quintessential example of a “how” storage option, as shown in Figure 14 of the

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'585 patent. (JX-0004 ('585 patent) at Fig. 14.).

That said, Comcast made a persuasive argument that the “Keep” option identified as infringing by Rovi “specifies only whether to continue to store all or a subset of recordings, but does nothing to control *how* the recordings are to be digitally stored on hard drives.” (RRBr. at 68 (citing Tr. (Albonesi) at 1896:13-1897:4; *id.* (McCann) at 1408:25-1409:21).). In the context of the '585 patent and its prosecution history, what to keep in storage (kept until the time expires or how long to keep it) is clearly distinct from how to store something. Therefore, while “Start,” “Stop,” and “HD Preferred” are “how” storage options in the context of the asserted claims, the weight of the evidence proves that “Keep” is not a “how” storage option.

As for Comcast’s argument that Rovi omitted evidence of settings relating to “Start,” “Stop,” and “HD Preferred” “how” storage options, to meet its burden of proof, Rovi did not necessarily need to provide source code evidence. As explained above, source code is not the only evidence of settings relating to these storage options. Instead, the IPG itself provides adequate circumstantial evidence of such settings in terms of displaying settings in the IPG and displaying modifications of the settings, as shown above in Figure 45. (Tr. (Balakrishnan) at 813:8-817:1; CX-1063C.0012-13). If these settings did not exist, Comcast could have rebutted Rovi’s admittedly circumstantial evidence of settings related to “how” storage options with citations to the source code showing the absence of such settings. Comcast did no such thing.

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy limitations 8[c], 22[b], and 22[f] of the '585 patent.

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- v. ***8[d]: “in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded”; 22[g]: “modify said at least one storage setting in response to said user selection”; 22[h]: “in response to receiving the user selection of the at least one storage option, modify the at least one storage setting for the program to be recorded”***

When operating in the X1 System, the Accused 585 Products satisfy these limitations for the same reasons as discussed above for limitation 1[b]. (*Id.* at 813:8-817:1 (discussing CX-1063C.0002, 12-13, 16 (XG2), CX-1051C.0011-12, 20 (XG1), CX-1056C.0011-12 (same), CX-1066C.0002, 12-13 (XiD))). As indicated above in Figure 45, upon receiving user selection of a “storage option” such as start time and end time, the underlying “storage setting” corresponding to this selected option will be modified such the program is recorded with the user selected start and stop times (as opposed to at the scheduled broadcast time). (*Id.* at 813:8-817:1; *see also* CX-1063C.0016) (“Live with Kelly and Ryan” program selected by the user will be recorded according to the user selected start time (“2 minutes early”) and stop time (“3 minutes late”))).

With respect to these limitations, Comcast did not offer additional rebuttal arguments or evidence in its Post-Hearing Briefs other than that addressed and rejected above, and has thus waived any such argument pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy limitations 8[d], 22[g], and 22[h] of the '585 patent.

- vi. ***8[e]: “recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program”; 22[i]: “record the program on the random access digital storage device based on the modification of the at least one storage setting for the program”***


When operating in the X1 System, the Accused 585 Products satisfy these limitations for

the same reasons as discussed above for claim 1[e]. (Tr. (Balakrishnan) at 817:2-818:17 (discussing CX-1063C.0014, 16 (XG2), CX-1051C.0011-12, 20 (XG1), CX-1056C.0011-12 (same), CX-1066C.0002, 12-13 (XiD))). As shown above in Figure 44, the normal broadcast time for “Live with Ryan and Kelly” is 9:00 a.m. to 10:00 a.m. (CX-1063C.0014, 16.). However, after modifying the “Start” and “Stop” storage settings for “2 minutes early” and “3 minutes late,” respectively, the recording of “Live with Ryan and Kelly” starts at 8:58 a.m. and ends at 10:03 a.m. (*Id.*). At least for the “Start,” “Stop,” and “HD Preferred” storage options, Rovi presented evidence that user selection of each results in the modification of a storage setting controlling “how” programs are to be digitally stored on a hard drive. (Tr. (Balakrishnan) at 818:1-7.).

Figure 46: Rovi’s Depiction of Recording Based on Storage Setting Modification in X1 System

'585 Patent, Claim 8[e]: Recording Based on the Modification

Claim 8[e]
recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.



CX-1063C.14 (left), 16 (right) (XG2v2)

Same rationale applies to other storage options shown for Claim 8[c]

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(CDX-0006C.0127 (introduced during the testimony of Dr. Balakrishnan)).

With respect to these limitations, Comcast did not offer rebuttal arguments or evidence in

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its Post-Hearing Briefs and has thus waived any such argument pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy limitations 8[e] and 22[i] of the '585 patent.

Based on the above, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy claims 8 and 22 of the '585 patent.

c) **Claim 11 (Method)**

- i. ***“The method of claim 10 [The method of claim 8 wherein the at least one storage option is for selecting at least one video format for recording.] wherein the at least one video format comprises at least one of high definition television, normal television and a digital format.”***

When operating in the X1 System, the Accused 585 Products satisfy these limitations for the same reasons as discussed above for claims 8 and 22. (Tr. (Balakrishnan) at 821:20-823:24 (discussing CX-1063C.0005-6 (XG2), CX-1051C.0005, 25-26 (XG1), CX-1056.0006, 29-30 (same), CX-1066C.0005, 6 (XiD))). In particular, as shown below in Figure 47, the Accused 585 Products provide a HD Preferred video format storage option, as required by claim 11. (*Id.* at 822:13-823:19 (testifying how HD preferred storage option allows the user to select a video format and thus modify the related video format storage setting)).

Figure 47: Rovi's Depiction of SD and HD Storage Options in X1 System

'585 Patent, Claim 11: High Definition Video Format

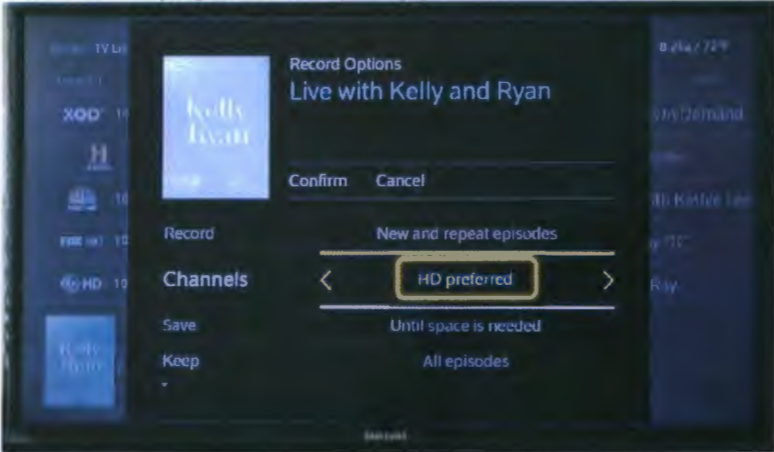
Claim 10

The method of claim 8 wherein the at least one storage option is for selecting at least one video format for recording.

Claim 11

The method of claim 10 wherein the at least one video format comprises at least one of high definition television, normal television and a digital format.

Same as "HD preferred" in Claim 8(c)



CX-1063C.5 (XG2v2); see also CX-1051C.5, 25, 26 (XG1v1); CX-1056.6, 29, 30 (XG1v3); CX-1066C.5, 6 (X1D)

Contains Confidential Business Information Subject to Protective Order CDX-0006C.148

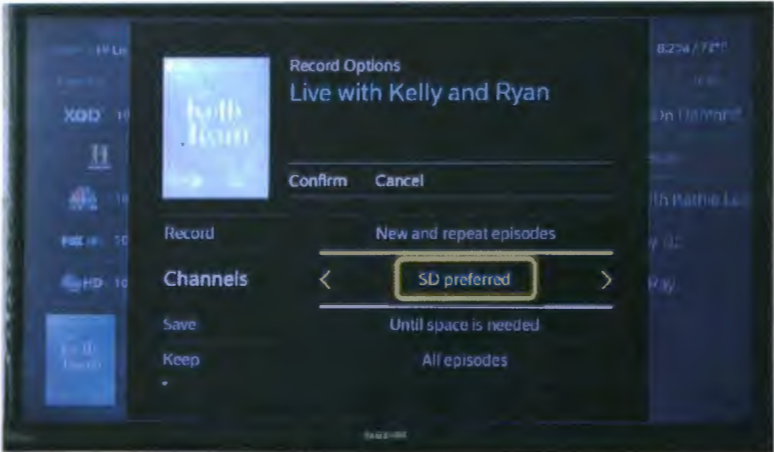
'585 Patent, Claim 11: Standard Definition Video Format

Claim 10

The method of claim 8 wherein the at least one storage option is for selecting at least one video format for recording.

Claim 11

The method of claim 10 wherein the at least one video format comprises at least one of high definition television, normal television and a digital format.



CX-1063C.6 (XG2v2); see also CX-1051C.5, 25, 26 (XG1v1); CX-1056C.6, 29, 30 (XG1v3); CX-1066C.5, 6 (X1D)

Contains Confidential Business Information Subject to Protective Order CDX-0006C.149

(CDX-0006C.0148-49 (introduced during the testimony of Dr. Balakrishnan).).

With respect to claim 11, Comcast did not offer rebuttal arguments or evidence in its

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Post-Hearing Briefs and has thus waived any such argument pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

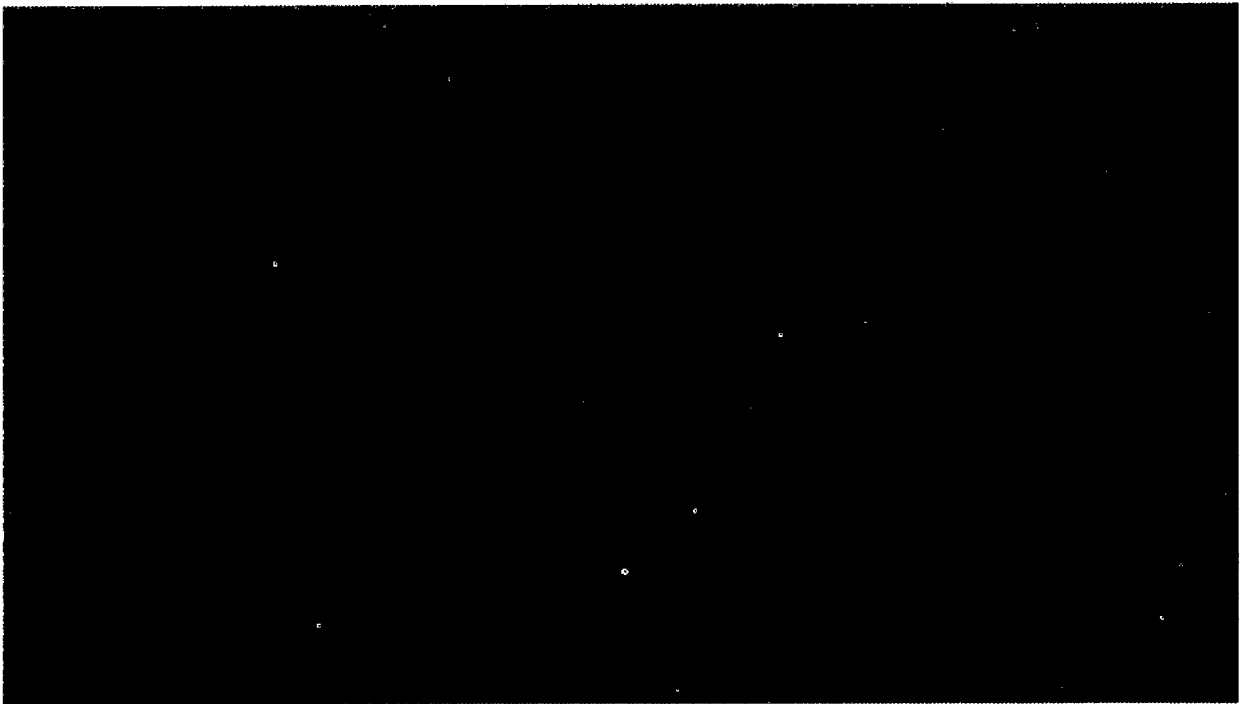
Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the Accused 585 Products satisfy claim 11 of the '585 patent.

B. Technical Prong of the Domestic Industry

1. Technical DI Overview

As shown below in Figure 48, Rovi asserted that four domestic industry products practice claims 8, 11, and 22 of the '585 patent. (CBr. at 60-61.). These products are: Rovi's i-Guide, Passport, and Next-Gen Platform, and TSI's TiVo Bolt with Experience 4.0 (collectively, "585 DI Products"). (Tr. (Balakrishnan) at 833:22-834:2; CDX-0006C.0167.).

Figure 48: Rovi's Depiction of 585 DI Products



(CDX-0006C.0167 (introduced during the testimony of Dr. Balakrishnan)).

As an initial matter, Comcast's expert, Dr. Albonesi, admitted that if Comcast's Accused

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585 Products were found to infringe the asserted claims of the '585 patent, the 585 DI Products would practice at least one asserted claim for the same reasons. (Tr. (Albonesi) at 1905:5-14, 1907:9-14, 1907:24-1908:3; *see also* Tr. (McCann) at 1438:23-1439:8 (testifying that the current Comcast X1 platform and the TiVo environment “share architectural similarities”).). As explained above, the Accused 585 Products satisfy the asserted claims of the '585 patent. Thus, the evidence is clear that Rovi's 585 DI Products also satisfy at least certain of these claims and that Rovi has satisfied the technical prong of the domestic industry requirement for the '585 patent. Nevertheless, for the sake of completeness, below is a limitation-by-limitation analysis presenting evidence proving that the 585 DI Products satisfy claims 8, 11, and 22.

2. Rovi's 585 DI Products Practice One or More Claims of the '585 Patent

a) Claims 8 and 22

- i. ***Preamble [claim 8]: “A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising;” [claim 22]: “A system for recording programs, the system comprising”; 22[a]: “a display screen”; 22[c]: “and an interactive television program guide implemented at least partially on circuitry, wherein the interactive television program guide is programmed to”***

As shown below in Figure 49, when operating in the X1 System, the 585 DI Products satisfy these limitations. (Tr. (Balakrishnan) at 835:8-837:11; CX-1071.0006 & CX-1028C.0001 (i-Guide); CX-1071.0024 & CX-1038C.0001 (Passport); CX-1071.0044 & CX-1035C.0001 (Next-Gen); CX-1071.0058 & CX-1024C.0002 (TiVo Bolt).). The 585 DI Products are IPGs implemented on STBs. (Tr. (Balakrishnan) at 835:8-837:11.). The 585 DI Products are applications that STBs store and run at user locations. (*Id.* at 836:1-837:2.).


Figure 49: Rovi's Depiction of 585 DI Products Satisfying Preambles of Claims 8 and 22

'585 Patent, Claim 8[pre]: Interactive Television Program Guide

Claim 8[pre]


A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:

I-Guide



CX-1071.6; see also CX-1028C.1

Passport



CX-1071.24; see also CX-1038C.1


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'585 Patent, Claim 8[pre]: Interactive Television Program Guide

Claim 8[pre]

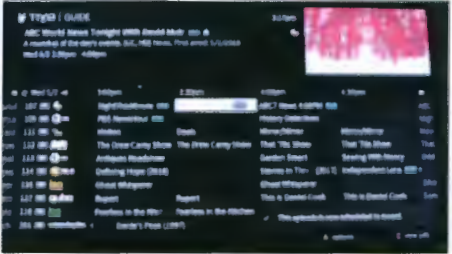
A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:

NextGen



CX-1071.44; see also CX-1035C.1

Bolt



CX-1071.58; see also CX-1024C.2

Contains Confidential Business Information Subject to Protective Order CDX-0006C.173

(CDX-0006C.0171, 173 (introduced during the testimony of Dr. Balakrishnan)).

With respect to these limitations, Comcast did not offer any new rebuttal arguments in its Post-Hearing Briefs that have already been addressed and rejected above in the context of

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infringement. Comcast has thus waived any such arguments pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the 585 DI Products satisfy the preambles of claims 8 and 22, and limitations 22[a] and 22[c] of the '585 patent.

- ii. ***8[a]: “displaying in a display screen at least one program listing relating to at least one program;” 22[d]: “display in the display screen at least one program listing related to at least one program”***


When operating in the X1 System, the 585 DI Products satisfy these limitations. (Tr. (Balakrishnan) at 837:12-838:10 (discussing CX-1071.0006 & CX-1028C.0001 (i-Guide); CX-1071.0024 & CX-1038C.0001 (Passport); CX-1071.0044 & CX-1035C.0001 (Next-Gen); CX-1071.0058 & CX-1024C.0002 (TiVo Bolt)).). As shown below in Figure 50, the 585 DI Products display at least one program listing relating to at least one program in a grid guide. (*Id.*; CDX-0006C.0173.).

Figure 50: Rovi's Depiction of 585 DI Products Displaying Program Listings


'585 Patent, Claim 8[a]

Claim 8[a]
displaying in a display screen at least one program listing relating to at least one program;

I-Guide



Passport



CX-1071.6; see also CX-1028C.1

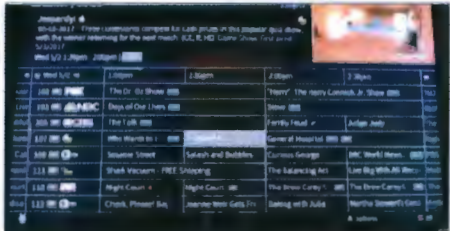
CX-1071.24; see also CX-1038C.1

Contains Confidential Business Information Subject to Protective Order CDX-0006C.177

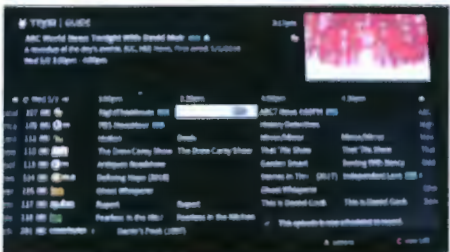
'585 Patent, Claim 8[a]

Claim 8[a]
displaying in a display screen at least one program listing relating to at least one program;

NextGen



Bolt



CX-1071.44; see also CX-1035C.1

CX-1071.58; see also CX-1024C.2

Contains Confidential Business Information Subject to Protective Order CDX-0006C.178

(CDX-0006C.0177-78 (introduced during the testimony of Dr. Balakrishnan)).

With respect to these limitations, Comcast did not offer any new rebuttal arguments or evidence in its Post-Hearing Briefs that have already been addressed and rejected above in the context of infringement. Comcast has thus waived any such arguments pursuant to Ground Rule

10.1. (*Id.* at 56-74.).

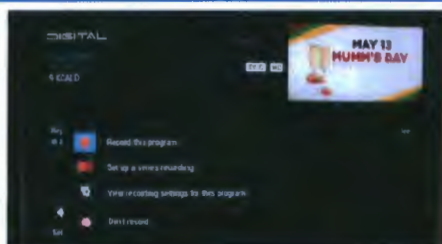

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the 585 DI Products satisfy limitations 8[a] and 22[d] of the '585 patent.

- iii. ***8[b]: “providing the user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;” 22[e]: “provide a user with the opportunity to indicate a program to be recorded on the random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded”***

When operating in the X1 System, the 585 DI Products satisfy these limitations. (Tr. (Balakrishnan) at 838:11-840:8; CX-1071.0009 & CX-1028C.0002-3 (i-Guide); CX-1071.0026 & CX-1038C.0002 (Passport); CX-1071.0046 & CX-1035C.0002 (Next-Gen); CX-1071.0060 & CX-1024C.0003 (TiVo Bolt).). As shown below in Figure 51, the 585 DI Products provide a user the opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded. (*Id.*; CDX-0006C.0182.). The 585 DI Products store programs on hard disk drives. (*Id.*; CX-0860C.0082 (i-Guide contains a hard drive); CX-0859.0019, 333, 518, 523 (Passport contains a hard drive); CX-0854 (Next-Gen contains a hard drive); CX-0229 (TiVo Bolt contains a hard drive).).

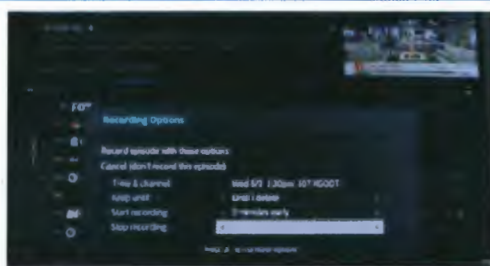

Figure 51: Rovi's Depiction of 585 DI Products and User Selection of a Program to Record

'585 Patent, Claim 8[b]: Indicating a Program to Be Recorded

<p>Claim 8[b]</p> <p>providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;</p>	<p>I-Guide</p>  <p>CX-1071.9; see also CX-1028C.2-3</p> <p>Passport</p>  <p>CX-1071.26; see also CX-1038C.2</p>
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'585 Patent, Claim 8[b]: Indicating a Program to Be Recorded

<p>Claim 8[b]</p> <p>providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;</p>	<p>NextGen</p>  <p>CX-1071.46; see also CX-1035C.2</p> <p>Bolt</p>  <p>CX-1071.60; see also CX-1024C.3</p>
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Contains Confidential Business Information Subject to Protective Order CDX-0006C.182

(CDX-0006C.0181-82 (introduced during the testimony of Dr. Balakrishnan)).

With respect to these limitations, Comcast did not offer any new rebuttal arguments or evidence in its Post-Hearing Briefs that have already been addressed and rejected above in the

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context of infringement. Comcast has thus waived any such arguments pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the 585 DI Products satisfy limitations 8[b] and 22[e] of the '585 patent.

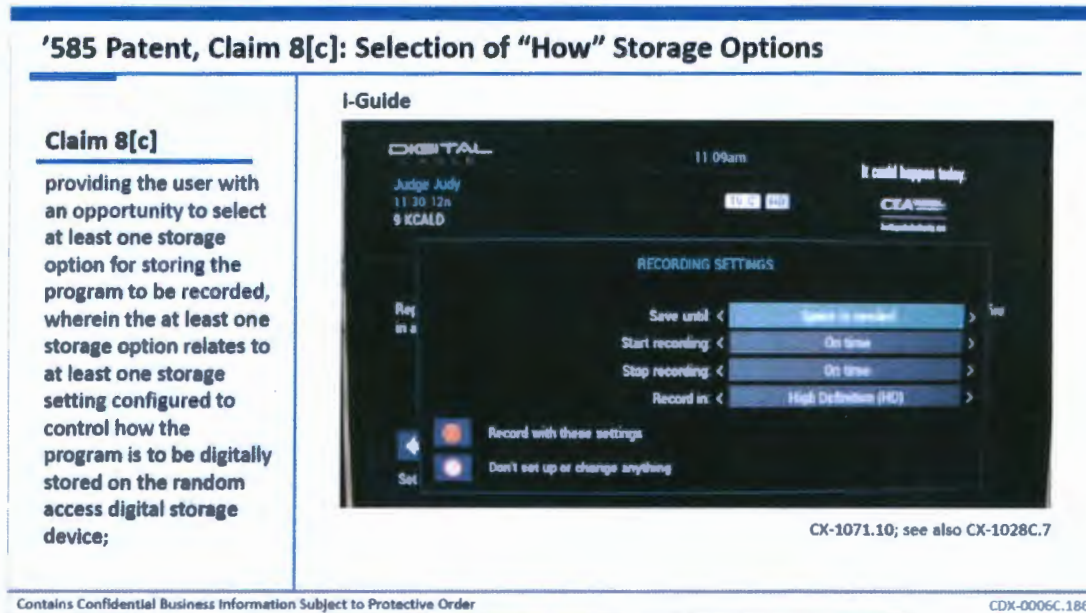
- iv. ***8[c]: “providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on a random access digital storage device;” 22[b]: “a random access digital storage device”; 22[f]: “provide the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;”***

When operating in the X1 System, the 585 DI Products satisfy these limitations. (Tr. (Balakrishnan) at 840:9-843:6; CX-1071.0010 & CX-1028C.0007 (i-Guide); CX-1071.0028 & CX-1038C.0005 (Passport); CX-1071.0046 & CX-1071.0047, CX-1035C.0003, 6 (Next-Gen); CX-1071.0060, CX-1071.0061, CX-1024C.0003, 6 (TiVo Bolt).). As shown below in Figure 52, a user can select storage options that each relate to at least one storage setting configured to control how the selected program is to be digitally stored on a random access digital storage device (i.e., the hard disk drive of the 585 DI Products). (*Id.*; CDX-0006C.0186-90 (citing CX-1071.0046 showing the Next-Gen guide “how” storage options of “start recording,” and “stop recording” are applied to the program).). Comcast agreed that “the settings found in [the 585 DI Products] are similar to the ‘record options’ in Comcast’s system.”⁷¹ (RRBr. at 76-77.). Finally,

⁷¹ By way of review based on the analysis provided above in the context of infringement, while “Start recording,” “Stop recording,” and “Record as” are “how” storage options that each satisfy the asserted claims, “Save Until” is merely a “what” storage option and thus does not satisfy the asserted claims.

the 585 DI Products include hard drives for storing programs as discussed above with respect to limitation 8[b]. The 585 DI Products thus meet these limitations for the same reasons that the Accused 585 Products infringe. (Tr. (Balakrishnan) at 840:9-843:6.).

Figure 52: Rovi's Depiction of 585 DI Products and User Selection of Storage Options



(CDX-0006C.0186 (introduced during the testimony of Dr. Balakrishnan)).

With respect to these limitations, Comcast did not offer any new rebuttal arguments or evidence in its Post-Hearing Briefs that have already been addressed and rejected above in the context of infringement. Comcast has thus waived any such arguments pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the 585 DI Products satisfy limitations 8[c], 22[b], and 22[f] of the '585 patent.

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- v. ***8[d]: “in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded;” 22[g]: “modify said at least one storage setting in response to said user selection;” 22[h]: “in response to receiving the user selection of the at least one storage option, modify the at least one storage setting for the program to be recorded;” and***

When operating in the X1 System, the 585 DI Products satisfy these limitations. (Tr. (Balakrishnan) at 843:7-846:5; CX-1071.0010 & CX-1028C.0007 (i-Guide); CX-1071.0028 & CX-1038C.0005 (Passport); CX-1071.0046, CX-1071.0047 & CX-1035C.0003, 6 (Next-Gen); CX-1071.0060, CX-1071.0061 & CX-1024C.0003, 6 (TiVo Bolt).). As shown below in Figure 53, in response to receiving the user selection of a “how” storage option (e.g., “start recording,” “stop recording”), the 585 DI Products modify the corresponding storage setting for the program to be recorded. (*Id.*; CDX-0006C.0193-99 (citing CX-1028C.0021 showing the i-Guide modified storage settings for “Eyewitness News”).). Comcast agreed that the “settings found in the [585 DI Products] are similar to the allegedly infringing ‘record options’ in Comcast’s system.” (RRBr. at 76-77.). It appears that the 585 DI Products satisfy these limitations for the same reasons that the Accused 585 Products infringe. (Tr. (Balakrishnan) at 843:7-846:5.).

Figure 53: Rovi's Depiction of 585 DI Products Modifying "How" Storage Settings

'585 Patent, Claim 8[d]: User Selection of "How" Storage Option

Claim 8[d]

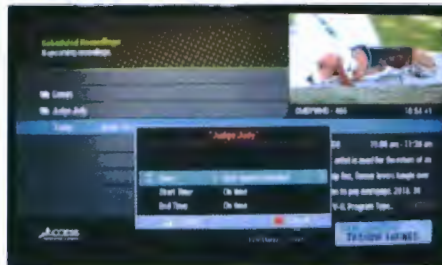
in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded, and

i-Guide



CX-1071.10; see also CX-1028C.7

Passport



CX-1071.28; see also CX-1038C.5

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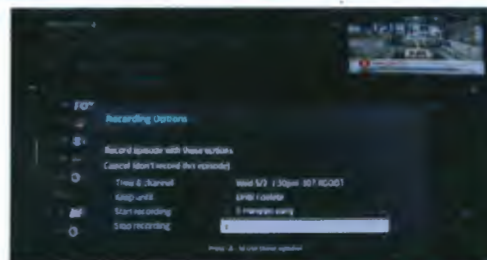
CDX-0006C.193

'585 Patent, Claim 8[d]: User Selection of "How" Storage Option

Claim 8[d]

in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded, and

NextGen



CX-1071.46; see also CX-1071.47; CX-1035C.3, 6

Bolt



CX-1071.60; see also CX-1071.61; 1024C.3, 6

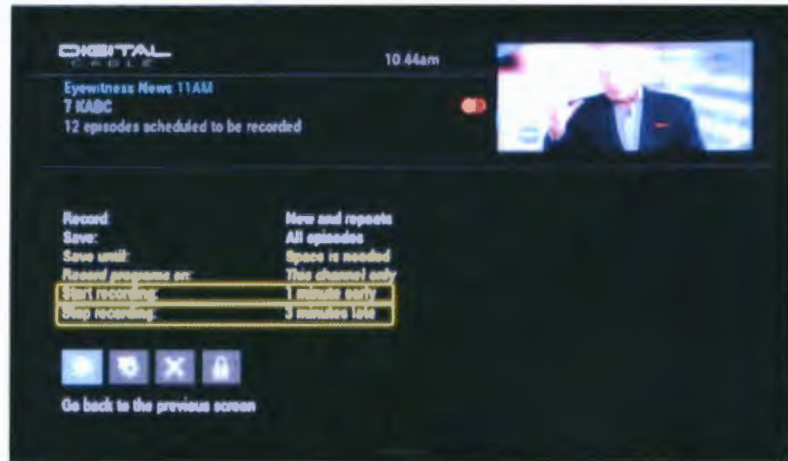
Contains Confidential Business Information Subject to Protective Order

CDX-0006C.194

'585 Patent, Claim 8[d]: Modification of Storage Setting (i-Guide Example)

Claim 8[d]

in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and



CX-1028C.21

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CDX-0006C.199

(CDX-0006C.0193-94, 199 (introduced during the testimony of Dr. Balakrishnan)).

With respect to these limitations, Comcast did not offer any new rebuttal arguments or evidence in its Post-Hearing Briefs that have already been addressed and rejected above in the context of infringement. Comcast has thus waived any such arguments pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the 585 DI Products satisfy limitations 8[d], 22[g], and 22[h] of the '585 patent.

- vi. ***8[e]: “recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program;” 22[i]: “record the program on the random access digital storage device based on the modification of the at least one storage setting for the program;”***

When operating in the X1 System, the 585 DI Products satisfy these limitations. (Tr. (Balakrishnan) at 846:6-846:24; CX-1071.0010 & CX-1028C.0007 (i-Guide); CX-1071.0028 &

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CX-1038C.0005 (Passport); CX-1071.0046, CX-1071.0047 & CX-1035C.0003, 6 (Next-Gen); CX-1071.0060, CX-1071.0061 & CX-1024C.0003 (TiVo Bolt).). As shown above in Figure 53, the 585 DI Products record the program on a random access digital storage device (hard drive) based on the modification of the at least one storage setting. (*Id.*; CDX-0006C.0203 (citing CX-1071.0046 showing Next-Gen modified storage settings for “Jeopardy”).). The 585 DI Products include hard drives for storing programs as discussed above in the context of limitation 8[b].

With respect to these limitations, Comcast did not offer any new rebuttal arguments or evidence in its Post-Hearing Briefs that have already been addressed and rejected above in the context of infringement. Comcast has thus waived any such arguments pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the 585 DI Products satisfy limitations 8[e] and 22[i] of the ’585 patent.

Based on the above, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the 585 DI Products satisfy claims 8 and 22 of the ’585 patent.



b) Claim 11


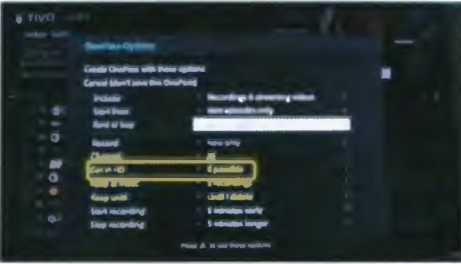
- i. ***The method of claim 10 wherein the at least one video format comprises at least one of high definition television, normal television and a digital format.***

When operating in the X1 System, the 585 DI Products satisfy claim 11. (Tr. (Balakrishnan) at 847:5-848:12; CX-1071.0014 (i-Guide); CX-1071.0043 (Passport); CX-1071.0050 (Next-Gen); CX-1071.0061 (TiVo Bolt). In addition to the analysis above showing that the 585 DI Products satisfy claim 8, one of the storage options provided in the 585 DI Products is recording in the “High Definition” or “HD” video format. (*Id.*; see CX-1024C.0006 (Screenshots of TiVo Bolt Operation); CX-1028C.0007 (Screenshots of Rovi Guides

Operation).).

Figure 54: Rovi's Depiction of 585 DI Products Offering Storage in HD Video

'585 Patent, Claim 11	
<p>Claim 10</p> <p>The method of claim 8 wherein the at least one storage option is for selecting at least one video format for recording.</p> <p>Claim 11</p> <p>The method of claim 10 wherein the at least one video format comprises at least one of high definition television, normal television and a digital format.</p>	<p>I-Guide</p>  <p>CX-1071.14</p> <p>Passport</p>  <p>CX-1071.43</p>
<p>Contains Confidential Business Information Subject to Protective Order CDX-0006C.208</p>	

'585 Patent, Claim 11	
<p>Claim 10</p> <p>The method of claim 8 wherein the at least one storage option is for selecting at least one video format for recording.</p> <p>Claim 11</p> <p>The method of claim 10 wherein the at least one video format comprises at least one of high definition television, normal television and a digital format.</p>	<p>NextGen</p>  <p>CX-1071.50</p> <p>Bolt</p>  <p>CX-1071.61</p>
<p>Contains Confidential Business Information Subject to Protective Order CDX-0006C.209</p>	

(CDX-0006C.0208-09 (introduced during the testimony of Dr. Balakrishnan).).

With respect to claim 11, Comcast did not offer any new rebuttal arguments or evidence

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in its Post-Hearing Briefs that has not already been addressed and rejected above in the context of infringement. Comcast has thus waived any such arguments pursuant to Ground Rule 10.1. (*Id.* at 56-74.).

Thus, Rovi has proven by a preponderance of the evidence that, when operating in the X1 System, the 585 DI Products satisfy claim 11 of the '585 patent.

C. Invalidity

1. Legal Standard: Anticipation

A determination that a patent is invalid as being anticipated under 35 U.S.C. § 102 requires a finding, based upon clear and convincing evidence, that each and every limitation is found either expressly or inherently in a single prior art reference. *See, e.g., Celeritas Techs. Inc. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998). Anticipation is a question of fact, including whether a limitation, or element, is inherent in the prior art. *In re Gleave*, 560 F.3d 1331, 1334-35 (Fed. Cir. 2009). The limitations must be arranged or combined the same way as in the claimed invention, although an identity of terminology is not required. *Id.* at 1334 (noting, “the reference need not satisfy an *ipsissimis verbis* test”); MPEP § 2131.

In addition, a prior art reference's disclosure must enable one of ordinary skill in the art to practice the claimed invention “without undue experimentation.” *Gleave*, 560 F.3d at 1334-35. A prior art reference that allegedly anticipates the claims of a patent is presumed enabled; however, a patentee may present evidence of non-enablement to overcome this presumption. *Impax Labs., Inc. v. Aventis Pharms. Inc.*, 468 F.3d 1366, 1382 (Fed. Cir. 2006). “[W]hether a prior art reference is enabling is a question of law based upon underlying factual findings.” *Gleave*, 560 F.3d at 1335.

2. Invalidation Overview

Based on the analysis that follows, Comcast has proven by clear and convincing evidence that the asserted claims of the '585 patent are invalid. They are anticipated by ReplayTV 893 and, in the alternative, obvious in light of ReplayTV 893 in combination with ReplayTV 338.

3. Examining the Crowded Prior Art Field Reveals the Strength of Comcast's Invalidation Case and the Weakness of Rovi's Rebuttal

Comcast asserted that claims 1, 8, 11, 15, and 22 of the '585 patent are invalid as anticipated and/or obvious in light of the prior art. (RBr. at 24-53.). Comcast relied on three prior art references: (1) U.S. Patent Application No. US 2002/0057893 ("ReplayTV 893"); (2) U.S. Patent No. 6,324,338 ("ReplayTV 338"); and (3) the U.S. Patent No. 6,016,348 ("Blatter"). (*Id.*). Comcast contended that each of these publications anticipated the asserted claims, that each of these publications independently rendered obvious the asserted claims, and, finally, that ReplayTV 893 and ReplayTV 338 in combination rendered the asserted claims obvious. (*Id.*).

In response, Rovi contended that claims 1, 8, 11, 15, and 22 of the '585 patent are valid. (CRBr. at 16-43.). Rovi lumped the Replay references together and argued that neither disclosed: (1) user specification of "global storage" settings from the IPG as required by claims 1 and 15; and (2) using an IPG for selecting storage options controlling *how* a program is to be digitally stored. (*Id.* at 16-32.). Rovi also argued that Blatter failed to disclose: (1) an "IPG" implemented on "user television equipment;" (2) "the global storage settings from claims 1 and 15 of the '585 Patent;" and (3) the "high-definition television, normal television [or] a digital format" storage options required by claim 11. (*Id.* at 37-42.). Finally, Rovi argued that Comcast's obviousness combination of ReplayTV 893 and ReplayTV 338 failed for lack of motivation to combine them and the likelihood of success. (*Id.* at 42-43.).

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a) Overview of the Prior Art

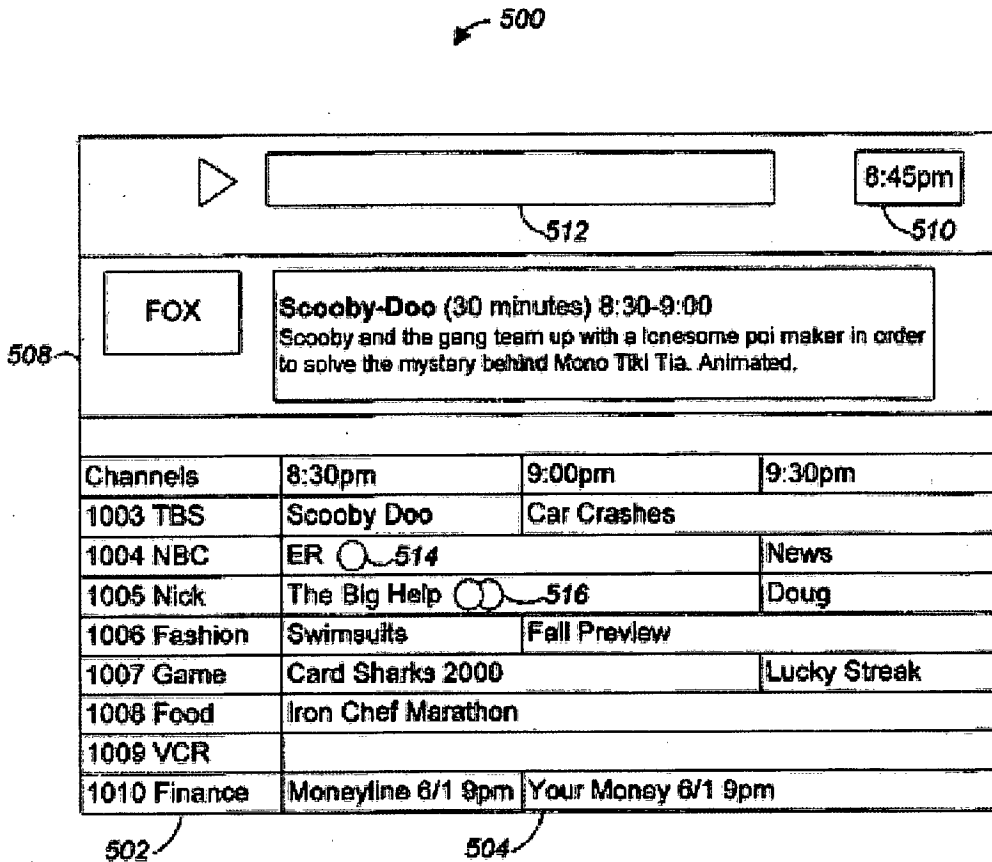
(1) *ReplayTV 893*

ReplayTV 893 “relates to digital recording and playback of audio and video streams.” (JX-0008 (ReplayTV 893 patent application) ¶ 1.). ReplayTV 893 teaches that “a digital VCR 10 acts as a central station for recording and playback of analog and digital audio and video” and that using “remote control 22 and on-screen menus displayed by the digital VCR 10 on the television 18” “the user may control all connected audio and video devices using a simple, natural, and unified interface provided by the digital VCR 10.” (*Id.* ¶ 18.).

Advantages of the “invention” include that a “user can exercise centralized control over multiple video sources,” “exercise VCR-style control over live television shows,” “specify a show to record based on the content of the show and information associated with the show,” and access “show information ... stored along with each recorded show.” (*Id.* ¶¶ 6-8.). As shown below in Figure 55, “a channel guide display 500 presents the user with a visual representation of information contained in the channel guide database and of content recorded in personal channels.” (*Id.* ¶ 87.). “The information about ... personal channels that is displayed by the channel guide display 500 is derived from the show information that is recorded in the personal channels.” (*Id.*). For example, in Figure 55 below, “a user might create a ‘Finance’ personal channel whose record criteria specify all episodes of the shows ‘Moneyline’ and ‘Your Money.’” (*Id.* ¶ 95.).

Figure 55: "Channel Display Guide" of ReplayTV 893

FIG. 5



(Id. at Fig. 5.).

(2) *ReplayTV 338*

ReplayTV 338 is a "video data record[er] having integrated channel guides allowing a user to control recording and storage of television signals into personal channels for later playback and viewing." (JX-0006 (ReplayTV 338 patent) at Abstract.). ReplayTV 338 observed that "[v]ideo data recorders" and [c]hannel guides are well-known in the art" and remarked that "there has not been sufficient integration of the channel guides with the record and playback

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capabilities of video data recorders.” (*Id.* at 1:12-55.). The ReplayTV 338 system allows a user to “specify criteria for recording of shows from an input source ... and shows are then selected based on the user specified criteria and recorded for later playback.” (*Id.* at Abstract.). “Storage of the shows may be organized into personal channels in order to facilitate later playback, e.g., the user may specify a channel of action movies, a channel of nature programming, a channel for sports, etc.” (*Id.*). As shown below in Figure 56, “personal channels may be displayed, similar to other channels, in the user interface.” (*Id.* at 7:27-28.).

Figure 56: “Channel Display Guide” of ReplayTV 338

▶		8:45pm	
<p>Friends recorded 11/17 (Personal Channel) <i>The friends hang out and have fun at their upscale New York apartment.</i></p>			
TV Channels	8:30pm	9:00pm	9:30pm
1003 TBS	Scooby Doo	Car Crashes	
1004 NBC	ER		News
1005 Nick	The Big Help		Doug
P100 Friends	Friends 11/17	Friends 11/20	Friends 11/24
P101 Tonight	Tonight 11/12		Tonight 11/13
P102 Science	Nature 11/15	Wild Discovery 11/15	

FIG. 10

(*Id.* at Fig. 10; *see also* 7:30-33 (describing Figure 10 as “showing personal channels for the series ‘Friends’ (P100 30 Friends), for ‘Tonight’ (P101 Tonight) and for science shows (P102 Science) is integrated in the same display with the channel guide).).

ReplayTV 338 is cited on the face of the '585 patent. (JX-0004.0003-4 ('585 patent) at 2-3 (listing references considered by the examiner); JX-0010.5125-26 ('585 patent prosecution

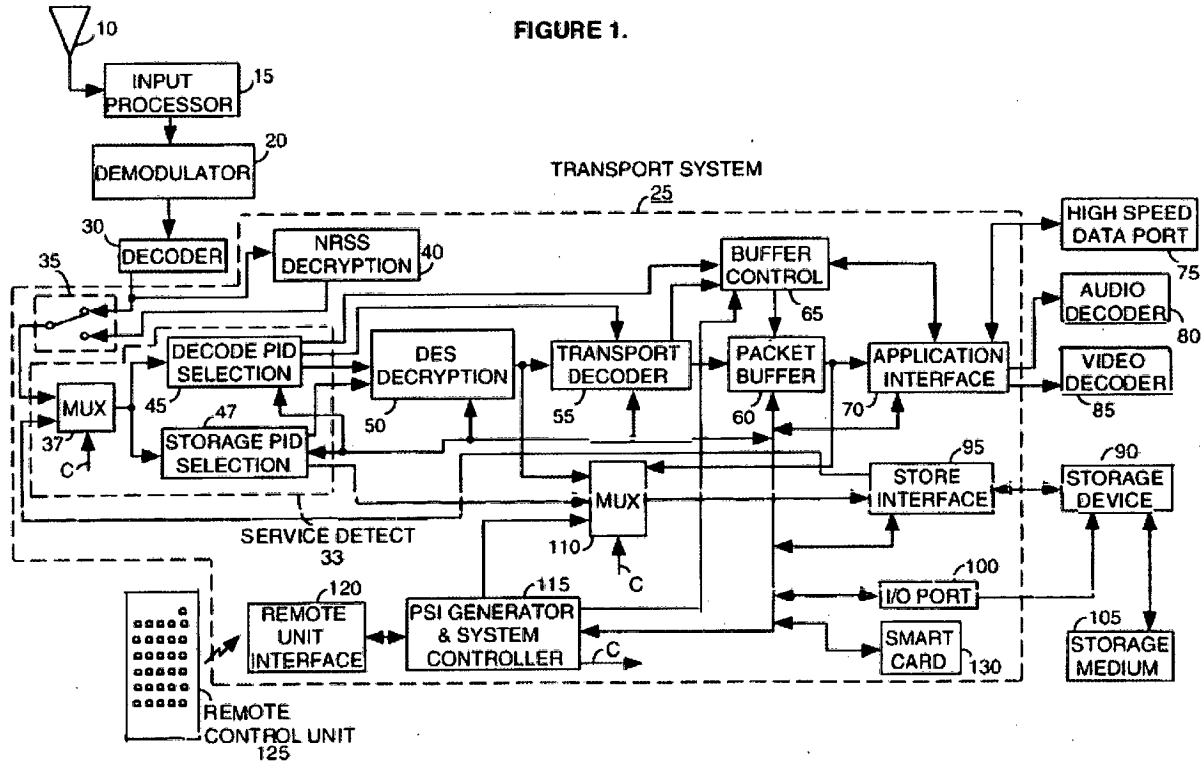
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history); Tr. (Albonesi) at 1945:9-1946:9 (admitting ReplayTV 338, along with other ReplayTV-related prior art, are cited on the face of the '585 patent as references considered by the USPTO during prosecution)).

(3) *Blatter*

Blatter teaches a “decoder conditional access system [that] incorporates different encryption systems for providing access to programs derived from different sources.” (RX-0004 (Blatter) at Abstract.). “The data content of premium program channels such as HBO™, Cinemax™ and Showtime™, for example, is usually protected from unauthorized access by methods such as encryption and scrambling.” (*Id.* at 1:27-32.). “The processing of encrypted and non-encrypted program data and the management of associated encryption and 50 scrambling codes for storage, billing and other applications presents a number of problems.” (*Id.* at 1:49-52.). Blatter proposes to solve these problems with two-algorithm decoder conditional access. (*Id.* at 2:16-21.). “A conditional access processor for processing encrypted program data and an encryption code includes a first algorithm means for decrypting the encryption code to provide an encryption key. The conditional access processor also includes a second algorithm means for encrypting the encryption key and the second encryption algorithm is different to the first encryption algorithm.” (*Id.* at 2:23-28.).

Figure 57: "Channel Display Guide" of Blatter



(Id. at Fig. 1.).

b) Rejecting Rovi's Invalidity Rebuttal Argument that Claims 1 and 15 Require Steps Performed in the Exact Order Recited

Even before reaching their dispute whether the asserted claims read on these prior art references, as an initial matter, the Private Parties raised a dispute over the scope of asserted claims 1 and 15. The Private Parties disputed, particularly in the context of "global storage settings," whether claims 1 and 15 require the performance of a specific sequence of "storage option selection" and "program selection" or, alternatively, cover those steps performed in any sequence.

Rovi appeared to assert that the asserted claims require performance of steps in the order recited, such that:

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- claims 1 and 15 require “global” storage options that apply to multiple programs and are set in advance of the selection of a program for recording; and
- claims 8 and 22 require storage options that apply to a single program and are set after the program has been selected for recording.

(RBr. at 34.).

For example, Rovi argued, in the context of Replay893, that there is no “disclosure related to user selection of global storage settings from the IPG that *are then applied* to all future recordings that control how those programs are to be digitally stored as required by claims 1 and 15 of the ‘585 Patent.” (CRBr. at 20 (emphasis added); *see also id.* at 41 (Blatter fails to disclose “global storage options that apply to all programs selected for recording *after* the options are selected”) (emphasis added)). In rebuttal, Comcast disputed whether the asserted claims require performance of “storage option selection” and “program selection” in any particular order, or (“an order of steps” argument).⁷² (RBr. at 34-36.). Comcast also indicated it should prevail regardless of the outcome on this issue (Rovi’s narrow, order-matters view v. Comcast’s broad, order-neutral view) because “ReplayTV 893 discloses ‘global’ storage options selected prior to selecting the program as well as settings applicable to only one program that are selected after that program is chosen.” (*Id.* at 36.).

Comcast’s position is correct. “[A]s a general rule, [a] claim is not limited to performance of the steps in the order recited.” *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1345 (Fed. Cir. 2008). Whether an exception to that rule applies must be assessed on a limitation-by-limitation basis because some limitations may compel a particular order while others may not. *Mformation Techs., Inc. v. Research in Motion Ltd.*, 764 F.3d 1392, 1399 (Fed.

⁷² To be clear, Comcast did not dispute that, in the asserted claims, modification of a storage setting must occur prior to the recording based on that modification. (RBr. at 35 n.11.). That is axiomatic.

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Cir. 2014); *Goff v. Harrah's Operating Co.*, 412 F. Supp. 2d 1090, 1104 (D. Nev. 2005) (holding that steps B and C need to be performed sequentially but step A could be performed before or after B and C); *SSL Servs., LLC v. Citrix Sys.*, 816 F. Supp. 2d 364, 374 (E.D. Tex. 2011) (holding that certain steps must be performed in order but could be performed before or after other steps).

Here, the asserted claims do not compel a particular order for the “storage option selection” and “program selection” steps. Nothing in the language of the claims (e.g., an antecedent) requires performance of the “storage option selection” and “program selection” steps in a particular order. This interpretation comports with the specification of the '585 patent, which discloses that the steps of “selecting a storage option” and “selecting a program to be recorded” can be “performed in any order.” (JX-0004 ('585 patent) at 16:3-7, Fig. 15; Tr. (Albonesi) at 1876:3-1877:6). During prosecution of the '585 patent, the examiner applied prior art to pending claims without observing a particular order for the “storage option selection” and “program selection” steps. (JX-0010.5254 ('585 patent prosecution history)).

4. ReplayTV 893 Application (RX-0008) Anticipates Claims 1, 8, 11, 15 and 22 of the '585 Patent

Given the large number of asserted claim elements, and Comcast's large number of invalidity arguments, it makes sense to group asserted claim elements across patents in a different manner than used above in the context of infringement.

- a) **ReplayTV 893 Application (RX-0008) Teaches Limitations 1[pre]/8[pre]/15[c]/22[c] – 1 [Pre] A method for allowing a user to select storage options for storing programs using an interactive television program guide implemented on user television equipment, the method comprising; 8[Pre] A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising; 15[c] and an interactive television program guide implemented at least partially on circuitry, wherein the interactive television program guide is programmed to; 22[c] and an interactive television program guide implemented at least partially on circuitry, wherein the interactive television program guide is programmed to:**

As shown below in Figure 58, ReplayTV 893 teaches an interactive program guide implemented on user television equipment or on circuitry, as recited in the equipment-based preambles of claims 1 and 8 and the circuitry limitations of claims 15 and 22. (Tr. (Albonesi) at 1815:24-1819:9; RDX-0001C.0014-21.).

ReplayTV 893 discloses a “digital VCR application 330” implemented on a “digital VCR” in a user’s home. (RX-0008 (ReplayTV 893) ¶¶ 13, 14, 18, Figs. 1-3; Tr. (Albonesi) at 1816:21-1817:19; RDX-0001C.0017-18.). ReplayTV 893 teaches a “block diagram of digital VCR circuitry,” including a Philips central processing unit, and explains that the “digital VCR 10 includes circuitry 100.” (RX-0008 (ReplayTV 893) at Fig. 2, ¶¶ 13, 20; Tr. (Albonesi) at 1816:21-1818:5; RDX-0001C.0019.). The digital VCR circuitry receives and processes MPEG program streams and channel guide information. (RX-0008 (ReplayTV 893) ¶ 58, Figs. 2, 3; RDX-0001C.0018-19.).

Figure 58: Comcast's Depiction of How ReplayTV 893 Discloses a Program Guide Implemented on Circuitry

ReplayTV 893 Discloses A Digital VCR For Recording Digital Video

8. A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:

displaying in a display screen at least one program listing relating to at least one program;

providing a user with an opportunity to indicate a program to be recorded in a random access digital storage device by selecting a program listing from the at least one displayed program listing wherein the selected program listing corresponds to the program to be recorded;

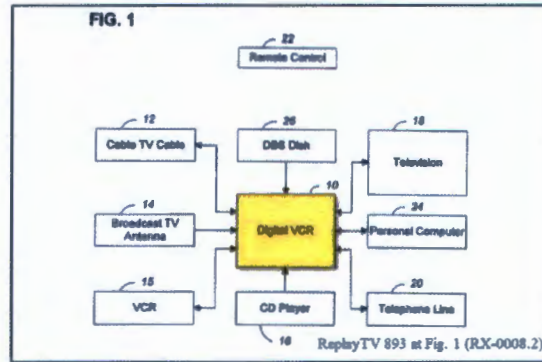
providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;

in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and

recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

585 Patent at Claim 8 (JX-0004.41)

RDX-0001C.17



[0018] Referring to FIG. 1, a digital VCR 10 acts as a central station for recording and playback of analog and digital audio and video. Five video sources, such as a cable
ReplayTV 893 at ¶18 (RX-0008.14)

ReplayTV 893 Discloses Implementing The Application On Circuitry

8. A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:

displaying in a display screen at least one program listing relating to at least one program;

providing a user with an opportunity to indicate a program to be recorded in a random access digital storage device by selecting a program listing from the at least one displayed program listing wherein the selected program listing corresponds to the program to be recorded;

providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;

in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and

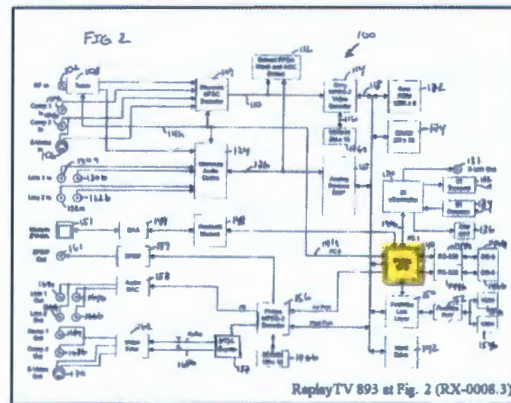
recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

585 Patent at Claim 8 (JX-0004.41)

RDX-0001C.18



[0013] FIG. 2 is a block diagram of digital VCR circuitry.
ReplayTV 893 at ¶13 (RX-0008.14)



See also, e.g., ReplayTV 893 (RX-0008) at ¶¶ 28, 30, 42-43, 47, 51, 56, 68, 70, 85, 87-88, 91, 93-94; Fig. 5; Abstract

(RDX-0001C.0017-19 (introduced during the testimony of Dr. Albonesi).).

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As shown below in Figure 59, the “digital VCR application 330” is an “interactive television program guide” as construed in the *Markman* Order. “[D]igital VCR application 330” generates a “channel guide display” that presents the user “with a visual representation of information contained in the channel guide database” (i.e., “television program listings”). (RX-0008 (ReplayTV 893) ¶ 87, Fig. 5; Tr. (Albonesi) at 1816:12-1817:5, 1819:16-1820:6.). “[D]igital VCR application 330” also “forwards commands received from the user,” allowing a user to navigate through and interact with those television program listings. (RX-0008 (ReplayTV 893) ¶¶ 46, 82, 93; RDX-0001C.0019, 23; Tr. (Albonesi) at 1818:23-1820:11, 1838:1-19.). “[D]igital VCR application 330” provides a “list of options” to a user including, for example, whether to record one episode or all episodes of the selected show. (RX-0008 (ReplayTV 893) ¶ 93 (“While the channel guide display 500 is on the screen, pressing the Select button 256 on the remote control 22” displays “a list of options ... (e.g., tune to the highlighted show’s channel, record one episode of the highlighted show, record all episodes of the highlighted show).”); Tr. (Albonesi) at 1838:1-19.). “[T]he user issues all commands using the remote control 22,” and the remote control is used to “select choices in on-screen menus.” (RX-0008 (ReplayTV 893) ¶¶ 18, 82.).

Figure 59: Comcast's Depiction of How ReplayTV 893's Program Guide Is An "Interactive Television Program Guide"

ReplayTV 893 Discloses An Application That Generates A Display Of Program Listings On The Digital VCR

8. A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:

displaying on a display selected at least one program listing relating to at least one program

providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;

providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;

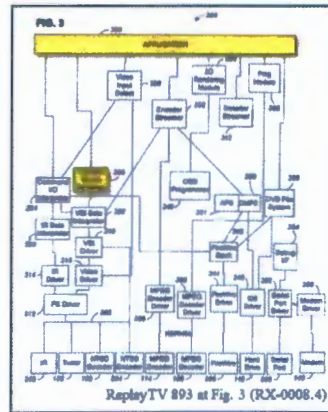
in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and

recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program

585 Patent at Claim 8 (JX-0004.41)

[0014] FIG. 3 is a block diagram of digital VCR system software.

ReplayTV 893 at ¶14 (RX-0008.14)



ReplayTV 893 at Fig. 3 (RX-0008.4)

RDX-0001C 18



(RDX-0001C.0018 (introduced during the testimony of Dr. Albonesi).).

With respect to these limitations, Rovi did not offer rebuttal argument or evidence in its Post-Hearing Briefs and has thus waived any such argument pursuant to Ground Rule 10.1. (CRBr. at 16-42.).

Based on the discussion and explanation above, Comcast has proven by clear and convincing evidence that ReplayTV 893 satisfies limitations 1[pre], 8[pre], 15[c], and 22[c] of the '585 patent.

- b) **ReplayTV 893 Application (RX-0008) Teaches Limitations 1[a]/15[d]/8[c]/22[f]—1[a] providing the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on a random access digital storage device; 15[d] provide the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein said at least one storage option relates to at least one storage setting configured to control how programs are to be digitally stored on the random access digital storage device; 8[c] providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device; 22[f] provide the user with an opportunity to select at least one storage option for storing a program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device:**

ReplayTV 893 teaches these storage option and storage setting limitations. (Tr. (Albonesi) at 1828:19-1834:2, 1837:5-1839:2; RDX-0001C.0035-46.). For example, ReplayTV 893 discloses that a “user can specify a recording quality (in, e.g., megabits per second) at which content should be recorded on a personal channel.” (RX-0008 (ReplayTV 893) ¶ 105; *see also id.* ¶ 108 (“For example, the user can specify . . . a recording quality”).).

The MPEG encoder subsystem of ReplayTV 893 uses the megabits-per-second setting to determine the storage format for the particular program selection. (Tr. (Albonesi) at 1840:5-1840:20; RX-0008 (ReplayTV 893) ¶ 74.). Rovi’s expert agreed that this disclosure is a storage setting configured to control how programs are to be digitally stored. (Tr. (Balakrishnan) at 2120:7-12 (“Q. And you will agree with me that by configuring the system to set a preferred encoding bit rate, that could affect how the program is stored into the hard drive; right? A. In a

general sense, yes, it's a part of the configuration.”). Thus, as shown below in Figure 60, these passages expressly teach that a user is given the opportunity to select an option, “quality,” that has a related setting, “megabits per second,” and that controls *how* a program is digitally stored to “hard disk space” on a random access digital storage device. (Tr. (Albonesi) at 1829:4-1831:3; RDX-0001C.0037-40.).

Figure 60: Comcast’s Depiction of ReplayTV 893’s Disclosure of a Storage Options That Relates to a Setting That Controls “How” a Program Is Stored

ReplayTV 893 Discloses Providing A User With An Option To Select A Recording Quality

- ✓ A method for recording program listings in interactive television program guide implemented on user television equipment, the method comprising
- ✓ displaying in a display screen at least one program listing relating to at least one program;
- ✓ providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;
- providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;
- in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and
- recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

[0105] The user can specify the quality (in, e.g., megabits per second) at which content should be recorded on a personal channel. The user can also specify that a particular number of episodes of a show are to be recorded on a personal channel. When a personal channel is created, the user can be notified of the hard disk space that will be needed to store all shows that are scheduled to be recorded on the personal channel. If the amount of room needed exceeds the

ReplayTV 893 at ¶105 (RX-0008.23)

ways. For example, the user can specify a show to be recorded on a personal channel by specifying the show's start time, end time, live television channel, and a recording quality. The digital VCR 10 can keep track of television

ReplayTV 893 at ¶108 (RX-0008.23)

585 Patent at Claim 8 (IX-0004.41)

RDX-0001C.0037



(RDX-0001C.0037 (introduced during the testimony of Dr. Albonesi).).

Rovi asserted that ReplayTV 893 fails to disclose these limitations for two (2) reasons. First, according to Rovi, “there has been no showing that the ReplayTV References teach (or otherwise suggest or disclose) *using an IPG* to select how storage options [i.e., options relating to settings that control ‘how’ programs are stored]; rather, the ReplayTV References only discuss selecting a program (or programs) for recording (the what) from the IPG and nothing more.” (CRBr. at 21 (emphasis added)). Second, “[t]he ReplayTV References do not teach the global

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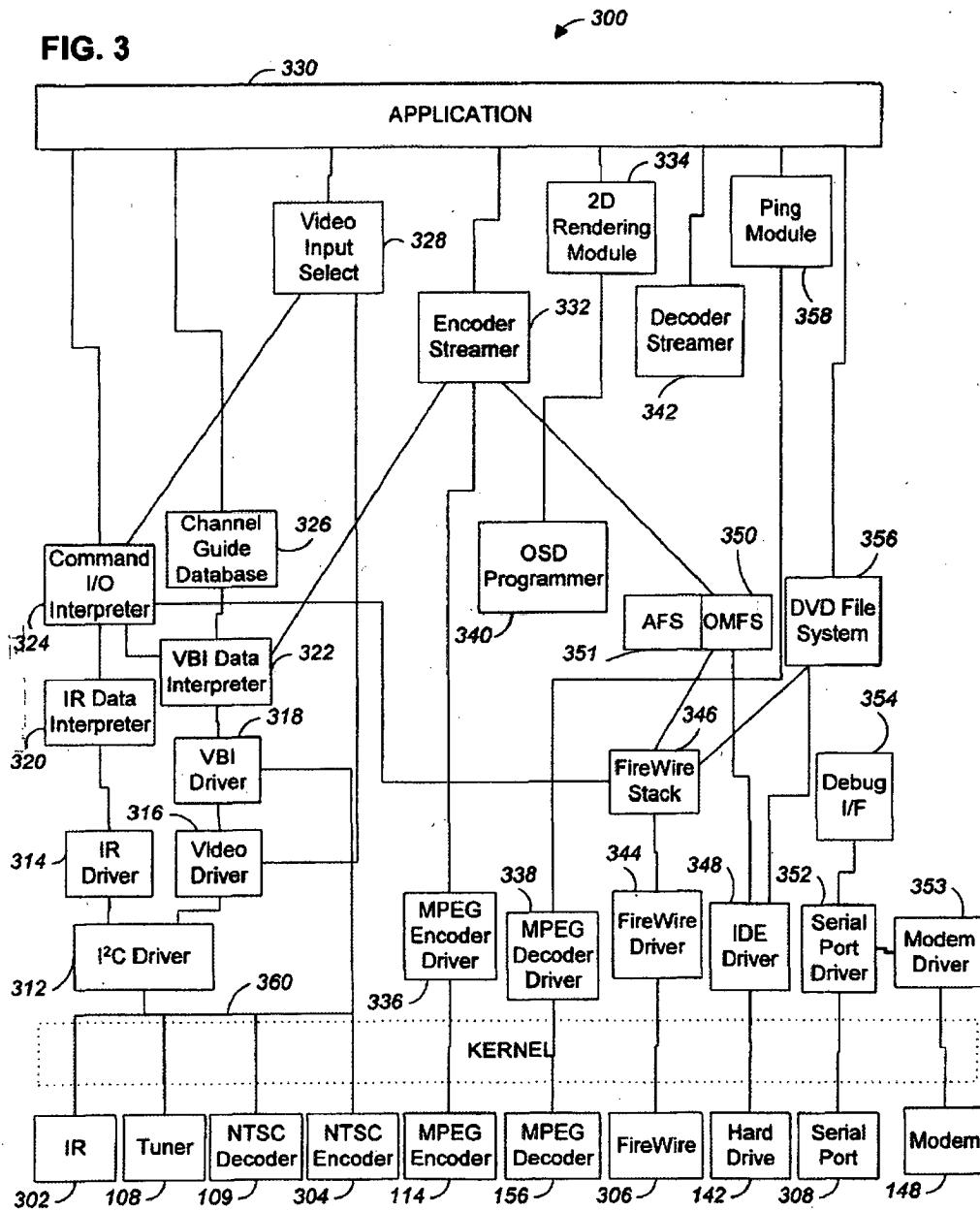
storage settings of claims 1 and 15 of the '585 Patent,” which pertain to “user selection and setting of a storage option that is then applied globally to all programs (plural) selected for recording thereafter through an IPG.” (*Id.* at 18-19.). Rovi is wrong on both counts.

(1) *ReplayTV 893 Discloses Using an IPG to Select “How” Storage Options*

ReplayTV 893 teaches use of the IPG to select a “how” storage option. ReplayTV 893 explains that, “regardless of the input device[,]” the “digital VCR application 330” (i.e., the “interactive television program guide” or “IPG”) receives and processes *all* user commands, as shown below in Figure 61. (RX-0008 (ReplayTV 893) ¶ 68; RDX-0001C.0019.). ReplayTV 893 elaborates that “[i]n general, the user issues all commands using the remote control 22”⁷³ and that “remote control 22 and on-screen menus displayed by the digital VCR 10 on the television 18 may be used to select audio and video from one or more of the attached audio and video sources to be output to a single display device such as the television 18.” (*Id.* ¶ 18; RDX-0001C.0017.). Given this disclosure in ReplayTV 893 that users use a remote control to navigate on-screen menus and make choices, and that the IPG processes *all* user commands “regardless of the input device,” it is clear that ReplayTV 893 teaches that it provides users with the opportunity to select storage options of every ilk using a IPG, including “how” storage options such as recording quality. (RDX-0001C.0037-45; Tr. (Albonesi) at 1828:19-1834:2, 1837:5-1839:2; JX-0004 ('585 patent) at Fig. 3 (showing IPG (“digital VCR application 330”) as overarching hub for “all” user commands).). In short, “all” means “all.”

⁷³ ReplayTV 893 also teaches receiving user input using the “front panel” of the digital VCR, a modem, a pager, a keyboard, a mouse, or a microphone. (RX-0008 (ReplayTV 893) ¶ 19, 68.).

Figure 61: ReplayTV 893's "Interactive Television Program Guide" Application Is a Hub for "All" User Commands, Regardless of Input Device



(JX-0004 ('585 patent) at Fig. 3.).

Tellingly, as shown below in Figure 62, ReplayTV 893 also appears to disclose selection

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of the same “how” storage option, program padding, that Rovi accuses of infringement in Comcast’s X1 System. ReplayTV 893 discloses that “the digital VCR 10 can begin recording a show *at a selected time* (e.g., three minutes) before the show is scheduled to be broadcast and stop recording the show at a select time after the show is scheduled to finish broadcasting.”

(RX-0008 (ReplayTV 893) ¶ 96 (emphasis added); *see also id.* ¶ 108; Tr. (Albonesi) at 1832:16-1833:3; RDX-0005C.0041.). This disclosure poses a serious challenge to Rovi’s attempt to rebut Comcast’s anticipation argument because Rovi cannot have it both ways in terms of calling a feature infringing in an accused product, on the one hand, while denying that the same feature is anticipatory when found in the prior art, on the other hand. *See White v. Dunbar*, 119 U.S. 47, 51 (1886) (“A patent may not, like a ‘nose of wax,’ be twisted one way to avoid anticipation and another to find infringement.”); *Cordance Corp. v. Amazon.com, Inc.*, 658 F.3d 1330, 1337 (Fed. Cir. 2011) (holding claims anticipated as a matter of law where an expert mapped each element of the asserted claims to the functionality of a prior art system in a manner that mirrored the patentee’s infringement theories).

Figure 62: Comcast's Depiction of How ReplayTV 893's Discloses in the Prior Art Features that Rovi Accuses of Infringement in Comcast's X1 System

ReplayTV 893 Also Discloses What Rovi Accuses

<ul style="list-style-type: none">Record a single episode or all episodes 2018-07-02 Balakrishnan Op. Rpt. at ¶158	<p>The digital VCR 10 can ask the user whether to record a single episode of the current show or all future episodes of the current show. If the user specifies to record all future episodes of the current show, the digital VCR 10 can record all future episodes of the current show. (ReplayTV 893 at ¶129 (RX-0008.25))</p>
<ul style="list-style-type: none">When to delete recordings 2018-07-02 Balakrishnan Op. Rpt. at ¶158, 159-160	<p>Similarly, the user can specify that the oldest content recorded on a personal channel be deleted when necessary to make room for new content. (ReplayTV 893 at ¶102 (RX-0008.23))</p>
<ul style="list-style-type: none">Padding: add time to start and end of recording 2018-07-02 Balakrishnan Op. Rpt. at ¶158, 159-160	<p>[0096] Optionally, the digital VCR 10 can begin recording a show at a selected time (e.g., three minutes) before the show is scheduled to be broadcast and stop recording the show at a selected time after the show is scheduled to finish broadcasting. (ReplayTV 893 at ¶96 (RX-0008.22))</p> <p>For example, the user can specify a show to be recorded on a personal channel by specifying the show's start time, end time, live television channel, and a recording quality. (ReplayTV 893 at ¶108 (RX-0008.23))</p>

RDX-0001C.41 

(RDX-0001C.0041 (introduced during the testimony of Dr. Albonesi).).

To sidestep what appears to be a fatal analytical inconsistency, Rovi attempted to draw distinctions between program padding in the accused X1 System and program padding in ReplayTV 893. Rovi asserted that ReplayTV 893 disclosed “program padding” as a feature of personal channels and that personal channels are separate from the claimed IPG. (CRBr. at 22 (“ReplayTV 893 describes personal channels at length in paragraphs 95 through 111, including setting and evaluating recording criteria, naming and numbering personal channels, managing personal channel storage, and viewing personal channels—but none of these paragraphs mentions or otherwise discloses accomplishing any of this functionality from the IPG.”). Rovi applied the same “personal channel” argument to the above-mentioned “how” storage option that a “user can specify a recording quality (in, e.g., megabits per second) at which content should be recorded on a personal channel.” (RX-0008 (ReplayTV 893) ¶ 105.). In other words, although

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Rovi acknowledged that ReplayTV 893 teaches users how to customize personal channels, Rovi maintained that “personal channels—and any user selection of a ‘finance’ [personal] channel or a ‘default recording quality’ [or the program padding feature] have not been shown ... to be selected by the user from the IPG as required by the Asserted Claims of the ’585 Patent.” (*Id.* at 26.).

Rovi is mistaken. As explained above, ReplayTV 893 teaches the IPG (“digital VCR application 330”) processing all user commands “regardless of the input device.” (RX-0008 (ReplayTV 893) ¶ 18, 42-51, 68, Fig. 3; RDX-0001C.0017, 19, 37-45; Tr. (Albonesi) at 1828:19-1834:2, 1837:5-1839:2.). ReplayTV 893 does not carve out an exception for user commands related to personal channel customization. (RX-0008 (ReplayTV 893) ¶ 96 (padding feature) (“the digital VCR 10 can begin recording a show at a selected time (e.g., three minutes) before the show is scheduled to be broadcast and stop recording the show at a selected time after the show is scheduled to finish broadcasting.”), 105 (recording quality feature) (“[t]he user can specify the quality (in, e.g., megabits per second) at which content should be recorded on a personal channel”).).

Moreover, as shown above in Figure 62, ReplayTV 893 clearly discloses personal channels not as separate from the IPG, but instead as integrated into the IPG display with other program and channel information. (*Id.* at Fig. 5.). ReplayTV 893 expressly states that “a channel guide display 500 presents the user with a visual representation of information contained in the channel guide database and of content recorded in personal channels.” (*Id.* ¶ 87.). “For example, as shown in FIG. 5, the ‘Finance’ [personal] channel is assigned channel number 1010, and is displayed in the channel list display 502 like any other channel.” (*Id.* ¶ 99.).

Thus, ReplayTV 893 discloses using an IPG to select “how” storage options.

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(2) *ReplayTV 893 Discloses Settings for the Global and Individual "How" Storage of Programs*

In contravention of Rovi's second anticipation rebuttal argument, ReplayTV 893 teaches "global storage settings of claims 1 and 15 of the '585 Patent."⁷⁴ Indeed, ReplayTV 893 discloses setting "how" storage options globally and individually for recorded programs. For example, ReplayTV 893 discloses providing a user with an opportunity to select default, global recording quality options that apply to "shows" in the plural.⁷⁵ (RX-0008 (ReplayTV 893) ¶ 117 ("The user can specify default recording qualities with which shows are to be recorded into the rewind buffer and into personal channels."); Tr. (Albonesi) at 1837:15-25; RDX-0005C.0044; *see also* Tr. (Albonesi) at 1878:21-1879:4.). Rovi's expert appeared to concede that ReplayTV 893 taught "default," "global" settings made for multiple programs:

Q. The last sentence of paragraph 117 says, "the user can specify default recording qualities with which shows are to be recorded." Do you see that?

A. Yes.

Q. And that's shows in the plural, isn't it?

A. Yes.

Q. And these are default settings, which would be those that are set for shows, in

⁷⁴ As explained above, the order in which users select storage options and select programs for storage is irrelevant from the perspective of the asserted claims. This Initial Determination rejects Rovi's argument that all steps of the claims must be performed in the order recited. By way of review of a topic addressed above, Rovi appears to interpret claims 1 and 15 as applying to a "global" storage option set in advance of selection of programs (plural) for recording. By contrast, Rovi appears to interpret claims 8 and 22 as applying to storage options set after a program (singular) has been selected for recording. This differential treatment of claims 1 and 15, on the one hand, and claims 8 and 22, on the other hand is not warranted by the intrinsic evidence.

⁷⁵ For what it is worth, ReplayTV 893 discloses setting these "global" recording quality options before selecting programs for recording. (RX-0008 (ReplayTV 893) ¶ 117; Tr. (Albonesi) at 1837:15-25; RDX-0005C at 44; *see also* Tr. (Albonesi) at 1878:21-1879:4.). This disclosure would satisfy claims 1 and 15 even under Rovi's now-rejected interpretation requiring the setting of a "global" storage option in advance of selection of programs (plural) for recording.

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the plural, in the default as a global setting. Would you agree with that?

A. I would say these are default recording qualities with which shows are to be recorded, yes. But it doesn't say anything about doing it through the program guide, as required by the claims.

(Tr. (Balakrishnan) at 2134:9-22; *see also id.* at 2134:9-2135:6 (“These are setting up default recordings before the shows are to be recorded. I agree with that part.”)).

ReplayTV 893 also teaches selecting storage options, including selecting recording quality, after selecting a particular program for recording. (Tr. (Albonesi) at 1838:1-19; RX-0008 (ReplayTV 893) ¶¶ 58, 105, 108 (“the user can specify a show to be recorded on a personal channel by specifying the show’s start time, end time, live television channel, and a recording quality.”)).⁷⁶ Thus, Rovi fails to undermine ReplayTV 893’s disclosure of global storage settings (or, for that matter, storage settings that pertain to a selected individual program).

Faced with persuasive evidence that ReplayTV 893 discloses limitations 1[a], 15[d], 8[c], and 22[f] of the '585 patent, Rovi appeared to argue that ReplayTV 893 did not disclose the exact embodiments required by the asserted claims (namely, a user setting, globally and for individual programs, a “how” storage setting using the channel guide display 500). That is not how anticipation works. “[A] reference can anticipate a claim even if it ‘d[oes] not expressly spell out’ all the limitations arranged or combined as in the claim, if a person of skill in the art, reading the reference, would ‘at once envisage’ the claimed arrangement or combination.”

⁷⁶ Rovi moved to strike Hearing testimony and demonstrative slides of Comcast’s expert, Dr. David Albonesi, which concern the difference in scope between claims 1 and 15 (global storage options) and claims 8 and 22 (program specific options). According to Rovi, “[i]f the ALJ grants Rovi’s motion to strike, then Comcast has presented no evidence that either ReplayTV Reference anticipates or renders obvious the ‘global’ storage settings claimed by claims 1 and 15 of the '585 Patent.” (CRBr. at 19-20.). Rovi is mistaken. ReplayTV 893 and ReplayTV 338 stand as independent pieces of evidence of the invalidity of the asserted claims of the '585 patent. Dr. Albonesi’s testimony was not stricken. (Order No. 49 (June 3, 2019)).

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Kennametal, Inc. v. Ingersoll Cutting Tool Co., 780 F.3d 1376, 1381 (Fed. Cir. 2015) (quoting *In re Petering*, 301 F.2d 676, 681 (C.C.P.A. 1962)); see also *Eli Lilly & Co. v. Los Angeles Biomedical Research Institute at Harbor-UCLA Med. Center*, 849 F.3d 1073, 1074 (Fed. Cir. 2017) (“the dispositive question regarding anticipation is whether one skilled in the art would reasonably understand or infer ... that every claim element is disclosed in that reference”).

Here, in the context of very approachable and intuitive technology, given ReplayTV 893’s teachings that the “digital VCR application 330” is a hub for all user commands “regardless of the input device,” it is apparent that a skilled artisan would recognize easily, if not “immediately envisage,” using the “digital VCR application 330” to select *how* storage options such as recording quality and to create corresponding settings globally and for individual programs. (RDX-0001C.0037-45; Tr. (Albonesi) at 1828:19-1834:2, 1837:5-1839:2.).

Rovi also argued, without sufficient supporting evidence, that ReplayTV 893 would not enable a person of ordinary skill in the art “to implement an IPG for selecting storage options controlling how a program is to be digitally stored.” (CRBr. at 24.). “A prior art reference cannot anticipate a claimed invention ‘if the allegedly anticipatory disclosures cited as prior art are not enabled.’” *In re Antor Media Corp.*, 689 F.3d 1282, 1287 (Fed. Cir. 2012). According to Rovi, based on attorney argument, “[t]here is no disclosure of how a person of ordinary skill in the art—over twenty years ago—would engineer the software and hardware required to implement such advanced guide functionality.” (CRBr. at 24.).

This argument fails for two (2) reasons. First, Rovi never mentioned the argument in its Pre-Hearing Brief and, thus, waived that argument pursuant to Ground Rule 7.2. Additionally, Rovi failed to support its argument with persuasive evidence. Dr. Balakrishnan did testify to the lack of disclosure in ReplayTV 893 with respect to “how the user interface would need to be

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modified to implement any [how storage options and settings] functionality,” “how the buttons on a remote would be mapped,” or “how source code of the guide application, source code of the set top box code, or source code of a remote server would need to be modified.” (Tr. (Balakrishnan) at 2085:1-2092:3, 2090:12-2091:8.). However, Rovi’s expert, Dr. Balakrishnan did not testify that these supposed deficiencies in ReplayTV 893 would prevent a person of ordinary skill in the art from practicing the asserted claims based solely on the ReplayTV 893 reference.

Based on the above, Comcast has proven by clear and convincing evidence that ReplayTV 893 satisfies limitations 1[a], 15[d], 8[c], and 22[f] of the ’585 patent.

- c) **ReplayTV 893 Application (RX-0008) Teaches Limitations 1[b]/8[d]/15[e]/22[g]/22[h] — 1[b] in response to a user selection of the at least one storage option, modifying the at least one storage setting; [d] in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; [e] in response to a user selection of the at least one storage option, modify the at least one storage setting; [g] modify said at least one storage setting in response to said user selection; and [h] in response to receiving the user selection of the at least one storage option, modify the at least one storage setting for the program to be recorded**

As shown below in Figure 63, ReplayTV 893 teaches a user to modify at least one “how” storage setting in response to user selection of a corresponding “how” storage option. (Tr. (Albonesi) at 1839:3-1842:11; RDX-0001C.0047-50.). ReplayTV 893 discloses preference files that make modifications to recording settings, such the bit rate (a “storage setting”), in response to a user’s selection of a preferred recording quality (a “storage option”). (Tr. (Albonesi) at 1839:3-17; RX-0008 (ReplayTV 893) ¶ 58 RDX-0001C.0048.). ReplayTV 893 also discloses that its MPEG encoder subsystem responds to user commands to change the encoding bit rate for

storing programs to a hard drive. (Tr. (Albonesi) at 1839:18-1842:5; RX-0008 (ReplayTV 893) ¶ 74; RDX-0001C.0049; see also RX-0008 (ReplayTV 893) ¶¶ 18, 61, Figs. 3, 5).

Figure 63: Comcast's Depiction of ReplayTV 893's Disclosure of Modifying a Setting in Response to User Selection of a "How" Storage Option

ReplayTV 893 Discloses Preference Files That Contain Modifications To Recording Settings, Like Encoding Bit Rate, In Response To User Selection

- ✓ A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:
 - ✓ displaying in a display screen at least one program listing relating to at least one program;
 - ✓ providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing wherein the selected program listing corresponds to the program to be recorded;
 - ✓ providing the user with an opportunity to select at least one storage option for storing the program to be recorded wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;
- in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and**
- recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

[0058] The files stored on the hard disk drive 142 include MPEG program streams, database files, preferences files, and program code files. The MPEG program streams can contain recorded broadcast data, stored as MPEG-2 Program System Streams, with video and audio Packetised Elementary Streams (PES) multiplexed together. Preferences files can contain data describing the way in which the user has configured the system, such as the preferred encoding bit rate, favorite channels, and personal channels. Program code files contain binary code for applications, system modules, DLLs, etc. The OMFS 350 supports filenames that are long enough to provide differentiation between files, e.g., 16 characters.

ReplayTV 893 at ¶58 (RX-0008.18)

585 Patent at Claim 8 (JX-0004.41)

RDX-0001C.49



ReplayTV 893 Discloses The MPEG Encoder Changing Settings, Like Recording Bit Rate and Encoding Resolution, In Response To User Selection

- ✓ A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:
 - ✓ displaying in a display screen at least one program listing relating to at least one program;
 - ✓ providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing wherein the selected program listing corresponds to the program to be recorded;
 - ✓ providing the user with an opportunity to select at least one storage option for storing the program to be recorded wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;
- in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and**
- recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

to the VBI and writing data to the OMFS 350. The components of the MPEG encoder subsystem respond to external commands to stop and start recording, change the recording bit rate, change the encoding resolution, save the current stream position as a bookmark, and respond to other user actions.

ReplayTV 893 at ¶74 (RX-0008.19)

585 Patent at Claim 8 (JX-0004.41)

See also, e.g., ReplayTV 893 (RX-0008) at ¶¶ 18, 61; Figs. 3, 5

RDX-0001C.49



(RDX-0001C.0048-49 (introduced during the testimony of Dr. Albonesi)).

During the Hearing, Rovi's expert, Dr. Balakrishnan, did not contest that ReplayTV 893

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teaches these limitations. The testimony of Dr. Albonesi, Comcast's expert, went unchallenged on cross-examination. Rovi did not rebut Dr. Albonesi's evidence in Post-Hearing Briefs. Thus, Rovi waived any argument on this issue under Ground Rule 10.1.

Based on the above, Comcast has proven by clear and convincing evidence that ReplayTV 893 satisfies limitations 1[b], 8[b], 15[e], 22[h], and 22[g] of the '585 patent.

- d) **ReplayTV 893 Application (RX-0008) Teaches Limitations 1[c]/8[a]/15[a]/15[f]/22[a]/22[d]—1[c] displaying in the interactive television program guide at least one program listing related to at least one program; 8[a] displaying in a display screen at least one program listing relating to at least one program; 15[a] a display screen; 15[f] display in the display screen at least one program listing related to at least one program; 22[a] a display screen; 22[d] display in the display screen at least one program listing related to at least one program:**

ReplayTV 893 discloses a display screen that displays an interactive television program guide and program listings. (Tr. (Albonesi) at 1819:10-1820:16; RDX-0001C.0022-24.). As shown above in Figure 55, ReplayTV 893 discloses a "channel guide display" that is displayed "on screen." (RX-0008 (ReplayTV 893) at Fig. 5, ¶¶ 82, 46, 87; Tr. (Albonesi) at 1819:10-1820:11.). The channel guide display includes various program listings such as "ER" and "The Big Help." (Tr. (Albonesi) at 1819:25-1820:6; RX-0008 (ReplayTV 893) at Fig. 5.).

Figure 64: Comcast's Depiction of ReplayTV 893's Disclosure of Displaying a Program Listing in an Interactive Television Program Guide

ReplayTV 893 Discloses A Channel Guide Displayed On A Screen

A method for recording programs using an interactive television program guide, implemented on user television equipment, the method comprising:

displaying in a display screen at least one program listing relating to at least one program;

providing a user with an opportunity to indicate a program to be recorded from a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;

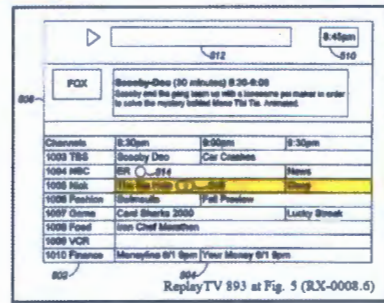
recording the program with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;

in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and

recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

585 Patent at Claim 8 (JX-0004.41)

A Menu button 452 displays a main menu from which sub-menus can be selected. A Guide button 450 causes a channel guide display to be displayed on screen, and a Display button 448 causes an on-screen display to be displayed on-screen, as described below. A Select button 256 is used to select choices in on-screen menus, as described below. A Replay Guide button 454 causes a replay menu to be displayed on-screen. *Abstract* (RX-0008.20)
 ReplayTV 893 at ¶82 (RX-0008.20)



ReplayTV 893 at Fig. 5 (RX-0008.6)

See also, e.g., ReplayTV 893 (RX-0008) at ¶¶ 46, 86-88, 91, 93-94



(RDX-0001C.0023 (introduced during the testimony of Dr. Albonesi).).

During the Hearing, Rovi's expert, Dr. Balakrishnan, did not contest that ReplayTV 893 teaches these limitations. Instead, Dr. Balakrishnan agreed that Figure 5 teaches an "interactive television program guide" that displays program listings. (Tr. (Balakrishnan) at 2114:15-19). The testimony of Dr. Albonesi, Comcast's expert, went unchallenged on cross-examination. Rovi did not rebut Dr. Albonesi's evidence in Post-Hearing Briefs. Thus, Rovi waived any argument on this issue under Ground Rule 10.1.

Based on the discussion of the evidence and arguments above, Comcast has proven by clear and convincing evidence that ReplayTV 893 satisfies limitations 1[c], 8[a], 15[a], 15[f], 22[a] and 22[d] of the '585 patent.

- e) **ReplayTV 893 Application (RX-0008) Teaches Limitations 1[d]/8[b]/15[g]/22[e]—1[d] providing the user with an opportunity to select a program listing from the at least one displayed program listing for recording on the random access digital storage device; 8[b] providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded; 15[g] provide the user with an opportunity to select a program listing from the at least one displayed program listing for recording on the random access digital storage device; and 22[e] provide a user with the opportunity to indicate a program to be recorded on the random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded:**

ReplayTV 893 provides the user with an opportunity to select a program listing for recording on a random access digital storage device. (Tr. (Albonesi) at 1820:17-1824:5, 1826:18-1828:18; RDX-0001C.0025-34.). ReplayTV 893 teaches that a user can select program listings for recording by selecting a program displayed in the guide. (RX-0008 (ReplayTV 893) ¶¶ 88, 91, 93-94, 101, 128-129, Fig. 5; Tr. (Albonesi) at 1821:2-1822:11, 1828:9-15.). ReplayTV 893 records selected programs to a hard drive, which is a “random access digital storage device.” (RX-0008 (ReplayTV 893) ¶ 105; Tr. (Albonesi) at 1827:23-1828:8.).

Figure 65: Comcast's Depiction of ReplayTV 893's Disclosure of User Selection from a Display of a Personal Channel Program for Recording

ReplayTV 893 Discloses Using The Channel Guide To Select Programs For Personal Channels

A method for recording programs using an interactive television program guide, implemented on user television equipment, the method comprising:

- displaying in a display device at least one program listing relating to at least one program;
- providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;
- providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;
- in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and
- recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

[0101] Record criteria for a personal channel can include criteria such as show title, keyword (e.g., actor, director), show category, description text, and rating. For example, a user can specify that all shows named "National Geographic" be recorded on a personal channel. A show name can be selected by entering the name of the show using real or virtual alphanumeric keys, by selecting a show from the Channel Guide grid, by selecting a show name from an alphabetized list of every known show in the channel database, or by selecting a show name from a hierarchical directory of shows. Record criteria can be combined by, for

ReplayTV 893 at ¶101 (RX-0008.22-23)

585 Patent at Claim 8 (RX-0004.41)

RDX-0001C-30



(RDX-0001C.0030 (introduced during the testimony of Dr. Albonesi).).

Rovi argued that "there is no reference to user selection of a how storage option using the remote control while the IPG is displayed." (CRBr. at 17-18, 23.). Rovi is mistaken. For starters, the asserted claims say nothing of remote controls. Additionally, as shown above in Figure 62, paragraph 108 of ReplayTV 893 explicitly states that "a user can specify that all shows named 'National Geographic' be recorded on a personal channel.

A show name can be selected by ... selecting a show from the Channel Guide grid." (RX-0008 (ReplayTV 893) ¶ 101.). Moreover, in the context of a discussion of "interface states," and, in particular, a user tuning "to a live television channel" and pressing record, paragraph ReplayTV 893 states that "after pressing the Record button 408, the digital VCR 10 (1) assigns a personal channel to the current channel; (2) saves the data that has been recorded in the rewind buffer, so that the entire show being viewed on the current channel can be recorded, and (3) changing the interface state to Recording 600d." (*Id.* at 129.). In other words,

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ReplayTV 893 explicitly discloses two ways in which a user selects a program from a guide display, such that the program is subject to personal channel “how” storage options and settings such as image quality.

Based on the discussion and evidence above, Comcast has proven by clear and convincing evidence that ReplayTV 893 satisfies limitations 1[d], 8[b], 15[g], and 22[e] of the '585 patent.

- f) **ReplayTV 893 Application (RX-0008) Teaches Limitations 1[e]/8[e]/15[b]/15[h]/22[b]/22[i]—1[e] recording the program on the random access digital storage device based on the modification of the at least one storage setting; 8[e] recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program; 15[b] a random access digital storage device; 15[h] record the program on the random access digital storage device based on the modification of the at least one storage setting; 22[b] a random access digital storage device; and 22[i] record the program on the random access digital storage device based on the modification of the at least one storage setting for the program:**

ReplayTV 893 discloses recording the program to a random access digital storage device. (Tr. (Albonesi) at 1843:4-1844:25; RDX-0001C.0051-56.). ReplayTV 893 teaches that the MPEG encoder subsystem “save[s] the program to the hard drive,” which is a “random access digital storage device.” (RX-0008 (ReplayTV 893) ¶ 74; RDX-0001C.0053; Tr. (Albonesi) at 1843:8-17.). ReplayTV 893 also discloses that, in the alternative, the digital VCR could store programs to random access memory. (Tr. (Albonesi) at 1843:18-1844:4; RX-0008 (ReplayTV 893) ¶ 143; RDX-0001C.0054.).

Additionally, ReplayTV 893 discloses the recording of personal channel programs based on the modification of a storage setting, such as recording quality in terms of megabits per second. (Tr. (Albonesi) at 1844:5-15; RX-0008 (ReplayTV 893) ¶ 74; RDX-0001C.0055; *see*

also RX-0008 (ReplayTV 893) ¶¶ 5, 51, 56-57, 60, 95-96, 102-103, 105, 108, 128-129, 145, Figs. 2-5; Tr. (Albonesi) at 1844:16-21; RDX-0001C.0054.). In the context of the “how” storage option related to recording quality and the corresponding setting of “megabits per second” at which to record, ReplayTV 893 discloses that “[t]he components of the MPEG encoder subsystem [which control ‘sav[ing] the program stream to the hard disk drive’] respond to external commands to stop and start recording, *change the recording bit rate*, change the encoding resolution, save the current stream position as a bookmark, *and respond to other user actions.*” (RX-0008 (ReplayTV 893) ¶ 74.).

Figure 66: Comcast’s Depiction of ReplayTV 893’s Disclosure of Recording a Program Based on the Modification of a “Personal Channel” Storage Setting

ReplayTV 893 Discloses Recording The Program Based On The Modification Of The At Least One Storage Setting

- ✓ A method for recording a program using an interactive television program guide implemented on user television equipment, the method comprising
- ✓ displaying in a display screen at least one program listing relating to at least one program;
- ✓ providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;
- ✓ providing the user with an opportunity to select at least one storage option for storing the program to be recorded wherein the at least one storage option relates to at least one recording setting configured to control how the program is to be digitally stored on the random access digital storage device;
- ✓ in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded, and
- ✓ recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

from the VBI, and writing data to the OMFS 350. The components of the MPEG encoder subsystem respond to external commands to stop and start recording, change the recording bit rate, change the encoding resolution, save the current stream position as a bookmark, and respond to other user actions.

ReplayTV 893 at ¶74 (RX-0008.19)

See also, e.g., ReplayTV 893 (RX-0008) at ¶¶ 5, 51, 56-57, 60, 95-96, 102-103, 105, 108, 128-129, 145; Figs. 2-5



(RDX-0001C.0055 (introduced during the testimony of Dr. Albonesi)).

During the Hearing, Rovi’s expert, Dr. Balakrishnan, did not contest that ReplayTV 893 teaches these limitations. Rovi did not rebut Dr. Albonesi’s evidence in Post-Hearing Briefs.

Thus, Rovi waived any argument on this issue under Ground Rule 10.1.

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Comcast has proven by clear and convincing evidence that ReplayTV 893 satisfies limitations 1[e], 8[e], 15[b], 15[h], 22[b], and 22[i] of the '585 patent.

Based on the discussion and evidence, Comcast has proven by clear and convincing evidence that ReplayTV 893 anticipates claims 1, 8, 15 and 22 of the '585 patent.

- g) ReplayTV 893 Application (RX-0008) Teaches the Additional Limitations Required by Claim 11 (which depends from claim 10)—10. The method of claim 8 wherein the at least one storage option is for selecting at least one video format for recording; 11. The method of claim 10 wherein the at least one video format comprises at least one of high definition television, normal television and a digital format:**

As shown below in Figure 67, ReplayTV 893 discloses a storage option for selecting “at least one video format” including “at least one of a high definition television, normal television, and a digital format” as required by claim 11. (Tr. (Albonesi) at 1845:12-1847:24; RDX-0001C.0058-63.). In the context of personal channels with “how” storage options and settings, ReplayTV 893 discloses allowing a user to specify a recording quality “e.g., megabits per second.” (RX-0008 (ReplayTV 893) ¶¶ 105, 74; Tr. (Albonesi) at 1845:17-1846:5; RDX-0001C.0059.). In addition, ReplayTV 893 teaches receiving video in NTSC, PAL, and HDTV video formats (of varying quality), and the digital VCR displaying a HDTV video output. (RX-0008 (ReplayTV 893) ¶¶ 147; Tr. (Albonesi) at 1845:17-1846:5.).⁷⁷

⁷⁷ To the extent that the order in which users select storage options and programs is relevant (which it is not according to this Initial Determination, for the reasons set forth above), ReplayTV 893 appears to disclose the selection of this record quality option after program selection. (Tr. (Albonesi) at 1846:12-1847:11; RX-0008 (ReplayTV 893) ¶¶ 93, 108; RDX-0001C.0037-43, 45.).

Figure 67: Comcast's Depiction of ReplayTV 893's Disclosure of the Opportunity of a User to Select a Video Format as a "Personal Channel" Storage Setting

ReplayTV 893 Discloses Providing The User With An Opportunity To Select The Digital Video Format Of A Recording

10. The method of claim 8 wherein the at least one storage option is for selecting at least one video format for recording.

11. The method of claim 10 wherein the at least one video format comprises at least one of high definition television, normal television and a digital format.

[0105] The user can specify the quality (in, e.g., megabits per second) at which content should be recorded on a personal channel. The user can also specify that a particular

ReplayTV 893 at ¶105 (RX-0008.23)

of the code. 124 Video can be received in NTSC, PAL, HDTV, or any other broadcast standard format. The digital VCR 10 can display video output on a high-definition television (HDTV). If the digital VCR 10 has Live output on

ReplayTV 893 at ¶147 (RX-0008.27)

from the VBI and writing data to the OMBS 350 The components of the MPEG encoder subsystem respond to external commands to stop and start recording, change the recording bit rate, change the encoding resolution, save the current stream position as a bookmark, and respond to other user actions.

ReplayTV 893 at ¶74 (RX-0008.19)

'585 Patent at Claims 10-11 (RX-0004.41) See also, e.g., ReplayTV 893 (RX-0008) at ¶¶ 30, 58, 83, 103, 108, Fig. 3

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(RDX-0001C.0059 (introduced during the testimony of Dr. Albonesi).).

During the Hearing, Rovi's expert did not contest that ReplayTV 893 teaches these limitations. Rovi did not rebut Dr. Albonesi's evidence in Post-Hearing Briefs. Thus, Rovi waived any argument on this issue under Ground Rule 10.1.

Based on the evidence and the discussion of it, Comcast has proven by clear and convincing evidence that ReplayTV 893 satisfies and therefore anticipates claim 11 of the '585 patent.⁷⁸

⁷⁸ Given the above analysis, it is apparent that the asserted claims of the '585 patent are invalid. The '585 patent was a prime candidate for withdrawal from Rovi's case in the weeks preceding the Hearing. Rovi's withdrawal of the '585 patent from the Investigation would have streamlined the Hearing and spared everyone's resources.

5. ReplayTV 338 (RX-0006) Does Not Anticipate Claims 1, 8, 15, and 22 of the '585 Patent Because ReplayTV 338 Fails To Disclose "How" Storage Options and Related Settings

Comcast asserted that, much like Replay 893, ReplayTV 338 anticipates claims 1, 8, 15, and 22 of the '585 patent.⁷⁹ (RBr. at 40.). In rebuttal, Rovi argued that "Comcast does not argue or provide any evidence that ReplayTV 338 teaches any "how" storage options—much less a how storage option being selected from an interactive television program guide." (CRBr. at 29 n.8.).

Rovi is correct. As shown below in Figure 68, Comcast identifies two (2) purportedly "how" storage options disclosed by ReplayTV 338: (1) the number of shows in a series to record; and (2) whether to record reruns or, alternately, record new episodes only. (RX-0006 (ReplayTV 338) at 4:66-5:6, 5:59-65, 3:21-26, 7:15-20; Tr. (Albonesi) at 1855:10-1857:21; RDX-0001C.0084.).

However, as explained above, "how" storage options pertain only to the particulars of actually storing a program on a digital storage device. It appears clear that, based on the prosecution history of the '585 patent, mere specification of the "what," the program to record and store, without more, does not satisfy the "setting configured to control how programs are to be digitally stored" limitation required by the claims. (CRBr. at 15 ("the '585 Patent makes an explicit distinction between what is being recorded (e.g., the program or programs to be recorded) and user-selectable storage options related to how those program(s) are digitally stored on a hard drive."); RRBBr. at 58 ("both Rovi's and Comcast's experts agreed that the 'control

⁷⁹ ReplayTV 338 is cited on the face of the '585 patent and ostensibly was considered by the examiner during prosecution of the '585 patent. (JX-0004 at 3-4 ('585 Patent) at 2-3 (listing references); JX-0010 ('585 Patent Prosecution History) at 5125-26; Tr. (Albonesi) at 1945:9-1946:9.). However, there is no mention of ReplayTV 338 in the prosecution history. (RBr. at 44 n.13.).

how' language of the claims cannot be met by the selection of what data to record").).

Here, ReplayTV 338 discloses only "what" storage options. The number of shows in a series to record pertains exclusively to "what" gets recorded, not how those shows get recorded. Likewise, whether to record reruns or only new episodes pertains exclusively to "what" gets recorded, not how those shows get recorded.

In other words, Comcast has failed to prove by clear and convincing evidence that ReplayTV 338 discloses the "how" storage option and setting limitations found in claims 1, 8, 15, and 22 of the '585 patent (and downstream limitations that refer back to "how" storage option and setting limitations).

Therefore, ReplayTV 338 does not anticipate these claims based on the present record.

Figure 68: Comcast's Depiction of ReplayTV 338's Disclosure of "How" Storage Options, Selected by a User, That Relate to a "How" Storage Settings for Recorded Programs

ReplayTV 338 Discloses Storage Options Accused Of Infringement By Rovi

- ✓ A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising
- ✓ displaying in a display screen at least one program listing relating to at least one program
- ✓ providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded

providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;

in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and

recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program

585 Patent at Claim 8 (DX-0004.41)

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(1) whether to record new episodes only;

(4) whether to store one or more episodes;

2018-07-02 Balakrishnan Opening Rpt. at ¶159

The user can also specify the priority of the show. If two shows are scheduled to be recorded at the same time, the higher priority show will take precedent. The user may specify the number of shows in a series to record (e.g., keep the most recent two shows). In addition, the user may specify whether reruns are to be recorded and whether syndicated reruns are to be recorded (e.g., record reruns, but not syndicated reruns, record all reruns, etc.).

ReplayTV 338 at 4:66-5:6 (RX-0006.11-12)

See also, e.g., ReplayTV 338 (RX-0006) at Abstract, 1:32-35, 1:37-52, 2:36-55, 4:8-18, 4:59-5:6, 5:42-6:7, 7:1-56, Figs. 1-3, 7-9



(RDX-0001C.0084 (introduced during the testimony of Dr. Albonesi)).

6. Blatter (RX-0004) Does Not Anticipate Claims 1, 8, 11, 15, and 22 of the '585 Patent Because Blatter (RX-0004) Fails to Disclose an Interactive Television Program Guide (Claims 1, 8, 11, 15, and 22) and User Selection of a Video Format (Claim 11)

Comcast asserted that Blatter anticipates claims 1, 8, 11, 15, and 22 of the '585 patent. (RBr. at 44.). In rebuttal, Rovi contended that Blatter failed to disclose an “interactive television program guide implemented on user equipment,” as required by all asserted claims, and “[e]ncryption and selection of a storage medium ... to be one of high-definition, normal television, or a digital format as required by claim 11.” (CRBr. at 37-42.). Rovi characterized Blatter as “addressed to a different problem than that addressed by the '585 Patent.” (*Id.* at 37.).

In general, Rovi’s critique of Blatter as mismatched to the '585 patent is well founded. Blatter addresses “the need to maintain encryption code security when a program is stored by a consumer in either encrypted or non-encrypted form for viewing at a later time” and “providing a system that permits billing on the storage or playback of a program and that permits copy protected processing of encrypted and non-encrypted program data.” (RX-0004 (Blatter) at 1:52-59.). By contrast, the '585 patent recognizes the limitations of “interactive program guides have been developed that allow for storage of programs selected within the program guide on an independent storage device, typically a videocassette recorder” and addresses “provid[ing] an interactive television program guide” in the context of “digital storage” to overcome those limitations. (JX-0004 ('585 patent) at 1:39-50.).

That said, Blatter appears to disclose several limitations of the asserted claims. For example, as shown below in Figure 69, Blatter teaches “[a] video receiver *user selects* the program he wishes to view, the programs he wishes to store, the type of storage media used and whether the programs are to be stored in encrypted or non-encrypted form *by on-screen menu*

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selection using remote control unit 125” and that “the invention appl[ies] to any system using an MPEG or non-MPEG compatible *electronic program guide* for conveying any of the information described herein.” (RX-0004 (Blatter) at 3:25-29, 14:47-50.). Blatter also appears to disclose storage settings that corresponded to the “how” storage, user-selectable option of whether to encrypt stored programs: “user generated data (SP, SM, SE) identifying the programs a user wishes to store, as well as those programs that are to be stored in encrypted form, and 65 the media and device to be used for storage, is input to controller 115 (FIG. 1). A user may select encrypted storage in preference to non-encrypted storage” (*Id.* at 8:62-66.). Blatter also teaches that “storage unit 90 may be any type of storage unit,” including “a solid state or nonlinear type device for storing data in RAM or on a nonlinear medium.” (*Id.* at 12:35-38.).

However, Blatter fails to disclose by clear and convincing evidence at least two (2) limitations found in the asserted claims.⁸⁰ First, while Blatter appears to disclose, in cursory fashion, an “interactive television program guide” of sorts, there is no clear and convincing evidence from Blatter that the guide is “an application” or “implemented, at least in part, at a user site on television equipment for receiving and processing television program listings and program data,” as required by the *Markman* Order.

As shown below in Figure 69, Comcast argued that Figure 1 of Blatter and associated text disclose these limitations. However, while Figure 1 teaches “a video receiver system ... for

⁸⁰ Rovi also argued that “Blatter only talk[s] about program-specific actions,” whereas asserted claims 1 and 15 require selection of a “global” storage option before selection of a program to record. (CRBr. at 41; RX-0004 at 7 (Blatter) at 3:25-28 (“A video receiver user selects the program he wishes to view, the programs he wishes to store . . . and whether the programs are to be stored in encrypted or non-encrypted form.”)). In other words, in Blatter, “choosing whether to store the program in encrypted or non-encrypted form is only done following selection of the program.” (CRBr. at 41 (citing RX-0004 at 2-3, 6-7 at Figs. 1-2 & 2:66-3:12; 3:14-32.). This required “order of steps” argument was already rejected above.

adaptively generating a program representative datastream in user selectable, encrypted or nonencrypted form,” neither Figure 1 nor text describing Figure 1 addresses whether the above-mentioned “guide” or “on-screen menu” in Blatter is implemented as an application or, in part, “at a user site on television equipment”

By contrast, Figure 3 of the clearly anticipatory ReplayTV 893 reference clearly discloses an “interactive television program guide” application running on a “digital VCR” in a user’s home. (RX-0008 (ReplayTV 893) at Fig. 3, ¶ 19 (“The digital VCR 10 includes a modem 148 (FIG. 2) (RC336ACFA) which is connected to a telephone line 20 and which may be used to send and receive information about upcoming television shows and other information, as described in more detail below.”).).

Figure 69: Comcast’s Depiction of ReplayTV 338’s Alleged Disclosure of the Claimed Interactive Television Program Guide

Blatter Discloses An On-Screen Menu (Program Guide) For Selecting Programs To Record

8. A method for recording programs using an interactive television program guide implemented on user television equipment, the method comprising:

displaying in a display screen at least one program listing relating to at least one program;

providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;

providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;

in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and

recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

585 Patent at Claim 8 (RX-0004.41)

100111 A video receiver user selects the program he wishes to view, the programs he wishes to store, the type of storage media used and whether the programs are to be stored in encrypted or non-encrypted form by on-screen menu selection using remote control unit 125. System 25 also provides a mechanism for permitting real time or non-real time removal of encryption codes from a non-encrypted program datastream.

Blatter at 3:25-32 (RX-0004.7)

100112 In addition, the principles of the invention apply to any system using an MPEG or non-MPEG compatible electronic program guide for conveying any of the information described herein as being conveyed in MPEG PSI tables. The invention principles are not restricted to program guides or PSI conveyed in MPEG compatible PSI tables.

Blatter at 14:47-52 (RX-0004.12)

001-0014-100

COMCAST

Blatter Discloses An Application Running On Circuitry For Generating Program Information On The Video Receiver System

8. A method for recording programs using an interactive television program guide implemented on user selectable equipment, the method comprising:

displaying in a display screen at least one program listing relating to at least one program;

providing a user with an opportunity to indicate a program to be recorded on a random access digital storage device by selecting a program listing from the at least one displayed program listing, wherein the selected program listing corresponds to the program to be recorded;

providing the user with an opportunity to select at least one storage option for storing the program to be recorded, wherein the at least one storage option relates to at least one storage setting configured to control how the program is to be digitally stored on the random access digital storage device;

in response to receiving the user selection of the at least one storage option, modifying the at least one storage setting for the program to be recorded; and

recording the program on the random access digital storage device based on the modification of the at least one storage setting for the program.

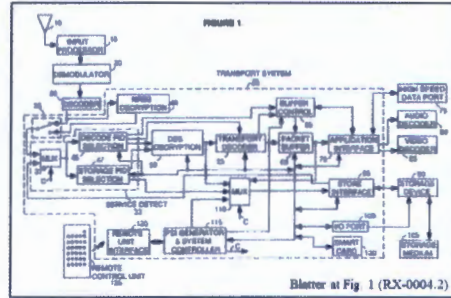


FIG. 1 shows a video receiver system, according to the invention, for adaptively generating a program representative datastream in user selectable, encrypted or non-encrypted form.

Blatter at 2:52-55 (RX-0004.6)

See also, e.g., Blatter (RX-0004) at 1:14-31, 2:66-3:12, 3:14-50, 4:14-43, 8:8-17, 8:62-9:17, 12:40-44, 12:49-67, 14:40-52, Figs. 1-3

585 Patent at Claim 8 (JX-0004.41)

RDX-0001C.107



(RDX-0001C.0103, 107 (introduced during the testimony of Dr. Albonesi).)

Blatter also fails to disclose the limitation of claim 11 because encryption is not a “video format.” Claim 11 requires “one storage option [] for selecting at least one video format” and “at least one video format comprises at least one of high definition television, normal television and a digital format.” (JX-0004 (‘585 patent) at cls. 10-11.). The ’585 patent teaches that a “user may also set ... video formats for playback” and that “[t]he program guide will either store all of the supplied video formats and languages, or store only the variant that matches the current viewer profile preferences.” (Id. at 9:27-29, 16:1-2.). The ’585 patent does not mention security or encryption and appears to distinguish “video format” from encryption by presenting the former in terms of something that affects “playback” and can be specified by a user with an interactive television program guide. In the context of the ’585 patent, it seems farfetched that user would use a guide to select a particular type of encryption for storage and “playback.”

Therefore, Blatter does not anticipate claims 1, 8, 11, 15, and 22 of the ’585 patent.

7. Claims 1, 8, 11, 15, and 22 Are Not Obvious In View of ReplayTV 893, ReplayTV 338, or Blatter, Individually

Comcast took the “six ways from Sunday” approach to invalidate the asserted claims of the ’585 patent by raising no fewer than seven (7) invalidity theories. It is apparent from the analysis above that Comcast could have reached its desired invalidity result with far fewer invalidity theories. It should have focused on anticipation by ReplayTV 893.

The plethora of remaining invalidity theories, while potentially understandable from a strategic or client relations perspective, did little for Comcast’s invalidity case here and, frankly, risked wasting precious resources.⁸¹ Each of Comcast’s obviousness theories is addressed below.

a) ReplayTV 893 Application (RX-0008) and ReplayTV 338 (RX-0006) Do Not Individually Render Obvious Claims 1, 8, 11, 15, and 22 of the ’585 Patent

Assuming *arguendo* that ReplayTV 893 does not anticipate the asserted claims, Comcast asserted that ReplayTV 893 at least renders these claims obvious. (RBr. at 49.). According to Comcast, “ReplayTV 893 discloses each of the limitations of the asserted claims individually, and all that would be necessary is to combine adjacent disclosures of the user specified storage options for personal channels and the interactive television program guide.” (*Id.*). Comcast asserted that the same is true for ReplayTV 338. (*Id.* at 51.).

As an initial matter, Comcast is incorrect to assert that ReplayTV 893 and ReplayTV 338 each disclose every limitation of the asserted claims. As discussed above, ReplayTV 893 does disclose every limitation of the asserted claims. That is a foundational requirement for the

⁸¹ Parties in every 337 investigation before the Commission are encouraged to trim their cases as much as possible prior to the evidentiary hearing.

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finding above that ReplayTV 893 anticipates the asserted claims. However, as discussed above, ReplayTV 338 does not disclose every limitation of the asserted claims. Instead, based on the evidentiary record, ReplayTV 338 fails to disclose selection of a “how” storage option, as construed in this Initial Determination. Nowhere does Dr. Albonesi opine that ReplayTV 338 renders the asserted claims obvious notwithstanding this critical “how” storage omission.

In addition to raising this omission, Rovi contended that Comcast’s obviousness argument fails due to lack of proof. (CRBr. at 32-37.). Rovi argued that Comcast’s expert, Dr. Albonesi, never explicitly disclosed in his expert report: (1) an argument (for obviousness or anticipation) that addressed the purported difference in scope between claims 1 and 15 (global storage options) and claims 8 and 22 (program specific options); and (2) an argument that it would be obvious to one of skill in the art to use the IPG in either ReplayTV 893 or ReplayTV 338 in isolation (not in combination) to select “how” storage options. (*Id.*).

Against this backdrop, only one of Rovi’s failure of proof arguments is compelling. Rovi’s first failure of proof argument fails. As explained in Order No. 49, in his expert report, Dr. Albonesi recognized Rovi’s contention “that there is a distinction in any of the claims with respect to ‘global’ and ‘local’ configuration of storage settings,” while stating his opinion that the distinction was inconsequential. Dr. Albonesi also cited to sections of ReplayTV 893 and ReplayTV 338 that satisfied Rovi’s “order of operations” requirements (rejected above) for global and local storage settings (first select program and then select setting, or vice versa). That put Rovi on notice that Dr. Albonesi might testify during the Hearing about how the ReplayTV reference discloses program selection and storage setting limitations of the asserted claims even under Rovi’s narrow and faulty interpretation of the order in which those limitations occur.

However, Rovi’s second failure of proof argument is legitimate. Nowhere in Dr.

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Albonesi's expert report is there an adequate disclosure of an argument that a person of ordinary skill in the art would find it obvious to use the IPG in ReplayTV 893 to select "how" storage options. Dr. Albonesi nevertheless testified during the Hearing that "one of skill in the art would understand" that "you could use the grid guide to select programs for recording to personal channels." (Tr. (Albonesi) at 1826:18-1827:4.). That testimony and associated demonstratives are waived and not considered here pursuant to Ground Rule 9.5.6.

Lastly, Dr. Albonesi did not specifically testify to a motivation to combine disclosures within ReplayTV 893 or ReplayTV 338 to render the asserted claims obvious. "Whether a rejection is based on combining disclosures from multiple references, combining multiple embodiments from a single reference, or selecting from large lists of elements in a single reference, there must be a motivation to make the combination and a reasonable expectation that such a combination would be successful, otherwise a skilled artisan would not arrive at the claimed combination." *In re Stepan Co.*, 868 F.3d 1342, 1346 n.1 (Fed. Cir. 2017).

In sum, Comcast failed to satisfy its burden of proving by clear and convincing evidence that ReplayTV 893 or ReplayTV 338 separately render the asserted claims obvious. More is needed in terms of evidence with respect to what a person of ordinary skill in the art would find obvious, particularly motivation to combine features within a single prior art reference and likelihood of success in making any such combination.

b) Blatter (RX-0004) Does Not Render Obvious Claims 1, 8, 11, 15, and 22 of the '585 Patent

Comcast next asserted that Blatter, standing alone, renders the asserted claims obvious. According to Comcast, "storage options for multiple programs [specified before program selection] would have been immediately apparent or obvious in view of the disclosures in Blatter

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because there are only a limited number of possible arrangements for providing the opportunity to select storage options, there are no technical barriers to selecting an option for multiple programs before selecting a program, and such an arrangement would have known benefits including that the option could be applied to multiple programs in advance.” (RBr. at 51 (citing Tr. (Albonesi) at 1876:3-1879:4; 1873:24-1875:11; RDX-0001C.0128-130).). However, as Rovi noted, “Comcast’s argument puts the cart before the horse ... Blatter does not disclose an IPG.”

Rovi is correct. Comcast failed to offer evidence that a person of ordinary skill in the art would find the asserted claims obvious in the event that Blatter failed to disclose an IPG. (RBr. at 51.). Moreover, as Rovi explained, Comcast failed to offer evidence with respect to motivation to combine features within Blatter and likelihood of success in making any such combination. (CRBr. at 42-43.). Thus, Comcast has failed to meet its burden of proving by clear and convincing evidence that Blatter renders obvious the asserted claims.

8. The Combination of ReplayTV 893 Application (RX-0008) and ReplayTV338 (RX-0006) Renders Obvious Claims 1, 8, 11, 15, and 22 of the '585 Patent

Comcast next argued that ReplayTV 893 in combination with ReplayTV 338 renders obvious asserted claims 1, 8, 11, 15, and 22 of the '585 patent. (RBr. at 51-52 (ReplayTV 338 “expressly discloses that users can select ‘recording criteria’ through the ‘user interface’” of the IPG and a “personal channel function’ that sets up a personal channel by ‘selecting a show from the channel guide.’”) (citing RX-0006 (ReplayTV 338) at 3:22-23, 7:17-20; Tr. (Albonesi) at 1879:5-1880:25).). According to Rovi, Comcast’s obviousness combination fails due to the “rudimentary and limited nature of software program IPGs in September 1998 and the corresponding lack of proof from Comcast that user selection of storage options from the IPG was conventional, routine, or otherwise expected.” (CRBr. at 34.).

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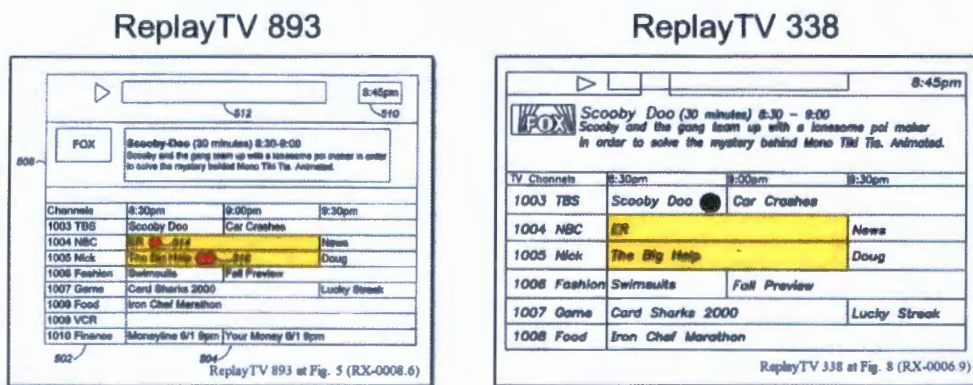
Rovi mischaracterized the record and failed to acknowledge Comcast's strong evidence that, together, ReplayTV 893 and ReplayTV 338 disclose all the elements of the asserted claims. As explained above, ReplayTV 893 and ReplayTV 338 do not erect a firewall between the IPG and the use of personal channels. Instead, the two appear integrated, giving rise to only a glimmer of doubt at best with respect to whether users employ the IPG to select storage settings for programs recorded on personal channels. To the extent ReplayTV 893 falters in terms of an unambiguous disclosure of user selection of personal channel "how" storage options within the IPG, ReplayTV 338 (which focuses on personal channels) discloses using the IPG to "set up" a personal channel by selecting a show from the IPG. (RX-0006 (ReplayTV 338) at 3:22-23, 7:17-20.). In terms of Rovi's purportedly required and different "order of steps" for global versus single program storage options, selecting options both before and after selecting programs for recording is disclosed in the two ReplayTV references. (Tr. (Albonesi) at 1874:25-1875:11, 1876:3-1879:4.). Also, as Dr. Albonesi explained, it would have been obvious to take teachings from one Replay TV reference and apply them to the other Replay TV reference. (*Id.*).

Comcast offered clear and convincing evidence of motivation to combine ReplayTV 893 and ReplayTV 338 and the likelihood of success of doing so. Dr. Albonesi testified that a person of ordinary skill in the art would have been motivated to combine ReplayTV 893 and ReplayTV 338 because the references are essentially siblings. (RDX-0001C.0134-139; Tr. (Albonesi) at 1881:21-1883:7.). They have "numerous overlapping inventors, were filed four days apart by the same company, and describe[] inventions that were intended for the same product with the same software and hardware." (RBr. at 52.). Dr. Albonesi also testified that a person of ordinary skill would have been able to combine these references with a reasonable expectation of success. (Tr. (Albonesi) at 1183:8-13.).

Rovi failed to offer compelling rebuttal evidence. In rebuttal, Dr. Balakrishnan testified about what “the authors or writers” of the “ReplayTV references” had or had not contemplated and opined that selecting “how” storage options “through an IPG would not have been well known, because that did not exist prior to that time frame.” (Tr. (Balakrishnan) at 2095:1-2096:14.). However, this testimony is of limited value because it omits a nuanced analysis of what each ReplayTV reference discloses and what a person of ordinary skill in the art would have or have not found obvious based on a combination of the ReplayTV references.

Figure 70: Comcast’s Depiction of Motivation to Combine the ReplayTV References

**Motivations To Combine ReplayTV 338 and ReplayTV 893:
Same Guide**



RDX-0001C 137 COMCAST

(RDX-0001C at 137 (introduced during the testimony of Dr. Albonesi); see also id. at 133-40.).

In short, Comcast met its burden of providing clear and convincing evidence that ReplayTV 893 and ReplayTV 338 collectively disclose all the elements of the asserted claims of the '585 patent and that a person of ordinary skill in the art would have been motivated to combine ReplayTV 893 and ReplayTV 338.

9. Secondary Considerations Support an Obviousness Finding

With respect to secondary considerations of non-obviousness, Rovi bore the burden of production. *ZUP, LLC v. Nash Mfg., Inc.*, 896 F.3d 1365, 1373 (Fed. Cir. 2018). Rovi failed to meet that burden. Rovi did not produce any evidence of secondary considerations of non-obviousness.

Figure 71: Comcast's Depiction of Secondary Considerations

Secondary Considerations

Obviousness

- ✓ Contemporaneous invention by others
- ✓ Technology or market changes

RDX-0001C-142



(RDX-0001C.0142 (introduced during the testimony of Dr. Albonesi).).

On the other hand, Comcast adduced some secondary consideration evidence in support of a finding that the asserted claims are obvious. With respect to technology or market changes, Dr. Albonesi testified that combining an “electronic program guide with digital storage” as described in the ’585 patent was driven by the density and reduced the cost of digital storage devices, and was not the product of any leap of inventiveness made by the inventors of the ’585 patent. (Tr. (Albonesi) at 1886:11-1887:13.). With respect to the contemporaneous “invention” by others, Dr. Albonesi testified that the ReplayTV inventors and others arrived at the same

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alleged invention prior to and contemporaneous with the filing of the '585 patent. (Tr. (Albonesi) at 1886:11-1887:13; *see also Geo. M. Martin Co. v. All. Mach. Sys. Int'l LLC*, 618 F.3d 1294, 1305 (Fed. Cir. 2010) (“Independently made, simultaneous inventions, made ‘within a comparatively short space of time,’ are persuasive evidence that the claimed apparatus ‘was the product only of ordinary mechanical or engineering skill’”) (citations omitted).

Dr. Albonesi’s testimony stands uncontested. An analysis of the evidentiary record on secondary considerations supports the finding that the asserted claims of the '585 patent are invalid in general and, in particular for our purposes here, as obvious.

Based on the above, the asserted claims of the '585 patent are obvious in light of ReplayTV 893 in combination with ReplayTV 338. The asserted claims are also anticipated by ReplayTV 893 as discussed above. However, in the event that the Commission reverses this anticipation finding on review, Comcast has proven obviousness as a second ground for invalidation of the asserted claims of the '585 patent.

IX. U.S. PATENT NO. 9,369,741

A. Literal Infringement

1. Infringement Overview

Rovi asserted that the Accused 741 Products satisfy each limitation of method or system claims 1, 8, or 14⁸² of the '741 patent. (CBr. at 65-66.). As shown below in Table No. 11, Comcast disputed whether, when operating in the X1 System, the Accused 741 Products satisfy only one limitation found in the asserted claims. (RRBr. at 56.). Comcast argued that the asserted claims require the display of an “indication ... after a specified time after the start time” of a program where the specified time is “configured prior to the start time” and that “Comcast’s

⁸² Claim 14 depends from independent claim 8.

accused ‘indications’ appear when a user happens to press a particular button, not at a specific preconfigured time.” (*Id.* at 77.). According to Comcast, “[n]either the time of the user’s button press, nor the miniscule and variable amount of time the system takes to process it, is a ‘specified time’ that is ‘configured prior to the start time.’” (*Id.*).

As explained below, Comcast is correct. Rovi has not met its burden of proving by a preponderance of the evidence that the Accused 741 Products satisfy the asserted claims.

Table No. 11: Disputed Terms for Infringement of Claims 1, 8, and 14 of the ’741 Patent

Element	Limitation	Resolution
1[e]	“based on determining that the archived copy is available to the user after the start time, cause an indication corresponding to the archived copy to be displayed simultaneously with the video <i>after a specified time</i> after the start time but before the end time, wherein the specified time was configured prior to the start time;”	<p>Rovi failed to satisfy its burden of proof.</p> <p>The variable, elapsed time taken by Comcast’s X1 System to process a user action (which triggers the display of a restart indicator) is not “a specified time” “configured prior to the start time” as required by claims 1 and 8.</p>
8[c]	“based on the determining, causing an indication corresponding to the archived copy to be displayed simultaneously with the video <i>after a specified time</i> after the start time, but before the end time, wherein the specified time was configured prior to the start time;”	

(CBr. at 67-70; RRBr. at 77-89; JX-0006 at cls. 1, 8.).

Rovi also contended, without citation to legal authority, that Comcast directly infringes the asserted claims. (CBr. at 65.). Notwithstanding that these claims cover methods and a system, Rovi nonetheless argued that “Comcast directly infringes [them] by importing the ’741 Patent Accused Products” and “by selling the Accused Products after importation.” (*Id.*).

Appearing to conflate direct and indirect infringement, Rovi also asserted that

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“[c]ustomer use of the claimed ‘Restart’ or ‘Start Over’ functionality is also evidence of Comcast’s use of the claim 1 system and performance of each and every step of claims 8 and 14.” (*Id.*). Comcast did not appear to address Rovi’s contentions that Comcast directly infringed the asserted claims of the ’741 patent. (RRBr. at 77-93.). Nevertheless, as explained below, Rovi has not met its burden of proving by a preponderance of the evidence that Comcast has directly infringed the asserted claims.

Rovi next argued that Comcast indirectly infringed the asserted claims by inducing customers to infringe them. (CBr. at 81-85.). In rebuttal, Comcast asserted that it does not indirectly infringe the asserted claims. (RRBr. at 90-92.). According to Comcast, “Rovi has adduced no evidence that any customer performs each and every step of the claimed methods.” (*Id.* at 90.). Comcast contended that a single entity must perform all steps of an asserted method claim, which Comcast argued cannot happen here because a number of steps are performed not by users, but instead by Comcast’s servers. (*Id.*). As for the remaining asserted system claim, Comcast asserted that its customers cannot control the accused Comcast system (especially its server-based operations) as required by law to show direct infringement. (*Id.* at 91.).

Comcast also argued that it did not possess the requisite specific intent to induce infringement because it removed one of the three (3) accused embodiments of the X1 System (“Restart Reminder notification”) within 24 hours of Rovi filing its Complaint in this Investigation. (*Id.* at 91-92.). Without citation to legal authority, Comcast stated that “this was the only feature Rovi accused prior to this investigation, and thus the only feature on which its allegations of inducement may be based.” (*Id.* at 92.).

As explained below, Rovi has not met its burden of proving by a preponderance of the evidence that Comcast indirectly infringed those claims.

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2. Relevant Claim Terms

The Private Parties agreed to the following construction of one of the claim terms recited in one of the asserted claims of the '741 patent, which this Court has adopted. (*See Markman Order*, App. A at 35.).

Table No. 12: Construction of Agreed Upon Claim Term Relevant to the '741 Patent

Claim Term	Adopted Construction
“storage circuitry for storing archived copies of videos” (Claim 1)	“a circuit or system of circuits for storing archived copies of videos”

This Court construed the following constructions of the disputed claim terms.⁸³
(*Markman Order*, App. A at 36-52.).

Table No. 13: Constructions of the Disputed Claim Terms Relevant to the '741 Patent

Claim Term	Adopted Construction
“archived copy” / “archived copies” (Claims 1, 8, and 14)	“a real or virtual copy of a program retained by the system / real or virtual copies of programs retained by the system”
“specified time” (Claims 1 and 8)	“a specific duration of time or at a clock time”
“a specified time after the start time but before the end time” (Claims 1 and 8)	“a specified duration of time or at a clock time that falls after the start time but before the end time”
“configured prior to the start time”	“set prior to the start time”

⁸³ The Private Parties disputed the meaning of additional claim terms recited in claims that have been terminated from this Investigation. Those terms are not included in Table No. 13.

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Claim Term	Adopted Construction
(Claims 1 and 8)	
“control circuitry configured to” “control circuitry” in context of “control circuitry configured to:” (Claim 1)	“a processor or processors [configured to]”

3. The Accused 741 Products Do Not Practice Claims 1, 8, and 14 of the '741 Patent

As an initial matter, Rovi asserted that no fewer than three (3) “embodiments” of Comcast’s X1 System satisfy the asserted claims. As shown below, these “embodiments” are: (i) Grid Guide (Figure 72); (ii) Mini Info Overlay (Figure 73); and (iii) Restart Reminder (Figure 74). (Tr. (Balakrishnan) at 1051:25-1052:11 (Grid Guide), 1054:17-1055:17 (Mini Info Overlay), 1056:16-1057:8 (Restart Reminder).). According to Rovi, each of these embodiments separately and independently infringes the asserted claims. (CDX-0006C.0334-40.).

To clarify, two (2) of these three (3) embodiments remain in the X1 System, while one embodiment has been removed by Comcast. The “Grid Guide” (Figure 72 below) and “Mini Info Overlay” (Figure 73 below) “embodiments” remain in the X1 System, and Comcast disputes whether these “embodiments” satisfy the asserted claims. (Tr. (David Karger)⁸⁴ at 1514:25-


⁸⁴ When he testified during the Hearing on October 23, 2018, Dr. David Karger was a professor at the Massachusetts Institute of Technology. (Tr. (Karger) at 1505:1-2.). Comcast identified Dr. Karger as “an expert in the field of computer science, which includes digital video receivers and related hardware and software components.” (RPSSt. at 2.). According to Comcast, “Dr. Karger is expected to testify regarding matters relating to, at least, the technical background of the Asserted Patents; the interpretation of the claims in those patents; issues relating to the alleged infringement of the Asserted Patents by the accused products and Comcast’s design alternatives, the design, structure, function, and operation of the accused products and Comcast’s design alternatives; issues relating to the validity of the Asserted Patents; issues

1515:6 (specifically constraining non-infringement opinion to “Comcast’s mini info screen and grid guide restart features”).

Figure 72: Rovi’s Depiction of the “Grid Guide” Embodiment

'741 Patent, Claim 1[d]: Comcast's X1 System Accesses a Database

Claim 1[d]
access a database to determine whether an archived copy corresponding to the video is available to a user after the start time



CX-1052C.2 (XG1v1); see also e.g., CX-1064C.2 (XG2v2); CX-1069C.2 (XiD); CX-1132C (XG1v1 Video); CX-1137C (XG1v3 Video); CX-1149C (XG2v2 Video); CX-1155C (XiD Video)

Contains Confidential Business Information Subject to Protective Order CDX-0006C.335

(CDX-0006C.0335 (introduced during the testimony of Dr. Balakrishnan)).

relating to whether the Rovi DI products practice the Asserted Patents and, relatedly, whether Rovi satisfies the technical prong of the domestic industry for the Asserted Patents; other issues in connection with the alleged infringement, validity, enforceability, and any other technical issue that may arise with respect to the Asserted Patents. Dr. Karger may also be called to rebut the testimony of Complainant’s experts or fact witnesses, should any be presented, regarding any of the areas described above.” (*Id.*).

Figure 73: Rovi's Depiction of the "Mini Info Overlay" Embodiment

'741 Patent, Claim 1[d]: Comcast's X1 System Accesses a Database

Claim 1[d]

access a database to determine whether an archived copy corresponding to the video is available to a user after the start time



CX-1052C.4 (XG1v1); see also CX-1064C.4 (XG2v2); CX-1069C.5 (XID)

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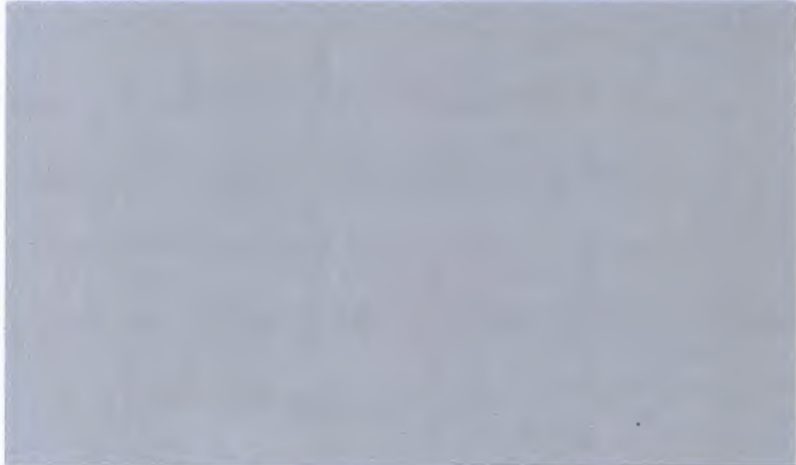
CDX-0006C.337

(CDX-0006C.0337 (introduced during the testimony of Dr. Balakrishnan)).

However, shortly after Rovi filed its Complaint in this Investigation, Comcast removed the "Restart Reminder" embodiment (Figure 74 below) from the X1 System. (RRBr. at 91-92.). Rovi nevertheless argued that "Comcast presented no evidence disputing Rovi's ... showing that this embodiment infringes" the asserted claims. (CBr. at 68.). Although Comcast has removed the "Restart Reminder" embodiment, Rovi seeks remedies directed at this embodiment. (*Id.*). (CDX-0006C.0337 (introduced during the testimony of Dr. Balakrishnan)).

Figure 74: Rovi's Depiction of the "Restart Reminder" Embodiment

'741 Patent, Claim 1[d]: Comcast's X1 System Accesses a Database

Claim 1[d]	
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access a database to determine whether an archived copy corresponding to the video is available to a user after the start time

CX-815C.71 (Comcast X1 [redacted]); see also CX-815C.72-73

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CDX-0006C.338

(CDX-0006C.0338 (introduced during the testimony of Dr. Balakrishnan)).

a) Claim 1

i. Preamble: "A system comprising"

The preamble of claim 1 is not limiting. The preamble defines claim 1 as a system claim.

(Tr. (Balakrishnan) at 1039:21-1040:4.).

ii. 1[a]: "storage circuitry for storing archived copies of videos"

The Accused 741 Products satisfy this limitation. By agreement of the parties, this phrase means "a circuit or system of circuits for storing archived copies of videos." (*Markman* Order at 35.). The *Markman* Order construed "archived copies" to mean "real or virtual copies of programs retained by the system." (*Id.* at 36.). Rovi's expert, Dr. Balakrishnan, testified that Comcast's X1 system [redacted]. (Tr. (Balakrishnan) at 1040:25-1041:19; CDX-0006C.0318-21.). According to Dr. Balakrishnan, [redacted]

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[REDACTED]
[REDACTED] (Tr. (Balakrishnan) at 1042:7-10; CX-0815C.0069
([REDACTED]⁸⁵ Overview); CX-0440C.0192 ([REDACTED] Features)). Copies of programs retained by the
system [REDACTED]
[REDACTED]⁸⁶ (Tr. (Balakrishnan) at 1043:12-1045:5).

In its Post-Hearing briefs, Comcast did not present any argument in rebuttal and thus has waived any such argument pursuant to Ground Rule 10.1.

Thus, Rovi has proven by a preponderance of the evidence that the Accused 741 Products satisfy limitation 1[a] of the '741 patent.

iii. *1[b]: "control circuitry configured to"*

The Accused 741 Products satisfy this limitation. The *Markman* Order construed "control circuitry configured to" to mean "a processor or processors configured to." (*Markman* Order at 45.). There is no dispute that the Accused 741 Products include [REDACTED]
[REDACTED] (Tr. (Balakrishnan) at 1045:20-1046:12 (identifying [REDACTED]
[REDACTED]); CDX-0006C.0324-325.). Dr. Balakrishnan testified that [REDACTED]
[REDACTED] (Tr. (Balakrishnan)
at 1045:20-1046:12.).

In its post-hearing briefs, Comcast did not present any argument in rebuttal and thus has waived any such argument pursuant to Ground Rule 10.1.

⁸⁵ The acronym [REDACTED] (CBr. at iv.).

⁸⁶ According to Dr. Balakrishnan, [REDACTED]
[REDACTED] (Tr.
(Balakrishnan) at 1045:1-5).


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Thus, Rovi has proven by a preponderance of the evidence that the Accused 741 Products satisfy limitation 1[b] of the '741 patent.

- iv. **1[c]: “transmit a video to a plurality of user equipment, wherein the transmitting begins at a start time and ends at an end time”**

The Accused 741 Products satisfy this limitation. As shown below in Figure 75, the Accused Products include [REDACTED] [REDACTED] (Tr. (Balakrishnan) at 1047:14-1048:13; CDX-0006C.0329-31; CX-1052C.0004; CX-1064C.0004; CX-1069C.0005.). Dr. Balakrishnan testified that [REDACTED] (Tr. (Balakrishnan) at 1048:14-1050:14 (describing [REDACTED] [REDACTED]; CDX-0006C.0330.)).

Figure 75: Rovi’s Depiction of the X1 System Transmitting Video

'741 Patent, Claim 1[c]: Comcast’s X1 System Transmits Video	
<p>Claim 1[c] transmit a video to a plurality of user equipment, wherein the transmitting begins at a start time and ends at an end time;</p>	<p>Video: “Southern Charm”</p> <p>Scheduled start time: 5:00p</p> <p>Scheduled end time: 6:00p</p>  <p>CX-1052C.4 (XG1v1); see also CX-1064C.4 (XG2v2); CX-1069C.5 (XID)</p>

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(CDX-0006C.0329 (introduced during the testimony of Dr. Balakrishnan)).

In its post-hearing briefs, Comcast did not present any argument in rebuttal and thus has waived any such argument pursuant to Ground Rule 10.1.

Thus, Rovi has proven by a preponderance of the evidence that the Accused 741 Products satisfy limitation 1[c] of the '741 patent.

- v. ***1[d]: “access a database to determine whether an archived copy corresponding to the video is available to a user after the start time”***

The Accused 741 Products satisfy this limitation. This is true for each of the three embodiments identified by Dr. Balakrishnan: (1) Grid Guide; (2) Mini Info Overlay; and (3) Restart Reminder. (Tr. (Balakrishnan) at 1051:25-1052:11 (Grid Guide), 1054:17-1055:17 (Mini Info Overlay), 1056:16-1057:8 (Restart Reminder)). The Accused 741 Products include [redacted]

[redacted]. (*Id.* at 1058:17-19 [redacted]
[redacted]). Control circuitry includes
[redacted]. (*Id.* at 1058:18-24).

With respect to the “Grid Guide” embodiment, shown in Figure 72, above, [redacted]
[redacted] (Tr. (Balakrishnan) at
1055:15-17; *see also id.* at 1051:25-1052:25 (discussing CX-1052C.0002), 1053:18-1054:16
(discussing CX-1052C.0001), 1054:5-16; CDX-0006C.0335-336). Dr. Balakrishnan testified
that [redacted]
[redacted]
[redacted]. (Tr. (Balakrishnan) at 1058:11-24).

With respect to the “Mini Info Overlay” embodiment, shown in Figure 73, above, Dr.
Balakrishnan testified that [redacted]

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[REDACTED] (*Id.* at 1055:24-1056:3.). The STB processors [REDACTED]

[REDACTED]. (*Id.* at 1058:11-24.). Restart indications on the Comcast STB's display of the "Mini Info Overlay," depicted in Figure 73, above, reflect the availability to the Comcast customer of the archived copy. (*Id.* at 1054:17-1056:15; CX-1052C.0004; CDX-0006C.0337.).

Finally, with respect to the "Restart Reminder" embodiment, depicted in Figure 74, above, the STB processors [REDACTED]

[REDACTED]. (*Id.* at 1058:11-24.). This process occurs when a user tunes to a channel. (Tr. (Balakrishnan) at 1056:16-1058:10; CX-0815C.0071-73 ([REDACTED] Overview)

[REDACTED]).).

In its post-hearing briefs, Comcast did not present any argument in rebuttal and thus has waived any such argument pursuant to Ground Rule 10.1.

Thus, Rovi has proven by a preponderance of the evidence that the Accused 741 Products satisfy limitation 1[d] of the '741 patent.

- vi. *1[e]: "based on determining that the archived copy is available to the user after the start time, cause an indication corresponding to the archived copy to be displayed simultaneously with the video after a specified time after the start time but before the end time, wherein the specified time was configured prior to the start time"*

There is no dispute that the Accused 741 Products satisfy the first part of limitation 1[e].

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(Tr. (Balakrishnan) at 1061:6-1063:14 (Mini Info Overlay), 1069:25-1072:15 (Grid Guide), 1075:7-24 (Restart Reminder).). Processors within each of the Accused 741 Products,

. (*Id.* at 1076:14-21.). Simultaneously with the video of interest, each of the three accused embodiments display restart indicators corresponding to the availability of an archived copy, as shown in Figures 72-74 above. In each of Comcast's X1 System embodiments at issue here, the indicator is labeled "Restart." (CDX-0006C.0334-40.).

In its post-hearing briefs, Comcast did not present any argument in rebuttal and thus has waived any such argument pursuant to Ground Rule 10.1.

Thus, Rovi has proven by a preponderance of the evidence that the Accused 741 Products satisfy the first half of limitation 1[e] of the '741 patent.

As for the second half of the 1[e] limitation, the main dispute between the Parties is whether the indication is "displayed after a specified time after the start time but before the end time, wherein the specified time was configured prior to the start time." (Tr. (Karger) at 1513:24-1514:3.).

As discussed below, the evidence suggests that Rovi should not have asserted claim 1 (or claims 8 or 14, for that matter) against Comcast's X1 System. This is because it is clear that the Mini Info Overlay, Grid Guide, and Restart Reminder⁸⁷ embodiments do not cause an archived

⁸⁷ Rovi made no mention of the Restart Reminder embodiment in its Pre-Hearing Brief in the context of limitation 1[e] or 8[c]. By contrast, Rovi explicitly cited to the Grid Guide and Mini Info Overlay embodiments with respect to each of these limitations. (*See* CPBr. at 76 (citing CX-1052C.0004 (X11M-741-1-14 Screenshots) and CX-1132C (X11M-741-v1 (MVI_0364 ('741 XG1v1).mov Video))).). Rovi thus waived argument with respect to the Restart Reminder embodiment under Ground Rule 7.2.

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copy indication to appear after a “specified time” that “was configured prior to the start time.”

The *Markman* Order should have put this matter to rest. During claim construction, for the terms “specified time” and “a specified time after the start time but before the end time,” Rovi proposed the following construction: “a non-zero amount of time after the start time but before the end time.” (*Markman* Order, App. A at 39.). It was apparent then, as it is now, that Rovi’s proposed construction attempted to broaden the asserted claims of the ’741 patent, such that a “specified time” was any “non-zero amount of time,” whether “specified” or not. It appears that Rovi’s proposed construction would have read on the Accused 741 Products. However, the *Markman* Order rejected Rovi’s proposed construction (and infringement theory) and instead adopted a construction that preserved the plain and ordinary meaning of “specified time” as presented in the context of the specification of the ’741 patent: “a specific duration of time or at a clock time.” (*Id.*).

As reflected below in Figure 76, the evidence proves that the X1 System does not post restart indicators at a “specified time after the start time but before the end time.” (Tr. (Karger) at 1519:9-14 (testifying that [REDACTED] [REDACTED]), 1530:3-20 (testifying [REDACTED])).

First, it is axiomatic that user actions are spontaneous, not “specified.” Second, Comcast has not [REDACTED] [REDACTED],⁸⁸ [REDACTED] [REDACTED] (Tr. (Karger) at [REDACTED])

⁸⁸ Dr. Karger described latency as “variability in the time that it will take to process a particular request for a mini info screen.” (Tr. (Karger) at 1530:10-12.).

1522:12-15.):

In addition to [REDACTED], Dr. Karger described timing in the display of restart indicators [REDACTED]

[REDACTED] (*Id.* at 1530:3-17, 1620:11-23.).

Comcast engineers testified about [REDACTED]

[REDACTED]. (Tr. (McCann) at 1416:17-23 ([REDACTED]

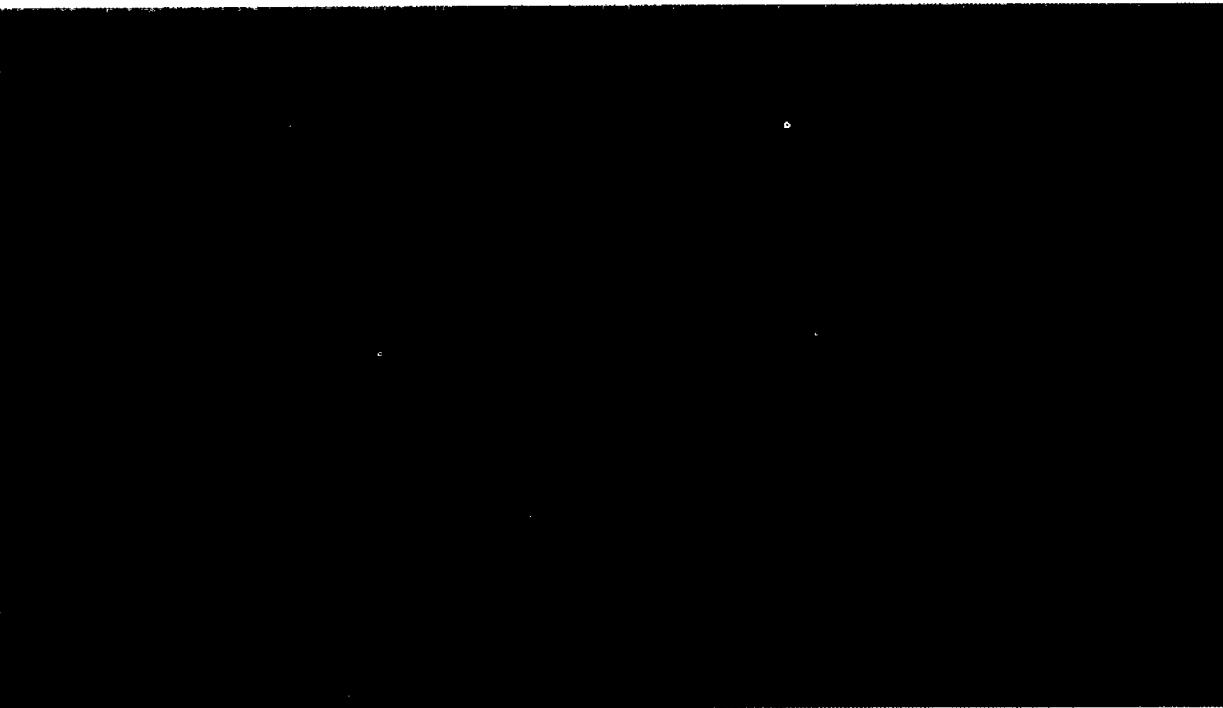
[REDACTED]), 1416:24-1417:5 ([REDACTED])). Taken together, this

testimony puts to rest any misconception that the Accused 741 Products satisfy the asserted

claims. In short, in the context of the timing of restart indicators in the X1 System, nothing gets

formally set or configured, and nothing gets truly “specified.”

Figure 76: Comcast’s Depiction of the X1 System Failing to Post Restart Indicators at a “Specified Time” Due to Randomness of Key Presses and System Latency



(RDX-0003C.0012 (introduced during the testimony of Dr. Karger)).

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At best, Rovi for the very first time⁸⁹ makes an equivalency argument here that stands at odds with the concept of specificity. Rovi has asserted that Comcast engineers baked a “specified” time into the X1 System by writing code for the Mini Info Overlay, Grid Guide, and Restart Reminder embodiments that is deterministic in terms of the amount of elapsed time passing between a user action and the appearance of an archived copy indication. (CBr. at 76.).

To achieve its tortured reading of the asserted claims onto the Accused 741 Products, Rovi slices the time it takes for the X1 System to display a restart indicator into engineered, computation delays and random, latency delays. (*Id.* at 73-75.). Rovi argued that the former is all that is needed to satisfy the asserted claim language. (*Id.* at 74.).

Rovi’s argument in this regard is not entirely fantastical or inaccurate. Comcast did

[REDACTED]

[REDACTED]. (Tr. (McCann) at 1450:5-16, 1461:14-1462:3.).

However, [REDACTED] is distinct from specifying a display response time. The ’741 patent describes “specified times” as specific durations or clock times “configured [not recommended] prior to the start time.” Tellingly, the ’741 patent does not describe an embodiment in which “specified times” are dependent on the speed of code execution, network latency, or the slicing of time segments. Instead, what the asserted claims require is straightforward: culmination of the restart indicator display process (i.e., display of a restart indicator) occurring after a pre-configured “specified time.” The asserted claims do not appear to cover how the Accused 741 Products actually operate, whereby

⁸⁹ Rovi did not raise a doctrine of equivalents argument in its post-hearing briefs. Thus, any such argument here is waived pursuant to Ground Rule 10.1.

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part (yet not all) of restart indicator display process appears to have some deterministic tendencies with the culmination of the process occurring in a non-deterministic fashion.

Moreover, “[t]he ’741 Patent discloses ‘configuring’ in the context of ‘profile or preference settings’” and that the time is “set” and “not defined” or otherwise partially baked into technological machinery [redacted]. (*Markman* Order, App. A at 44 (citing ’741 patent at 16:17-18)). Thus, Rovi’s infringement case against restart indicators in the X1 System displaying after a brief but indeterminate amount of time is simply out of step with the teachings of the ’741 patent.

In essence, Rovi contorted the asserted claims to read on any system with archived copy indicators (e.g., in the form of restart indicators in the Accused 741 Products) that is somewhat deterministic in terms of the speed at which indicators are displayed to users. (*See Tr.* (Balakrishnan) at 1135:17-1136:5, 1099:4-14.). The ’741 patent requires more.

As the applicant on the face of the ’741 patent, Rovi could have could have attempted to modify claim 1 during prosecution to achieve the claim scope Rovi now seeks through its litigation. For example, Rovi could have amended limitation 1[e] as follows: “cause an indication corresponding to the archived copy to be displayed simultaneously with the video ~~after a specified time~~ after the start time but before the end time, ~~wherein the specified time was configured prior to the start time.~~” Rovi did not achieve this broadening of claim scope during prosecution and cannot do so now.

Consequently, Rovi has failed to prove by a preponderance of the evidence that the Accused 741 Products satisfy limitation 1[e] of the ’741 patent.

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- vii. **1[f]: “receive a user response to the indication that is displayed”**

The Accused 741 Products satisfy this limitation. As shown below in Figure 77, the Accused 741 Products [REDACTED] [REDACTED]. (Tr. (Balakrishnan) at 1077:7-1080:4 (discussing CX-1052C.0004 (Mini Info Overlay), CX-1052C.0002 (Grid Guide), and CX-1074.0002 (Restart Reminder)); CDX-0006C.0359 (Mini Info Overlay); CDX-0006C.0360 (Grid Guide); CDX-0006C.0361 (Restart Reminder)). [REDACTED] [REDACTED] (*Id.* at 1077:21-1078:17; CX-1027C.0001 (X1 Setup)).

Figure 77: Rovi’s Depiction of Indications Eliciting User Responses in the X1 System

'741 Patent, Claim 1[f]: Response to the Indication

Claim 1[f]

receive a user response to the indication that is displayed



CX-1052C.4 (XG1v1); see also CX-1064C.4 (XG2v2); CX-1069C.5 (XiD)

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CDX-0006C.359

(CDX-0006C.0359 (introduced during the testimony of Dr. Balakrishnan)).

In its post-hearing briefs, Comcast did not present any argument in rebuttal and thus has

waived any such argument pursuant to Ground Rule 10.1.


Thus, Rovi has proven by a preponderance of the evidence that the Accused 741 Products satisfy limitation 1[f] of the '741 patent.

- viii. **1[g]: “based on the received user response, retrieve, from the storage circuitry, the archived copy”**

The Accused 741 Products satisfy this limitation. As illustrated below in Figure 78, the Accused 741 Products [REDACTED]. (Tr. (Balakrishnan) at 1080:19-1083:4; CX-1052C.0008; CDX-0006C.0366, 368; CX-1137C.).

Figure 78: Rovi’s Depiction of User Retrieval of an Archived Copy in the X1 System

'741 Patent, Claim 1[g]: Control Circuitry in X1 System for Claim 1[g]

<p><u>control circuitry configured to:</u></p>	
<p>Claim 1[g] based on the received user response, retrieve, from the storage circuitry, the <u>archived copy</u></p>	

Based on CX-0607C.4

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CDX-0006C.370

(CDX-0006C.0370 (introduced during the testimony of Dr. Balakrishnan)).

In its post-hearing briefs, Comcast did not present any argument in rebuttal and thus has waived any such argument pursuant to Ground Rule 10.1.

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Thus, Rovi has proven by a preponderance of the evidence that the Accused 741 Products satisfy limitation 1[g] of the '741 patent.

Based on the above, Rovi has not met its burden of proving by a preponderance of the evidence that the Accused 741 Products satisfy claim 1 of the '741 patent.

b) Claim 8

- i. ***A method comprising: transmitting a video to a plurality of user equipment, wherein the transmitting begins at a start time and ends at an end time; accessing a database to determine whether an archived copy corresponding to the video is available to a user after the start time; based on the determining, causing an indication corresponding to the archived copy to be displayed simultaneously with the video after a specified time after the start time, but before the end time, wherein the specified time was configured prior to the start time; receiving a user response to the indication that is displayed; and based on the received user response, retrieving from storage the archived copy.***

As shown below in Figure 79, claim 1 contains each limitation found in claim 8. (Tr. (Balakrishnan) at 1083:10-17.). If the Accused 741 Products satisfy claim 1, they also satisfy claim 8. (*Id.* at 1083:14-20.). However, as discussed above, the Accused 741 Products do not satisfy every limitation of claim 1. Specifically, they fail to satisfy limitation 1[e], which requires display of an indication “after a specified time after the start time, but before the end time, wherein the specified time was configured prior to the start time.” Consequently, the Accused 741 Products also fail to satisfy limitation 8[c], limitation 1[e]’s counterpart.

Thus, Rovi has not met its burden of proving by a preponderance of the evidence that the Accused 741 Products satisfy claim 8 of the '741 patent.

Figure 79: Rovi's Depiction of Similarities Between Claims 1 and 8

'741 Patent, Claim 1 and Claim 8 Comparison

1. A system comprising:
storage circuitry for storing archived copies of videos;
control circuitry configured to:
transmit a video to a plurality of user equipment,
wherein the transmitting begins at a start time and
ends at an end time;
access a database to determine whether an archived copy
corresponding to the video is available to a user after
the start time;
based on determining that the archived copy is available
to the user after the start time, cause an indication
corresponding to the archived copy to be displayed
simultaneously with the video after a specified time
after the start time but before the end time, wherein the
specified time was configured prior to the start time;
receive a user response to the indication that is displayed; and
based on the received user response, retrieve, from the
storage circuitry, the archived copy.

8. A method comprising:
transmitting a video to a plurality of user equipment,
wherein the transmitting begins at a start time and ends
at an end time;
accessing a database to determine whether an archived
copy corresponding to the video is available to a user
after the start time;
based on the determining, causing an indication corresponding
to the archived copy to be displayed simultaneously with the
video after a specified time after the start time, but before
the end time, wherein the specified time was configured
prior to the start time;
receiving a user response to the indication that is displayed;
and
based on the received user response, retrieving from storage
the archived copy.

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CDX-0006C.373

(CDX-0006C.0373 (introduced during the testimony of Dr. Balakrishnan)).

c) Claim 14

- i. *“The method of claim 8, further comprising: removing the archived copy from the storage device at an end of a retention period, wherein the archived copy on the storage device is associated with the retention period.”*

As shown below in Figure 80, the Accused 741 Products satisfy this additional limitation required by claim 14. In some instances, the Accused 741 Products [REDACTED]
[REDACTED]
[REDACTED]. (Tr. (Balakrishnan) at 1084:12-1085:2; CX-0815C.0075 ([REDACTED] Overview) (evidencing [REDACTED]
[REDACTED])).

However, claim 14 depends from claim 8, which the Accused 741 Products do not satisfy

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as explained above. Thus, Rovi has not met its burden of proving by a preponderance of the evidence that the Accused 741 Products satisfy claim 14 of the '741 patent.

B. Technical Prong of Domestic Industry

1. Technical DI Overview

Based on the analysis below, the 741 DI Products do not satisfy the technical prong of domestic industry for the same reasons that the Accused 741 Products do not infringe.

2. Rovi's 741 DI Products Do Not Practice Claim 1 or 8 of the '741 Patent

Rovi asserted that the 741 DI Products practice claims 1 and 8 of the '741 patent. (CBr. at 85-90.). The 741 DI Products consist of Rovi's Next-Gen and TSI's Bolt with Experience 4.0 systems. (*Id.* at 85.). Comcast disagreed that the 741 DI Products practice claims 1 and 8 for the same reason it contended that the Accused 741 Products did not infringe, namely that the 741 DI Products failed to satisfy limitations 1[e] and 8[c]. (*Id.* at 89-90.).

For the reasons discussed below, Rovi has proven by a preponderance of the evidence that the 741 DI Products satisfy every limitation of claims 1 and 8 except limitations 1[e] and 8[c]. (CBr. at 85-90.). Rovi presented un rebutted evidence to this effect. (*Id.*). Comcast did not dispute Rovi's arguments or evidence or assert a contrary position in its post-hearing briefs and has thus waived any such opportunity pursuant to Ground Rule 10.1.

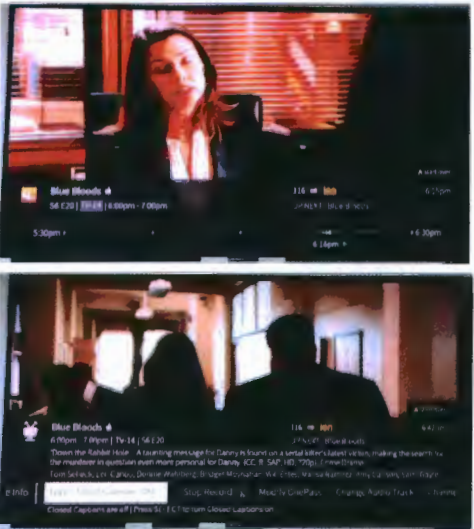
With respect to limitations 1[e] and 8[c], there also appears to be no dispute as to how the restart indicators operate in the 741 DI Products. As shown below in Figure 81, the Next-Gen and Bolt systems present "A start over" indication corresponding to the archived copy of a video that is displayed simultaneously with the video. (Tr. (Balakrishnan) at 1092:18-1093:12; CDX-0006C.0417-18; CX-1036C.0002 (Next-Gen Screenshot); CX-1025C.0001 (Bolt Screenshot).).

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The Next-Gen and Bolt systems display the relevant restart indication automatically after a user tunes into a program. (Tr. (Balakrishnan) at 1094:1-4 (“Q. In this example, what triggered the display of the indication? A. The enter key that resulted in the tuning to that video, and then that indication shows up afterwards.”)). Additionally, the Next-Gen and Bolt systems display restart indications following the user pressing the “Info” button on the remote. (*Id.* at 1094:19-22 (after “the user presses the info button, and when the info button is pressed, this overlay shows up after a specific duration of time that also displays the restart indicator at the top right.”); CX-1119C (Next-Gen Video) at 0:41-0:44; CX-1112C (Bolt Video) at 0:34-0:38.).

Figure 81: Rovi’s Depiction of 741 DI Products Displaying Restart Indicators

'741 Patent, Claim 1[e]: Restart Indication + Video

<p>Claim 1[e]</p> <p>based on determining that the archived copy is available to the user after the start time, cause an indication corresponding to the <u>archived copy</u> to be displayed simultaneously with the video</p>		<p>CX-1036C.2 (Next-Gen)</p> <p>CX-1025C.1 (Bolt)</p>
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(CDX-0006C.0417 (introduced during the testimony of Dr. Balakrishnan)).

With respect to the satisfaction of limitations 1[e] and 8[c] by the 741 DI Products, Rovi and Comcast have equated the manner in which the Accused 741 Products and 741 DI Products operate. In other words the Accused 741 Products and the 741 DI Products rise and fall together

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in terms of practicing the '741 patent.

According to Rovi, the Next-Gen and Bolt systems [REDACTED]

[REDACTED]

[REDACTED] (CBr. at 87-88 (citing Tr. (Balakrishnan) at 1094:9-11 [REDACTED]

[REDACTED]). Rovi asserted

that [REDACTED]

[REDACTED] (*Id.* at 88.). Likewise,

Comcast and its expert argued that the Next-Gen and Bolt systems do not satisfy claim 1 for the same reasons Comcast's Accused 741 Products do not. (RRBr. at 89 [REDACTED]

[REDACTED]

[REDACTED]; Tr. (Karger) at 1536:12-13

("Well, it's for the same reasons as I've already explained with regard to the Comcast products").).

For the same reasons set forth above in the context of infringement, the Next-Gen and Bolt systems fail to satisfy limitations 1[e] and 8[c]. The evidence supports a finding that Rovi has failed to prove that each system fails to cause an indication corresponding to an archived copy to be displayed simultaneously with the video after a specific duration of time falling after the start time but before the end time, wherein the specified time was configured prior to the start time.

As explained above in the context of infringement, spontaneous user actions that cause the display of a restart indicator and variable elapsed times for system processing (including unpredictable latencies) thwart Rovi's narrative that its 741 DI Products display restart indicators after a preconfigured "specified time" as required by claims 1 and 8.

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Therefore, as both Comcast and Rovi argued, and unfortunately for Rovi, the Accused 741 Products and 741 DI Products fall together. Rovi has failed to prove by a preponderance of the evidence that either category satisfies claim 1 or claim 8 of the '741 patent.

C. Invalidity

1. Invalidity Overview

According to Comcast, Rovi stretched the '741 patent to read on the concept of restarting any program currently in progress. (RBr. at 53-54.). Comcast asserted that this concept appeared only in the claims of the patent and was not disclosed in the specification of the '741 patent, which addresses “[i]nteractive television systems with digital video recording and adjustable reminders.” (JX-0006 ('741 patent) at Title, cls. 1, 8, 14.). Thus, Comcast concluded, the asserted claims were invalid for lack of adequate written description. (RBr. at 54.).

Comcast also contended that the asserted claims are invalid as: (i) anticipated by U.S. Patent Publication No. 2002/0095510 (“Sie”); and (ii) anticipated by U.S. Patent No. 7,073,189 (“McElhatten”) “when the ALJ’s constructions are applied in the manner Rovi applies them for infringement.” (*Id.*). Comcast pointed out that Rovi did not provide any anticipation rebuttal testimony from its expert, Dr. Balakrishnan, who limited his rebuttal testimony only to Comcast’s written description challenge. (*Id.*). Comcast also noted that, with respect to anticipation, Rovi cross-examined Comcast’s expert, Dr. Karger, on the presence of only one claim limitation in Sie and no limitations in McElhatten. (*Id.*).

While Rovi did not dispute that Sie and McElhatten were prior art, Rovi asserted that Comcast failed to meet its burden of proving by clear and convincing evidence that either of these references anticipated an asserted claim of the '741 patent. (CRBr. at 44.).

With respect to written description, Rovi contended that “Dr. Balakrishnan identified

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embodiments in the '741 Patent[] ... where the inventor described the usage of an indicator (including a restart indicator) for a currently displayed program or video.” (*Id.* at 56.). Rovi also argued that “Figure 18, Figure 21, and the underlying descriptions in the specification teach the display of an indication (including a restart indication) relevant to the program being watched simultaneously with the program.” (*Id.* at 57.).

As explained below, Comcast has not proven by clear and convincing evidence that the asserted claims are anticipated by prior art or by lack of written description.

The appropriate analytical starting points are the plain and ordinary meanings of the asserted claims, as illuminated by the *Markman* Order. Against this backdrop, Sie lacks the disclosure of an important claim limitation, and Comcast admits that McElhatten does not anticipate. As for written description, Comcast is correct that Rovi provides little to no support for its expansive interpretation of the asserted claims. However, the specification of the '741 patent contains adequate support for the asserted claims as interpreted in conformance with the law (i.e., covering plain and ordinary meaning as understood by a person of ordinary skill in the art).

2. Comcast Failed to Demonstrate that the Asserted Claims Are Invalid
a) RX-0069 (Sie) Does Not Anticipate Claims 1, 8, and 14 of the '741 Patent

Sie is undisputed pre-AIA § 102(b) prior art. (RX-0069 (Sie) at Cover; JX-0173 (Stip. re: Undisputed Issues) at ¶ 9.). Sie discusses systems and methods for providing what it calls “club programs.” (Tr. (Karger) at 1540:5-21; RX-0069 (Sie) ¶¶ 46, 85, 87.). Club programs are copies of broadcast programs stored “in the cloud” at a cable-system headend, locally on a user’s device, or both. (RX-0069 (Sie) ¶¶ 95, 118-119; Tr. (Karger) at 1543:18-1545:3.).

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Club programs allow a user to access “special playback control[s]” including a restart function. (RX-0069 (Sie) at 87-88; Tr. (Karger) at 1538:19-1540:23.). To denote when these playback controls are available, Sie discloses presenting a “club notification symbol” in a program grid or when an “info” button is pressed by the user, as shown below in Figure 82. (RX-0069 (Sie) at Fig. 8B; Tr. (Karger) at 1557:25-1559:10; RDX-0003C.0037.). Moreover, Sie’s system also appears to present a club notification at a “preconfigured” “specified time,” such as a set number of seconds after tuning to the program or at 15-minute intervals. (RX-0069 (Sie) ¶¶ 83, 85; Tr. (Karger) at 1554:20-24, 1555:2-1557:8.). Sie then discloses “a simple single-key means for selecting the scheduled program currently showing and accessing the stored club program from its beginning” in response to the notification. (RX-0069 (Sie) ¶ 88; Tr. (Karger) at 1561:1-1562:17.).

Figure 82: Sie Using Stars as “Club Notification Symbols”

	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
Ch. A	840-1	840-2		840-3	840-1	840-4			840-1		
Ch. B	840-5		840-4		840-4		840-6		840-1		
Ch. C	840-7			840-7		840-8	840-9				
Ch. D	840-8	840-10				840-10					
Ch. E	840-11		840-4			840-3		840-8			
Ch. F	840-3	840-6				840-10					
Ch. G	840-12	840-10				840-7					

(RX-0069 (Sie) at Fig. 8B.).

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At first blush, Sie appears to disclose most, if not all, of the limitations found in the asserted claims. However, as Rovi explained, “Comcast failed to prove that Sie teaches ‘control circuitry’ configured to (1) ‘access a database to determine whether an archived copy corresponding to the video is available to a user;’ (2) where the determination occurs ‘after the start time;’ and (3) ‘based on determining that the archived copy is available to the user after the start time, cause an indication corresponding to the archived copy to be displayed simultaneously with the video.’” (CRBr. at 46 (citing JX-0006 (’741 patent) at 37:64, 38:1-3, 38:4-7)). In other words, during a specific time window, the asserted claims require a determination about whether an archived video copy is “available” to a user and, based on a determination that it is available, the display of an indication to the user. According to Rovi, Sie does not disclose these steps.

Rovi is correct. As shown below in Figure 83, a primary distinction between Sie and the asserted claims of the ’741 patent is that Sie displays its “club program” indications to all users (even those to whom the video is unavailable after the start time). The ’741 patent, by contrast, requires that the indication be displayed only to users for whom the content is “available.” (*Id.* at cls. 1, 8, 14.).

The ’741 patent appears to treat availability as immediate accessibility, not possibly accessible in the future to users who become “club members.” (*See, e.g., id.* at 2:29-38 (“The network-based or local personal video recorder capabilities of the system may be used to make a program available to the user at times other than the scheduled broadcast time for that program. If a program for which a user is interested in setting a reminder is available from the network at time other than the scheduled broadcast time through the use of such capabilities, the user may be provided with an opportunity to select a viewing time and a time for receiving an accompanying reminder message that is later than the original broadcast time.”), 23:59-65


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(“When the selected program is not available at any other time than the originally-scheduled broadcast time—e.g., because video recording of the program is prohibited or otherwise not available—the interactive television application may display a set reminder screen reminder.”).

Omitting the asserted claims’ “determine” and “display indication” steps from Sie makes sense given that the system in Sie is oriented towards marketing and implementing a tiered subscription service, including “club” memberships. (RX-0069 (Sie) at 45-46.). By showing all users when a program is a “club program,” Sie entices non-members to become members and thereby obtain access to desired content. Importantly, Sie’s determination of whether a club program is “available” to a user (whether the user is a “club” member) occurs only after the user sees the “club program” indication and demonstrates a desire to play the video. (RX-0069 (Sie) at 89 (“Processing of that request proceeds at steps 784 and 786 to determine . . . whether the user is a member of the club and therefore entitled to access to the previously stored club version”).). The asserted claims of the ’741 patent require the inverse – determination first, indication second.

Figure 83: Comcast's Unpersuasive Depiction of Sie Satisfying the "Determine" and "Display Indication" Limitations of the '741 Patent

741 Patent


 A system comprising:

- storage circuitry for storing archived copies of videos;
- control circuitry configured to:
 - transmit a video to a plurality of user equipment, wherein the transmitting begins at a start time and ends at an end time;
 - access a database to determine whether an archived copy corresponding to the video is available to a user after the start time;
 - based on determining that the archived copy is available to the user after the start time, cause an indication corresponding to the archived copy to be displayed simultaneously with the video after a specified time after the start time but before the end time, wherein the specified time was configured prior to the start time;
 - receive a user response to the indication that is displayed; and
 - based on the received user response, retrieve from the storage circuitry the archived copy.

741 Patent at Claim 1 (JX-0006.82)

Sie

Such a club notification symbol may comprise, for example, a special icon or alphanumeric string recognizable to a club member or other subscriber to denote that the special playback control is available. In certain embodiments the Sie at ¶85 (RX-0069.43)

activated by the user. The PLAY key is used as a simple single-key means for selecting the scheduled program currently showing and accessing the stored club program from its beginning. Such a feature allows a user to respond to seeing a program that is in progress by issuing a demand for immediate access to the entire program. Sie at ¶88 (RX-0069.43)


[0087] At step 768, a determination is made whether the program being shown on the subscription channel is a club program. Sie at ¶87 (RX-0069.43)

Thus, to include the club notification symbol, the controller 612 consults the program request database 136 and/or the subscriber management system 124. Sie at ¶97 (RX-0069.43)

See also Sie at ¶¶48, 53, 60, 64, Fig. 7A



741 Patent

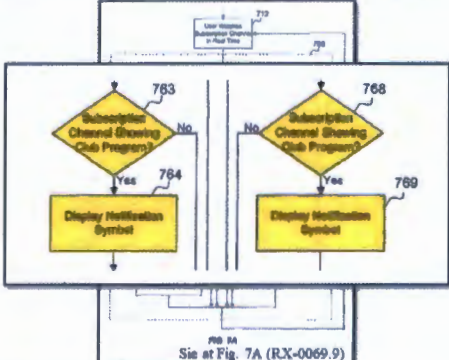

 A system comprising:

- storage circuitry for storing archived copies of videos;
- control circuitry configured to:
 - transmit a video to a plurality of user equipment, wherein the transmitting begins at a start time and ends at an end time;
 - access a database to determine whether an archived copy corresponding to the video is available to a user after the start time;
 - based on determining that the archived copy is available to the user after the start time, cause an indication corresponding to the archived copy to be displayed simultaneously with the video after a specified time after the start time but before the end time, wherein the specified time was configured prior to the start time;
 - receive a user response to the indication that is displayed; and
 - based on the received user response, retrieve from the storage circuitry the archived copy.

741 Patent at Claim 1 (JX-0006.82)

Sie

[0087] At step 768, a determination is made whether the program being shown on the subscription channel is a club program. If so, a notification symbol is overlaid with the program information at step 769 so that the display of program information includes such an indication that the playback control features for that program are available to club members. In one embodiment the notification symbol Sie at ¶87 (RX-0069.43)



```

    graph TD
      763{Subscription Channel Showing Club Program?} -- No --> 768{Subscription Channel Showing Club Program?}
      763 -- Yes --> 764[Display Notification Symbol]
      768 -- No --> 769[Display Notification Symbol]
      768 -- Yes --> 769
  
```

Sie at Fig. 7A (RX-0069.9)



741 Patent

1. A system comprising:
 a storage circuitry for storing archived digital video;
 a processor configured to:
 a) present a video to a plurality of user equipments when the transmission begins at a start time and end at an end time;
 b) calculate, to determine whether an archived copy corresponding to the video is available to a user after the start time;
 based on determining that the archived copy is available to the user after the start time, cause an indication corresponding to the archived copy to be displayed simultaneously with the video after a specified time after the start time but before the end time, wherein the specified time was configured prior to the start time;
 receive a user response to the indication that is displayed; and
 based on the received user response, retrieve, from the storage circuitry, the archived copy.

741 Patent at Claim 1 (JX-0006.82)

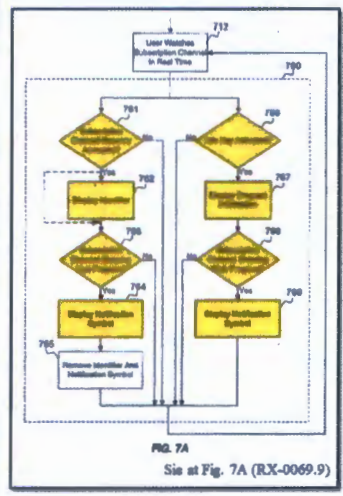
Sie

[0085] At step 763, a determination is made whether the program being shown on the accessed subscription channel is a club program. If not, the system returns to showing the program at step 712 and removes the Identifier after the appropriate time period. If a club program is being displayed, then a club notification symbol is shown on the Identifier at step 764 in the embodiment shown with the

The overlaid Identifier and notification symbol remains displayed for a brief period (e.g., between 2 and 6 seconds), and are then removed at step 765 so that the user may continue to watch the subscription channel without distraction at step 712. In certain embodiments, display of the identifier and notification symbol may be repeated periodically, such as at 15-minute intervals. Sie at ¶85 (RX-0069.43)

[0087] At step 768, a determination is made whether the program being shown on the subscription channel is a club program. If so, a notification symbol is overlaid with the program information at step 769 so that the display of program information includes such an indication that the playback control features for that program are available to club members. In one embodiment, the notification symbol Sie at ¶87 (RX-0069.43)

[0086] The controller 612 also monitors at step 766 whether a designated information key is actuated by the user. Such an information key is used to bring up information on the screen that describes the program currently being shown. Such program information may include, for example, the title of the program, a brief description of the program, the time of day that the program began, the total Sie at ¶86 (RX-0069.43)



(RDX-0003C.0033-34 (introduced during the testimony of Dr. Karger).).

Based upon the discussion and reasoning provided above, Comcast has failed to prove by clear and convincing evidence that Sie anticipates claims 1, 8, and 14 of the '741 patent.

b) **RX-0069 (McElhatten) Does Not Anticipate Claims 1, 8, and 14 of the '741 Patent**

Comcast next argued that McElhatten anticipates claims 1, 8, and 14 of the '741 patent. (RBr. at 63-70.). McElhatten is undisputed pre-AIA § 102(e) prior art. (RX-0071 (McElhatten) at Cover; JX-0173 (Stip. re: Undisputed Issues) at ¶ 10.). McElhatten discloses systems and methods for storing “reservable programs,” which support functionalities such as restart. (RX-0071 (McElhatten) at 15:65-16:5; Tr. (Karger) at 1566:21-1568:17; RDX-0003C.0045-47.).

McElhatten’s “reservable programs” are television programs that are recorded and stored at a cable headend that can be accessed by users after the shows have been broadcast. (RX-0071 (McElhatten) at 15:59-16:13; Tr. (Karger) at 1566:21-1568:17, 1569:11-23.). When a user

watches a broadcast program, the user can issue a “reserve command.” (RX-0071 (McElhatten) at 15:59-62, Fig. 12; Tr. (Karger) at 1573:19-1574:2.). If the program is reservable (as determined by the system), a user will see additional functionality including the ability to restart the program. (RX-0071 (McElhatten) at 12:59-65, 15:56-16:3; Tr. (Karger) at 1573:19-1574:15, 1575:5-20, 1577:8-20, 1581:9-1582:10.).

Figure 84: Comcast’s Depiction of Restarting a “Reservable” Program

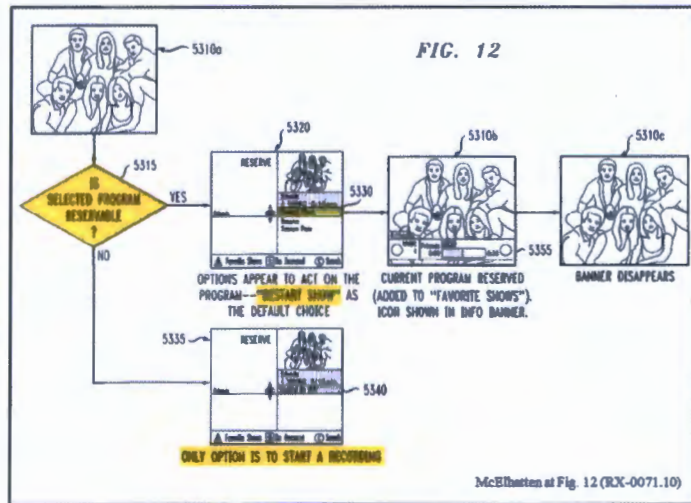
741 Patent

McElhatten

741 Patent at Claim 1 (JX-0006.82)

A system comprising:

- storage circuitry for storing archival copies of videos;
- control circuitry configured to:
 - present a video to a plurality of user equipment, wherein the transmission begins at a start time and ends at an end time;
 - access a database to determine whether an archival copy corresponding to the video is available to a user after the start time;
 - based on determining that the archival copy is available to the user after the start time, cause an indication corresponding to the archival copy to be displayed simultaneously with the video after a specified time after the start time but before the end time, wherein the specified time was configured prior to the start time;
 - receive a user response to the indication that is displayed; and
 - based on the received user response, retrieve, from the storage circuitry, the archival copy.



RDX-0003C-53 COMCAST

(RDX-0003C.0053 (introduced during the testimony of Dr. Karger).).

Comcast framed McElhatten’s presentation of a restart notification when a user issues a “reserve command” as “analogous to the functionality accused of infringement, where a Comcast user presses the ‘info’ key and is then presented with an information screen with a restart option.” (RBr. at 64.). In so doing, Comcast attempted to establish that the Accused 741 Products and McElhatten should rise and fall together in terms of infringement and invalidity, respectively. Rovi disagreed, arguing that McElhatten failed to disclose several limitations.

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(CRBr. at 52-55.).

However, a detailed analysis of Rovi's arguments here is unwarranted. The most compelling evidence that McElhatten does not anticipate any asserted claim of the '741 patent is the admission of Comcast's expert, Dr. Karger, that a finding of anticipation is not appropriate under the binding *Markman* constructions issued in this Investigation. (Tr. (Karger) at 1579:18-19 ("Q. How about under the Court's interpretation? A. No, I don't think so").). In Comcast's view, neither the Accused 741 Products nor McElhatten disclose display of the required notification at a "specified time" "configured prior to the start time." (RBr. at 64.). Comcast is correct. Comcast raised McElhatten as allegedly anticipatory prior art not because it is legitimate anticipatory prior art, but instead to guard against Rovi's view, rejected above, that the restart notification in the Accused 741 Products occurs at a "specified time" because of some computational determinism and threshold time targets baked into Comcast's X1 System.

Consequently, Comcast has failed to prove by clear and convincing evidence that Sie anticipates claims 1, 8, and 14 of the '741 patent.

c) Claims 1, 8, and 14 Are Not Invalid for Lack of Written Description

Comcast contended that claims 1, 8, and 14 of the '741 patent lacked adequate written description support. (RBr. at 70.). Comcast argued that "the asserted claims relate to retrieving an archived copy of the program currently being viewed, i.e., restarting the same program that is being watched," while "the specification discloses setting 'reminders' that will alert a user when it is time to change channels and view a different program." (*Id.* (citing Tr. (Karger) at 1587:11-1587:22, 1591:25-1593:1).).

In rebuttal, Rovi challenged Comcast's characterization of the specification and alleged

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that “Dr. Balakrishnan identified embodiments in the ’741 Patent’s written description where the inventor described the usage of an indicator (including a restart indicator) for a currently displayed program or video.” (CRBr. at 56-57.). Specifically, Rovi asserted that “Figure 18, Figure 21, and the underlying descriptions in the specification teach the display of an indication (including a restart indication) relevant to the program being watched simultaneously with the program.” (*Id.* at 56.).

Patents are presumed valid. 35 U.S.C. § 282. The first paragraph of Section 112 says: “The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same. . . .” 35 U.S.C. § 112. To comply, a patent applicant must “convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the [claimed] invention.” *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64 (Fed. Cir. 1991) (emphasis omitted). “The form and presentation of the description can vary with the nature of the invention[.]” *In re Skvorecz*, 580 F.3d 1262, 1269 (Fed. Cir. 2009). “[T]he applicant [for a patent] may employ ‘such descriptive means as words, structures, figures, diagrams, formulas, etc., that fully set forth the claimed invention.’” *Id.* (citing *In re Alton*, 76 F.3d 1168, 1172 (Fed. Cir. 1996)). The adequacy of the description depends on content, rather than length. *In re Hayes Microcomputer Prods., Inc. Patent Litig.*, 982 F.2d 1527, 1534 (Fed. Cir. 1992). “Specifically, the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010) (en banc).

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Compliance with the written description requirement is a question of fact. In order to overcome the presumption of validity a party must set forth clear and convincing evidence. *Centocor Ortho Biotech, Inc. v. Abbott Labs.*, 636 F.3d 1341, 1347 (Fed. Cir. 2011). The Federal Circuit also has held with respect to the written description requirement that “[a] claim will not be invalidated on section 112 grounds simply because the embodiments of the specification do not contain examples explicitly covering the full scope of the claim language.” *Falko-Gunter Falkner v. Inglis*, 448 F.3d 1357, 1366 (Fed. Cir. 2006) (quoting *LizardTech, Inc. v. Earth Resource Mapping, PTY, Inc.*, 424 F.3d 1336, 1345 (Fed. Cir. 2005)).

As an initial matter, Comcast’s interpretation of the scope of the asserted claims is too narrow. While claims 1, 8, and 14 of the ’741 patent do require “an indication corresponding to the archived copy to be displayed simultaneously with the video,” they do not necessarily require that a user receive the indication about an archived copy of the video while watching the video. (JX-0006 (’741 patent) at cls. 1, 8.). Instead, these claims require only that the indication appear at the same time that the system is transmitting the video that corresponds to the archived copy. (*Id.*). The ’741 patent refers to this time window as the program’s “scheduled broadcast time” (i.e., at a time at which the program is being broadcast). (*Id.* at 34:30-32.).

Against this backdrop, Comcast’s written description argument is flawed because the specification of the ’741 patent appears to disclose displaying a reminder for a program during that program’s “scheduled broadcast time.” As shown below in Figure 85, Figure 31 of the ’741 patent discloses a user selecting a program and setting a reminder, at steps 372 and 374. (*Id.* at Fig. 31.). At step 376, the system records the selected program from its start time if the user set her reminder to appear after that start time. (*Id.*). The reminder appears at step 378 and, if the user chooses to watch the program, at step 380, she has the option to tune to the appropriate

channel and watch the program (in progress) or play back the program (i.e., restart the program).
(Id.).

Figure 85: Figure 31 of the '741 Patent Disclosing Playback Options

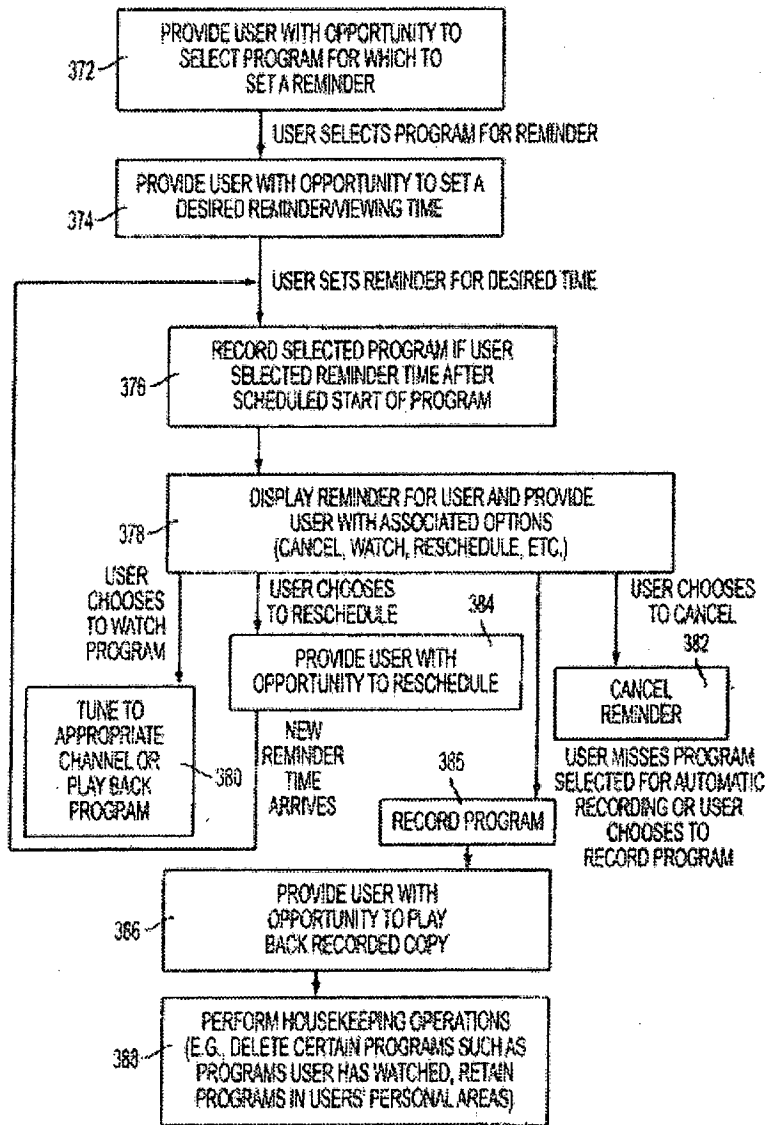


FIG. 31

(Id. at Fig. 31.).

Figure 31 of the '741 patent does not explicitly limit the play back option to situations in

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which the reminder occurs after the program's "scheduled broadcast time." Neither does the specification, which states that "[i]f the user chooses to watch the program immediately, the interactive television application may display the program for the user on the user's equipment 18 at step 380." (*Id.* at 29:15-17.). The specification then appears to give two (2), nonexclusive examples of how a "reminded" user can watch her program of interest. "If the program is currently being broadcast ..., the interactive television application may tune the user's equipment to the appropriate television channel to receive that program at step 380." (*Id.* at 29:17-21.). "If the program is not currently being broadcast, the program may be played back for the user using the network-based or local personal video recorder at step 380. A playback arrangement of the type shown in FIG. 21 or any other suitable arrangement may be used to playback the desired program for the user from the network-based or local personal video recorder." (*Id.* at 29:23-31.). As Rovi demonstrated, and Comcast did not deny, the "playback arrangement" of Figure 21 includes a program restart option. (CRBr. at 56; RBr. at 71.).

Thus, Comcast's written description argument distills to the lack of explicit disclosure in the '741 patent specification of the specific embodiment found in claims 1, 8, and 14. Specifically, the specification lacks an unambiguous description of a user receiving a reminder of a program during the program's "scheduled broadcast time" and then choosing to watch the program, where program content comes not from the program's broadcast channel, but instead from an "archived copy" recording of the program. In other words, Comcast's written description challenge to claims 1, 8, and 14 relates to whether there is clear and convincing evidence that, considered together: (1) a general disclosure of a user receiving a program reminder and watching the corresponding program immediately; and (2) an explicit disclosure of a reminded user retrieving an archived copy of a program after the program's "scheduled

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broadcast time” fail to convey with reasonable clarity the inventor’s possession of the idea that a user can retrieve an archived copy during the program’s “scheduled broadcast time.”

Figure 86: Figure 21 of the '741 Patent Disclosing Playback Options

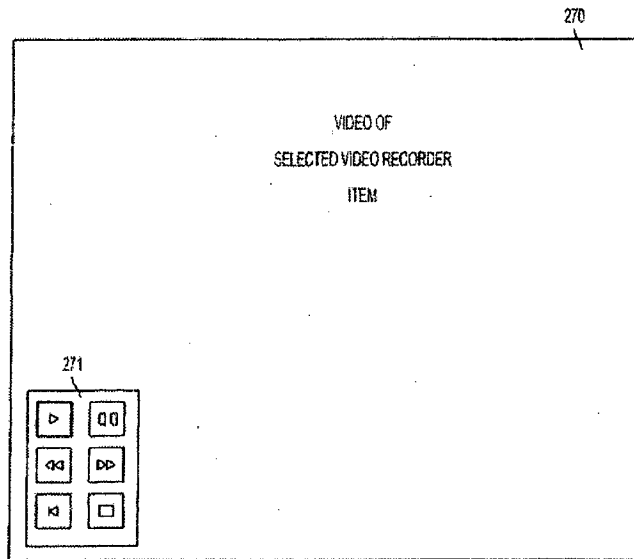


FIG. 21

(JX-0006 ('741 patent) at Fig. 31.).

Such clear and convincing evidence is not present here. As discussed above, Comcast premised its written description argument on an overly narrow interpretation of the scope of claims 1, 8, and 14. Moreover, the non-limiting nature of Figure 31 of the '741 patent appears to cut against Comcast’s strict reading of the text describing Figure 31. Additionally, Comcast’s argument arises in an approachable and intuitive technology space—interactive program guides—in which the level of detail needed to make an adequate written description disclosure is less demanding than would be the case in a highly technical field. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010) (*en banc*) (“Specifically, the level of detail

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required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.”). Thus, based on the above, the weight of the evidence proves that Comcast has not met its burden of proving by clear and convincing evidence that claims 1, 8, and 14 of the ’741 patent are invalid for lack of written description.

X. INDIRECT INFRINGEMENT

A. Legal Standard: Induced Infringement

“Whoever actively induces infringement of a patent shall be liable as an infringer.” 35 U.S.C. § 271(b). A patentee asserting a claim of inducement must show (i) that there has been direct infringement and (ii) that the alleged infringer “knowingly induced infringement and possessed specific intent to encourage another’s infringement.” *Minnesota Mining & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1304-05 (Fed. Cir. 2002). With respect to the direct infringement requirement, the patentee “must either point to specific instances of direct infringement or show that the accused device necessarily infringes the patent in suit.” *ACCO Brands, Inc. v. ABA Locks Mfrs. Co., Ltd.*, 501 F.3d 1307, 1313 (Fed. Cir. 2007) (citation omitted). This requirement may be shown by circumstantial evidence. *Vita-Mix Corp. v. Basic Holding, Inc.*, 581 F.3d 1317, 1326 (Fed. Cir. 2009). “[A] finding of infringement can rest on as little as one instance of the claimed method being performed during the pertinent time period.” *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1317 (Fed. Cir. 2009); *Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358, 1364 (Fed. Cir. 2012) (citing *Lucent Techs.*, 580 F.3d at 1317).

The specific intent requirement for inducement necessitates a showing that the alleged infringer was aware of the patent, induced direct infringement, and that he knew that his actions would induce actual direct infringement. *Commil USA, LLC v. Cisco Sys., Inc.*, 720 F.3d 1361,

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1367 (Fed. Cir. 2013), *aff'd and vacated in part on other grounds*, 135 S. Ct. 1920, 1926-28 (2015); *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068-70 (2011). Specific intent can be shown by, for example: (1) changes in importation practices effectuated to shift infringement liability; (2) the infringer's copying of patented technology; and (3) the infringer's willful blindness of the underlying direct infringement. *Certain Network Devices, Related Software and Components Thereof (I)*, Inv. No. 337-TA-944, Initial Determination at 82; *see also Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1924-25 (2015) ("It was not only knowledge of the existence of [the asserted] patent that led the Court to affirm the liability finding but also it was the fact that [the accused infringer] copied 'all but the cosmetic features of the [patented product],' demonstrating [the accused infringer] kn[ew] it would be causing customers to infringe [the asserted] patent.") (quoting *Global-Tech*, 131 S. Ct. at 2071).).

Willful blindness, which also constitutes "knowledge," has two basic requirements: "(1) the defendant must subjectively believe that there is a high probability that a fact exists"; and "(2) the defendant must take deliberate actions to avoid learning of that fact." *Global-Tech*, 131 S. Ct. at 2070. The intent to induce infringement may be proven with circumstantial or direct evidence and may be inferred from all the circumstances. *Commil*, 720 F.3d at 1366; *Global-Tech*, 131 S. Ct. 2071-72.

The Federal Circuit has upheld the Commission's authority to cover "goods that were used by an importer to directly infringe post-importation as a result of the seller's inducement." *Suprema*, 796 F.3d at 1352-53.

B. Indirect Infringement Overview

As an initial matter, Rovi's Initial Post-Hearing Brief argued that Comcast induced infringement of claims 1, 8, 11, 15, and 22 of the '585 patent. (CBr. at 57-58.). However, in its

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Pre-Hearing Brief, Rovi's only raised contentions regarding induced infringement for claims 15 and 22 of the '585 patent. (CPBr. at 33-34.). Thus, any argument with respect to induced infringement of claims 1, 8, or 11 is deemed abandoned or withdrawn under Ground Rule 7.2. *See Certain Automated Media Library Devices*, Inv. No. 337-TA-746, Comm'n Op. at 14-16 (U.S.I.T.C. 2013) ("*Library Devices*").

In its Pre-Hearing Brief, Rovi also argued that Comcast induced infringement of claims 1, 7, and 15 of the '741 patent. (CPBr. at 78.). In its Initial Post-Hearing Brief, Rovi's only raised contentions regarding induced infringement for claim 1. (CBr. at 81.). Consequently, any argument with respect to induced infringement of claims 7 or 15 is deemed waived under Ground Rule 10.1. *See Library Devices*, Comm'n Op. at 14-16.

Rovi failed to meet its burden of proving that Comcast induces its customers of using the Accused 011 Products with the X1 System in a manner that directly infringes claim 1 of the '011 patent because the users do not perform all the steps recited in the method claim, i.e., limitations 1[a], 1[c], and 1[d]. Rovi also failed to meet its burden of proving that Comcast induces users of the Accused 741 Products of directly infringing claim 1 of the '741 patent because the Accused 741 Products, when operating in the X1 System, do not satisfy limitation 1[e].

To the contrary, for the reasons discussed below, Rovi demonstrated by a preponderance of the evidence that Comcast induced its customers of infringing claim 9 of the '011 patent, and claims 15 and 22 of the '585 patent, all of which are system claims.

C. Comcast Does Not Induce Infringement of Claim 1 (Method) of the '011 Patent and Claim 1 (System) of the '741 Patent Because Users of Comcast's X1 System Do Not Directly Infringe

1. Claim 1 of the '011 Patent

Direct infringement of a method claim can only occur when all steps of the claimed

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method are performed by or attributable to a single entity. *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 797 F.3d 1020, 1022 (Fed. Cir. 2015) (citation omitted). As Rovi and Dr. Bovik acknowledged, [REDACTED]

[REDACTED]. (CBr. at 13-14, 30; Tr. (Bovik)

at 698:14-25 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; see also *id.* at 560:18-561:16, 568:1-8.).

Because Comcast's customers [REDACTED], they cannot be the "single entity" that performs all the claimed steps of claim 1. (Tr. (Kelly) at 1715:5-1716:7

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]; RDX-0004C.0040-41.). See *Ricoh Co., Ltd. v.*

Quanta Comput. Inc., 550 F.3d 1325, 1333 (Fed. Cir. 2008).

For example, no Comcast customer performs "indexing said items by associating subsets of said items with corresponding strings of one or more unresolved keystrokes" (limitation 1[a]), "receiving from a user a search query" (limitation 1[c]), or "in response to each unresolved keystroke, identifying . . . subsets of items" (limitation 1[d]). (JX-0001 at 8:47-52, 8:59-60, 8:64-65.).

Accordingly, Rovi has failed to prove that Comcast induces its customers to directly infringe claim 1 of the '011 patent.

2. Claim 1 of the '741 Patent

As discussed above in Section IX.A.3(a), when operating in the X1 System, the Accused 741 Products do not satisfy every limitation of claim 1. Specifically, they fail to satisfy limitation 1[e], which requires display of an indication “after a specified time after the start time, but before the end time, wherein the specified time was configured prior to the start time.” (JX-0006 at 38:4-9.). Spontaneous user actions that cause the display of a restart indicator and variable elapsed times for system processing (including unpredictable latencies) thwart Rovi’s narrative that its Accused 741 Products display restart indicators after a preconfigured “specified time” as required by claim 1.

Comcast cannot induce infringement of a claim that is not directly infringed. *ACCO Brands, Inc. v. ABA Locks Mfrs. Co., Ltd.*, 501 F.3d 1307, 1313 (Fed. Cir. 2007) (patentee “must either point to specific instances of direct infringement or show that the accused device necessarily infringes the patent in suit.”) (citation omitted).

For the foregoing reasons, Rovi has failed to prove that Comcast induces its customers to directly infringe claim 1 of the '741 patent.

D. Comcast Induces Infringement of Claim 9 (System) of the '011 Patent and Claims 15 and 22 (System) of the '585 Patent⁹⁰

1. Comcast Had Pre-Suit Knowledge of the '011 and '585 Patents

a) The '011 Patent

Rovi has demonstrated that Comcast had actual knowledge of the '011 patent since at least 2013. On August 7, 2013, Comcast received notice of the '011 patent and Rovi’s

⁹⁰ It is a finding of this ID that the asserted claims of the '585 patent are invalid. (See Section VIII.C, *supra*). However, an analysis of claims 15 and 22 for purposes of indirect infringement is provided should the Commission disagree with the finding of invalidity.

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allegations of infringement when Veveo filed a district court complaint in which Rovi asserted the '011 patent against Comcast's X1 System ("2013 Complaint"), and alleged that Comcast developed its X1 System with Veveo's intellectual property, know-how, software, and trade secrets. (Tr. (Samir Armaly)⁹¹ at 147:3-08; CX-1172C (Veevo Complaint) at 7, 9-11.). Rovi also provided detailed patent infringement allegations in claim charts asserting claims 1, 9, and 17 against Comcast's X1 System in an action filed on January 10, 2018 in the District Court of Massachusetts. (Tr. (Armaly) at 147:9-148:23; CX-1182 (D. Mass. Complaint); CX-0964 ('011 patent claim chart). Comcast conceded longstanding pre-suit knowledge of the '011 patent. (See CX-1208C (Comcast Interrog Resp.) at 25-32.).

b) The '585 Patent

Like the '011 patent, Rovi has proven that Comcast had specific knowledge of the '585 patent well before Rovi filed its Complaint. The 2010 Amended Patent License ("2010 Comcast License") between Comcast and Rovi listed the patent application that issued as the '585 patent. (Tr. (Armaly) at 144:8-11; JX-0026C (2010 License) at Ex. C-112.).

Additionally, as part of the negotiations for renewal of that license, Rovi presented detailed claim charts for the '585 patent to Comcast on September 23, 2014, in which it mapped Comcast's X1 products to claim 22—the same products and one of the claims asserted in this Investigation. (Tr. (Armaly) at 144:19-146:7; CX-0318C ("Next Steps" email); CX-0953C ('585 patent claim chart); CX-0954C ('585 patent claim chart).). Rovi again provided Comcast with detailed claim charts on January 10, 2018 when Rovi filed a complaint alleging patent

⁹¹ When Mr. Samir Armaly testified during the Hearing on October 17, 2018, he was a Strategic IP Advisor for Rovi. (CPSt. at 1.). Rovi identified Mr. Armaly as a fact witness to testify generally about Rovi's history and negotiations with Comcast, including Comcast's notice of the Asserted Patents, and the renewal of the license agreement between Rovi and Comcast. (*Id.*).

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infringement in the Central District of California (“California Litigation”). Rovi set forth with particularity allegations that Comcast’s X1 System infringed certain claims that were later included in this Investigation. (Tr. (Armaly) at 147:9-148:17; CX-1181 (C.D. Cal. Complaint); CX-0966 (’585 patent chart).

Comcast recognized its longstanding pre-suit knowledge of the ’585 patent. (See CX-1208C (Comcast Interrog. Resp.) at 25-32.).

2. Comcast Encourages Its U.S. Customers to Infringe Claim 9 of the ’011 Patent and Claims 15 and 22 of the ’585 Patent

a) Claim 9 of the ’011 Patent

Comcast provides videos and documents that instruct, direct, or advise its customers to use the X1 unresolved overloaded key search functionality implemented on the X1 System in a way that infringes claim 9 of the ’011 patent. (Tr. (Bovik) at 604:21-606:1; CDX-0008C.0111-13.). For example, Dr. Bovik explained that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (Tr. (Bovik) at 604:21-606:1; CX-0393C.0130 (Comcast Xfinity TV on the X1 Platform)). Similarly, Dr. Bovik testified that a Comcast online support page, dated December 7, 2017, is an example of how Comcast encourages its customers to use overloaded keypad functionality. (Tr. (Bovik) at 604:21-606:1; CX0062.0001-3 (Search X1 with the Remote Control Keypad)). Moreover, Comcast acknowledged that it teaches its customers how to use X1 features, including through the use of “how to” videos. (JX-0131C (Megan Wallace Dep.

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Tr.)⁹² at 55:3-5, 59:19-60:20, 63:12-15, 75:10-77:1; CX-1098 (Video) at 0:53-1:00 (highlighting the accused feature). Comcast offered no rebuttal to this evidence.

b) Claims 15 and 22 of the '585 Patent

Comcast makes online guidance available to its subscribers that instructs its users to infringe claims 15 and 22 of the '585 patent. For instance, a Comcast online support webpage, dated September 2018, provides step-by-step instructions to set a global storage option. (CX-0156 (X1 Settings Overview)). Comcast domestic subscribers who use these step-by-step instructions infringe claim 15. (Tr. (Balakrishnan) at 826:7-829:25; CX-0156).

Another Comcast online support webpage, dated January 2018, offers step-by-step directions to set a program-specific storage option. (CX-0161 (Change the Start or Stop Time of Recording on Your X1 DVR)). Comcast domestic customers following these step-by-step instructions infringe claim 22. (Tr. (Balakrishnan) at 830:1-833:7; CX-0161.). Comcast did not rebut that its subscribers who follow the directions in CX-0156 and CX-0161 infringe claims 15 and 22. (Tr. (David Albonesi)⁹³ at 1922:21-1923:2, 1923:14-17 (stating that he could not provide rebuttal testimony to Dr. Balakrishnan's inducement evidence); *see also* Tr.

⁹² At the time of her deposition on June 15, 2018, Ms. Megan Wallace was Vice President of Media and Marketing Communications of Comcast's northeast division. (JX-0131C (Wallace Dep. Tr.) at 6:17-22.).

⁹³ When Dr. David H. Albonesi testified during the Hearing on October 24, 2018, he was a Professor in the Electrical and Computer Engineering at Cornell University. (RPSt. at Ex. A; Tr. (Albonesi) at 1810:9-12.). Comcast identified Dr. Albonesi as an expert to testify about the technical background of the Asserted Patents; the interpretation of the claims in those patents; issues relating to the alleged infringement of the Asserted Patents by the Accused Products and Comcast's Design Alternatives; the design, structure, function, and operation of the Accused Products and Comcast's Design Alternatives; issues relating to the validity of the Asserted Patents; issues relating to whether the Rovi DI Products practice the Asserted Patents and whether Rovi satisfies the technical prong of the domestic industry for the Asserted Patents; other issues in connection with the alleged infringement, validity, enforceability, and any other technical issue that may arise with respect to the Asserted Patents; and to rebut the testimony of Rovi's experts or fact witnesses regarding any of these areas. (*Id.* at 1-2.).

(Balakrishnan) at 752:10-753:2, 826:7-833:7; CDX-0006C.0157-65.).

3. Comcast Users Directly Infringe Claim 9 of the '011 and Claims 15 and 22 of the '585 Patent

Comcast customers directly infringe the claim 9 of the '011 patent. (Tr. (Bovik) at 603:10-606:1; CDX-0008C.0114-15.). *See Lucent Techs.*, 580 F.3d at 1317 (finding that evidence of a single instance of direct infringement is sufficient to support a finding of infringement); *Toshiba Corp.*, 681 F.3d at 1364 (“Circumstantial evidence must show that at least one person directly infringed an asserted claim during the relevant time period.”). □

[REDACTED]

[REDACTED]. (Tr. (Bovik) at 603:10-606:1; CX-0357C (Comcast Survey) at 54.).

[REDACTED]

[REDACTED]. (Tr. (Bovik) at 603:10-606:1; CX-0355C (Comcast Review) at 22; CX-0356C (Comcast Monthly Review May 2014) at 12.).

Additionally, when each imported STB is used by Comcast (e.g., its employees), or a Comcast customer in the U.S. after importation as instructed and directed by Comcast, that use directly infringes claims 15 and 22 of the '585 patent. (Tr. (Balakrishnan) at 826:7-833:7.). *See Lucent Techs.*, 580 F.3d at 1317; *Toshiba Corp.*, 681 F.3d at 1364.

Rovi's expert, Dr. Michael Shamos,⁹⁴ testified about focus groups he attended where

⁹⁴ When he testified during the Hearing on October 18, 2018, Dr. Michael Shamos was a Professor in the School of Computer Science at Carnegie Mellon University. (CPSSt. at 10, App. E; Tr. (Shamos) at 386:19-387:12.). Rovi identified Dr. Shamos as an expert to testify about: (i) the disputed terms of the '799 patent to one of skill in the art in view of the intrinsic and extrinsic evidence, the specification, prosecution history, and the knowledge of one of ordinary skill in the art; (ii) how the Accused Products infringe the '799 patent; and (iii) how the DI Products satisfy the technical prong of the for the '799 patent. (CPSSt. at 10.). However, as mentioned in Section II.A, *supra*, this patent was terminated from

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Comcast customers were asked to identify whether they were familiar with and made use of the features covered by, *inter alia*, claim 9 of the '011 patent, and claims 15 and 22 of the '585 patent. (Tr. (Shamos) at 389:5-9, 391:3-24, 392:20-393:5, 394:9-395:18, 396:23-397:9, 397:10-398:4, 398:24-399:4, 421:25-423:17 (discussing Comcast customers' actual use of the Accused Products in the United States after the filing of the Complaint with respect to overloaded key searching within the meaning of the claims of the '011 patent and set storage options within the meaning of the claimed of the '585 patent); CDX-0012C.0014 (tabulated results of Comcast Customer focus group); CX-0543 (focus group results); CX-0543.0006 (showing that one customer used Features T and K, the storage options and overloaded key search functions, respectively). This evidence shows that after the filing of the Complaint in this Investigation, at least one Comcast customer in the U.S. made post-importation use of the Accused Products to infringe claim 1 of the '011 patent.

On cross-examination, Comcast questioned Dr. Shamos about some seeming discrepancies in the tabulation of the focus groups' usage results (CDX-0012C.0014) that Dr. Shamos prepared and described during his direct testimony, which is summarized below in Figure 87.

this Investigation before the Hearing commenced. Thus, Dr. Shamos did not provide any testimony with regard to this patent during the Hearing.

Figure 87: Tabulation of Usage Results

FEATURE	FAMILIARITY			FREQUENCY OF USE					
	Not Familiar	Familiar / Never Used	Familiar / Used	Several / Week	Once a week	2-3 times / month	Once a month	Once every 3 months	3 times or less last 12 months
Restart Now (741 Patent): Noon Group		5	5	3		1	1		4
Restart Now (741 Patent): 5:30 Group	6	1	3		1		1	1	1
Restart Now (741 Patent): TOTAL	6	6	8	3	1	1	2	1	5
Overloaded Keys ('011 Patent): Noon Group	5	3	2	2					6
Overloaded Keys ('011 Patent): 5:30 Group	7	1	2	2					2
Overloaded Keys ('011 Patent): TOTAL	12	4	4	4	0	0	0	0	8
Storage Options ('585 Patent): Noon Group	1	3	6	1	2	2			4
Storage Options ('585 Patent): 5:30 Group	4	3	3				1		4
Storage Options ('585 Patent): TOTAL	5	6	9	1	2	2	1	0	8

(CDX-0012C.0014.).

For instance, he was asked why certain numbers of users in the “Familiarity” column, i.e., users who were not familiar with the feature or familiar but never used the feature, were not consistent with numbers in the “Frequency of Use” column specifying the number of customers who used the feature 3 times or less in the last 12 months.⁹⁵ (See, e.g., Tr. (Shamos) at 400:13-401:21, 405:12-18; RDX-0016C.00012.). Although Dr. Shamos acknowledged that he may have made some errors in tabulating the results (see, e.g., Tr. (Shamos) at 407:4-11), this provides at least some evidence that after Rovi filed the Complaint in this Investigation, at least one Comcast customer in the U.S. made post-importation use of the Accused Products to infringe claim 9 of the '011 patent, and claims 15 and 22 of the '585 patent.⁹⁶

⁹⁵ For example, with regard to the overloaded key search, if there were 12 unfamiliar users and 4 users who were familiar with the feature but never used it, the number of users who used the feature less than 3 times in the last 12 months (far right column) should be 16, not 8.

⁹⁶ Dr. Shamos also testified that he used the Accused Products in his home in Pittsburgh to perform the

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A separate survey of Comcast customers that Dr. Elliot Schwartz⁹⁷ conducted confirms the results of the focus group. (CX-1336C (results of Dr. Schwartz's survey); RDX-0016C.0010 (citing CX-1335C.0010 reflecting the opinion that "[e]ach of the evaluated features are used by at least half of the respondents"); Tr. (Shamos) at 421:25-422:14.). Comcast also raised issues with the methodology used in Dr. Schwartz's survey. (*See, e.g.*, Tr. (Shamos) at 407:12-18.). Again, while Dr. Schwartz's survey may not have been methodologically sound in certain respects, it is still some evidence entitled to some weight that at least one Comcast customer in the U.S. made post-importation use of the Accused Products after Rovi filed its Complaint to infringe the claims at issue.

Moreover, although [REDACTED]

[REDACTED], users still directly infringe because by initiating the search query, the users "control" and "benefit" from each claimed component of claim 9. *See, e.g., Intellectual Ventures*, 870 F.3d at 1329; *see also Centillion*, 631 F.3d at 1285-86 (customers found to be direct infringers controlled and benefitted from back-end processing equipment over which they exercised no physical control by requesting service and requiring particular reports, and because their requests produced response from the back-end equipment on a "one request/ one response basis").

4. Comcast Intends to Induce Infringement or Has Been Willfully Blind to Infringement

Despite its knowledge of the '011 and '585 patents, Rovi presented evidence supporting

overloaded key search functionality of the asserted claims of the '011 patent, and to perform the storage options functionality of the asserted claims of the '585 patent. (Tr. (Shamos) at 398:5-399:4.).

⁹⁷ Dr. Elliot Schwartz conducted the focus group that Dr. Shamos attended, which is separate and distinct from Dr. Schwartz's survey. (Tr. (Shamos) at 388:8-25; CBr. at 29.).

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its claim that Comcast has been willfully blind to its infringement of claim 9 of the '011 patent, and claims 15 and 22 of the '585 patent. At least for the '585 patent, most tellingly, Comcast did not provide Rovi with a responsive claim chart or a detailed technical response explaining why it contended it did not infringe the '585 patent.⁹⁸ (Tr. (Armaly) at 145:25-146:9.). Comcast's Vice President of Software Development and Engineering, Mr. McCann, and Comcast's Senior Director of Product Management for Consumer Premise Equipment Software, Steven Allinson, also failed to describe an alternative design that Comcast alleged does not infringe the '585 patent.

Although Mr. McCann and Steven Allinson were aware of the patents and this Investigation, and had intricate knowledge of how Comcast's products work, neither witness provided testimony with respect to whether Comcast lacked the intent to infringe the '011 and '585 patents or whether Comcast took any steps to avoid infringement at any point in time (e.g., after the license expired or after receiving Rovi's claim charts), other than the Design Alternatives, which no longer include the highlighting feature required by claim 1 of the '011 patent. (Tr. (McCann) at 1425:5-1428:8; Tr. (Allinson) at 1490:20-1491:16; *see also* Tr. (Kotay) at 503:24-504:20; Section V.B, *supra* (describing Design Alternatives).).

With regard to the '011 patent, Comcast contended that because Veveo dismissed in 2013 its district court complaint in which it asserted the '011 patent, Comcast lacked the requisite intent to induce infringement. (RPBr. at 22; RRBr. at 22.).

However, as Rovi pointed out: (1)

⁹⁸ Comcast argued that it provided "high-level" feedback with respect to Rovi's patent portfolio and offered to give Rovi detailed feedback with regard to specific patents of Rovi's choosing. (Tr. (Armaly) at 168:8-170:16.). However, that meeting never occurred. (*Id.*; *see also id.* at 193:11-24.).

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[REDACTED]; and (2) Veveo agreed to dismiss the 2013 Complaint *without prejudice* so that the patents could be asserted again at a later time. (Tr. (Koenig) at 461:20-462:11.). See *Certain Beverage Brewing Capsules, Components Thereof, & Prods. Containing the Same*, Inv. No. 337-TA-929, Comm'n Op. at 20-21 (Apr. 5, 2016) (requiring evidence that a belief of non-infringement was reasonable and in good-faith); *Certain Microfluidic Devices*, Inv. No. 337-TA-1068, Initial Determination at 127-28 (Sept. 20, 2018) (rejecting unsupported claims of no intent to infringe); see also *Certain Digital Video Receivers & Hardware & Software Components Thereof*, Inv. No. 337-TA-1001, Initial Determination at 232-34, 399-400 (May 26, 2017) (finding intent to infringe where Comcast was provided with claim charts and offered no technical response).

With respect to the '585 patent, Comcast relied upon Rovi's failure to assert its infringement of the '585 patent after the 2010 Comcast License expired on April 1, 2016 to imply that it lacks the requisite intent. (RPBr. at 22.). This is not sufficient evidence to prove that Comcast had a good-faith belief that it has not been infringing the '585 patent. See *Beverage Brewing*, Comm'n Op. at 20-21; *Microfluidic Devices*, Initial Determination at 127-28.

Although *Commil* suggests that a good-faith belief of non-infringement shields it against a claim of indirect infringement, such a belief must be reasonable. *Commil*, 135 S. Ct. at 1928 (stating that a defendant is not liable for induced infringement "if the defendant reads the patent's claims differently, and that reading is reasonable"); see also *Beverage Brewing*, Comm'n Op. at 20-21. This is consistent with Federal Circuit precedent that an accused infringer may defeat a claim of induced infringement by presenting evidence, such as legal opinions, explaining why it reasonably believed it did not infringe. See, e.g., *DSU Med. Corp. v.*

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JMS Co., Ltd., 471 F.3d 1293, 1307 (Fed. Cir. 2006); *Broadcom Corp. v. Qualcomm Inc.*, 543 F.3d 683, 699 (Fed. Cir. 2008). Here, Comcast failed to provide any such evidence supporting its belief of non-infringement.

Accordingly, Rovi has demonstrated that Comcast had knowledge that its acts of inducement constitute infringement. *See Commil*, 720 F.3d at 1367; *Global-Tech*, 131 S. Ct. at 2068-70.

XI. DOMESTIC INDUSTRY REQUIREMENT: ECONOMIC PRONG

A. Legal Standard

The Commission may only find a violation of Section 337 “if an industry in the United States relating to the articles protected by the patent . . . exists or is in the process of being established.” 19 U.S.C. § 1337(a)(2) (emphases added). Typically, a complainant must show that a domestic industry existed at the time the complaint was filed. *See Motiva LLC v. Int’l Trade Comm’n*, 716 F.3d 596, 601 n.6 (Fed. Cir. 2013).

The domestic industry requirement consists of a “technical prong” and an “economic prong.” *See, e.g., Certain Elec. Devices, Including Wireless Commc’n Devices, Portable Music & Data Processing Devices, & Tablet Computs.*, Inv. No. 337-TA-794, Order No. 88, 2012 WL 2484219, at *3 (June 6, 2012); *Certain Unified Commc’ns Sys., Prods. Used with Such Sys., and Components Thereof*, Inv. No. 337-TA-598, Order No. 9 at 2 (Sept. 5, 2007) (“*Communications Systems*”). A complainant satisfies the “technical prong” of the domestic industry requirement when it proves that its activities relate to an article “protected by the patent.” *See Communications Systems*, Order No. 9 at 2. A complainant satisfies the “economic prong” of the domestic industry requirement when it demonstrates that the economic activities set forth in subsections (A), (B), and/or (C) of Section 337(a)(3) have taken place or are taking place with

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respect to the protected articles. *See id.*

Subsection 337(a)(3) states that:

(3) For purposes of paragraph (2), and industry in the United States shall be considered to exist if there is in the United States, with respect to the articles protected by the patent, copyright, trademark, mask work, or design concerned –

- (A) significant investment in plant and equipment;
- (B) significant employment of labor, or capital; or
- (C) substantial investment in its exploitation, including engineering, research and development, or licensing.

19 U.S.C. § 1337(a)(3).

Because the criteria are listed in the disjunctive, satisfaction of any one of them will be sufficient to meet the economic prong of the domestic industry requirement. *Certain Integrated Circuits, Chipsets and Prods. Containing Same*, Inv. No. 337-TA-428, Order No. 10, Initial Determination (May 4, 2000) (“*Integrated Circuits*”) (unreviewed). Establishment of the “economic prong” is not dependent on any “minimum monetary expenditure” and there is no need for a complainant “to define the industry itself in absolute mathematical terms.” *Certain Stringed Musical Instruments and Components Thereof*, Inv. No. 337-TA-586, Comm’n Op. at 25-26 (May 16, 2008) (“*Stringed Instruments*”). However, a complainant must substantiate the nature and the significance of its activities with respect to the articles protected by the patent at issue. *Certain Printing and Imaging Devices and Components Thereof*, Inv. No. 337-TA-690, Comm’n Op. at 30 (Feb. 17, 2011) (“*Imaging Devices*”).

The Commission has interpreted Sections 337(a)(3)(A) and (B) to concern “investments in plant and equipment and labor and capital with respect to the *articles* protected by the patent.” *Certain Ground Fault Circuit Interrupters and Prods. Containing Same*, Inv. No. 337-TA-739, 2012 WL 2394435, at *50, Comm’n Op. at 78 (June 8, 2012) (“*Circuit Interrupters*”) (emphasis

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in original) (quoting 19 U.S.C. §§ 1337(a)(3)(A), (B)).

When a complainant proceeds under Section 337(a)(3)(C), it is not sufficient for the “substantial investment” under subsection (C) to merely relate to articles protected by the asserted patents. Rather, “the complainant must establish that there is a nexus between the claimed investment and asserted patent regardless of whether the domestic-industry showing is based on licensing, engineering, research and development.” *Certain Integrated Circuit Chips & Prods. Containing*, Inv. No. 337-TA-845, Final Initial Determination, 2013 WL 3463385, at *14 (June 7, 2013) (“*Certain Integrated Circuit Chips*”).

In addition, the Commission has definitively stated that investments in plant and equipment or labor and capital that relate to engineering and research and development (“R&D”) (that are expressly identified under subsection (C)), are properly considered under subsections (A) and (B):

The statutory text of section 337 does not limit sections 337(a)(3)(A) and (B) to investments related to manufacturing or any other type of industry. It only requires that the domestic investments in plant and equipment, and employment of labor or capital be “with respect to the articles protected by the patent.” 19 U.S.C. § 1337(a)(3). Moreover, even though subsection (C) expressly identifies “engineering” and “research and development” as exemplary investments in the “exploitation” of the patent, that language does not unambiguously narrow subsections (A) and (B) to exclude those same types of investments.

Certain Solid State Storage Drives, Stacked Elecs. Components, and Prods. Containing Same, Inv. No. 337-TA-1097, Comm’n Op. at 8 (June 29, 2018) (“*Storage Drives*”); *see also, e.g., Certain Marine Sonar Imaging Devices, Including Downscan and Sidescan Devices, Prods. Containing the Same, and Components Thereof*, Inv. No. 337-TA-921, Comm’n Op. at 57-64 (Jan. 6, 2016) (“*Sonar Imaging Devices*”).

There is no mathematical threshold test or a “rigid formula” for determining whether a

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domestic industry exists. *Certain Male Prophylactic Devices, Inc.*, Inv. No. 337-TA-292, Comm'n Op. at 39, USITC Pub. 2390 (June 1991) ("*Male Prophylactic Devices*"). However, to determine whether investments are "significant" or "substantial," the actual amounts of a complainant's investments or a quantitative analysis must be performed. *Lelo Inc. v. Int'l Trade Comm'n*, 786 F.3d 879, 883-84 (Fed. Cir. 2015). Even after *Lelo*, which requires some quantification of a complainant's investments, there is still no bright line as to a threshold amount that might satisfy an economic industry requirement.

It is the complainant's burden to show by a preponderance of evidence that each prong of the domestic industry requirement is satisfied. *Certain Prods. Containing Interactive Program Guide and Parental Control Tech.*, Inv. No. 337-TA-845, Initial Determination, 2013 WL 3463385, at *14 (June 7, 2013) ("*Interactive Program Guide*"). Moreover, the Commission makes its determination by "an examination of the facts in each investigation, the article of commerce, and the realities of the marketplace." *Male Prophylactic Devices*, Comm'n Op. at 39 (quoting *Certain Double Sided-Floppy Disk Drives and Components Thereof*, Inv. No. 337-TA-215, Comm'n Op. at 17, USITC Pub. 1859 (May 1986)).

B. Economic DI Overview

Rovi has proven that a domestic industry exists for its i-Guide, Passport Guide, AS&R, and Next-Gen Platform products, and for its licensee TSI's TiVo Bolt with Experience 4.0. Evidence presented in this Investigation established that from [redacted], Rovi and its licensee invested [redacted] in qualifying domestic industry investments, including more than [redacted] in P&E under subsection (A), [redacted] in labor and [redacted] in capital under (B), and [redacted] in R&D and engineering under (C).

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Dr. Jonathan Putnam,⁹⁹ Rovi's economic expert, concluded that Rovi and TSI have a domestic industry for each DI Product. (Tr. (Putnam at 1235:2-12, 1239:10-13, 1271:5-9.). He testified that Rovi's investments are significant and substantial for each DI Product for the periods of [REDACTED]. (*Id.* at 1241:6-25, 1244:1-16, 1250:9-1251:25, 1253:16-1254:19, 1257:2-1259:1, 1269:1-13.). By contrast, Comcast's expert, Mr. W. Todd Schoettelkotte,¹⁰⁰ did not offer any alternative analysis of Rovi's domestic industry, did not identify a single data point that was wrong, and did not dispute Dr. Putnam's conclusion that Rovi's and/or TSI's investments are significant or substantial. (Tr. (Schoettelkotte) at 2042:11-2046:24.).

For the reasons discussed below, Rovi has proven that it satisfies the economic prong of the DI requirement under Sections 337(a)(3)(A)-(C).

C. Rovi Properly Relied Upon Its Product Allocations in the Ordinary Course of Business

Rovi demonstrated its significant investments in the DI Products through product

⁹⁹ When he testified during the Hearing on October 23, 2018, Dr. Jonathan D. Putnam was the founder and principal of Competition Dynamics. (CPSt. at 9, App. D.). Rovi identified Dr. Putnam as an expert to "define and characterize the domestic industry at issue; to offer testimony on the appropriate remedy, including whether the domestic inventory of the Respondent's Accused Products is commercially significant; to calculate a bond sufficient to protect Rovi from any injury during the presidential review period; and secondary considerations." (*Id.* at 9.).

¹⁰⁰ When he testified during the Hearing on October 25, 2018, Mr. W. Todd Schoettelkotte was the President and a Managing Director of Intellectual Property and Financial Consulting Corp. ("IPFC"). (RPSt. at Ex. D; Tr. (Schoettelkotte) at 1979:20-25.). He described his practice as "focus[ed] mostly . . . on the valuation of intellectual property for the purposes of dispute, and also for the purposes of sale." (Tr. (Schoettelkotte) at 1980:1-4.). Mr. Schoettelkotte also stated that he was "involved in determining or assessing domestic industry as well as remedy and bond and public interest here at the ITC." (*Id.* at 1980:4-6.). Comcast identified Mr. Schoettelkotte as an expert to testify about matters relating to the economic prong of the domestic industry; importation issues; and/or the remedy and bond; and to rebut any testimony by Rovi's experts or fact witnesses regarding any of the areas described above. (RPSt. at 4.).

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allocations it makes in the ordinary course of business. Rolan Sargis,¹⁰¹ Rovi's Vice President of Finance, testified that Rovi manages, tracks, and reports its expenditure data through departments called "cost centers." (Tr. (Sargis) at 1155:3-1157:3; *see also* Tr. (Gaeta) at 227:5-228:25; Tr. (Putnam) at 1231:24-1232:2.). Evidence adduced in this Investigation supports a finding that Rovi's expenditure data is reliable, and does not lack transparency, as Comcast has contended. (RRBr. at 93-99.).

For example, Mr. Sargis explained that [REDACTED]

[REDACTED]
[REDACTED]. (Tr. (Sargis) at 1155:7-1156:16; JX-0170C (Sargis Dep. Tr.) at 18:21-19:3, 46:15-50:3.). Mr. Sargis testified that [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]. (Tr. (Sargis) at 1154:3-1156:16, 1159:2-13, 1165:14-1166:13; *see also* Tr. (Putnam) at 1231:24-1232:12.). Notably, Mr. Sargis testified, and Comcast's expert, Mr. Schoettelkotte did not contest, that [REDACTED]

[REDACTED]
[REDACTED]. (Tr.

¹⁰¹ When he testified during the Hearing on October 22, 2018, Mr. Rolan Sargis was Rovi's Vice President of Finance, a position he held since August 2017. (CPSt. at 2; Tr. (Sargis) at 1152:6-11.). In that capacity, Mr. Sargis testified that his (and his team's) responsibilities include "provid[ing] financial support to the rest of the company, in terms of . . . financial planning analysis, budgeting, forecasting, and . . . support[ing] the management team in terms of any sort of finance decision support." (Tr. (Sargis) at 1152:12-17.). Rovi identified Mr. Sargis as a fact witness to testify generally as to Rovi's investments pertaining to its domestic industry, including Rovi's business process for allocating costs by product. (*Id.*).

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(Sargis) at 1158:6-15; Tr. (Schoettelkotte) at 2041:12-16.).

According to Mr. Sargis and Ms. Gaeta, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED].¹⁰² (Tr. (Sargis) at 1156:17-1157:21; CX-0920C (Cost Center Owners); Tr. (Gaeta) at 227:5-228:18.). Rovi presented evidence that established that [REDACTED]

(See, e.g., CX-0924C [REDACTED]

[REDACTED]). For instance,

[REDACTED]
[REDACTED]
[REDACTED]. (CX-0924C.). With respect to [REDACTED]

[REDACTED]. (Tr. (Sargis) at 1182:8-19; JX-0170C (Sargis Dep. Tr. (Apr. 23, 2018)) at 21:13-22:9, 25:13-26:4; CX-0122C (Sargis Dep. Tr. (June 22, 2018)) at 59:7-63:12.). Ms. Gaeta clarified that [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED].
(Tr. (Gaeta) at 229:1-10.).

Mr. Sargis and Ms. Gaeta testified that [REDACTED]
[REDACTED]

¹⁰²

[REDACTED]
[REDACTED] (Tr. (Gaeta) at 201:3-12; Tr. (Putnam) at 1230:5-1231:23; 1379:25-1380:17.).

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[redacted].¹⁰³ (Tr. (Sargis) at 1156:17-1157:21, 1159:14-1160:4, 1216:20-1217:7; Tr. (Gaeta) at 201:3-12; *see also* Tr. (Putnam) at 1230:5-1231:13.). Specifically, Mr. Sargis explained that

[redacted]

[redacted]. (Tr. (Sargis) at 1159:14-1160:4; JX-0170C (Sargis Dep. Tr.) at 21:16-22:9; *see also* Tr. (Schoettelkotte) at

2048:8-2049:7.). Mr. Sargis testified that [redacted]

[redacted]

[redacted]

[redacted]. (Tr. (Sargis) at 1160:11-1161:3, 1213:1-25.).

Dr. Putnam and Mr. Sargis confirmed that [redacted]

[redacted]

[redacted]. (Tr. (Sargis) at 1162:4-16; Tr. (Putnam) at

1230:5-1231:23; JX-0170C (Sargis Dep. Tr. (Apr. 23, 2018)) at 41:21-42:23, 46:15-48:9.). In

particular, Mr. Sargis explained that [redacted]

¹⁰³ Comcast criticized Ms. Gaeta's explanation of [redacted], asserting that she "had no knowledge of any allocations relating to Rovi US facilities purportedly involved in claimed DI products." (RRBr. at 97 (citing Tr. (Gaeta) at 272:9-273:12, 281:6-16).). Comcast pointed out that she was not familiar with DI-related financial spreadsheets, and there was discordance between Rovi's documents with respect to i-Guide and Passport, and Ms. Gaeta's testimony. (*Id.* (citing Tr. (Gaeta) 262:13-264:16, 286:1-7, 380:19-381:10).). Comcast also disparaged Mr. Sargis' lack of knowledge because, *inter alia*, "he is not involved in the creation or collection of allocations[,]" he did not know "whether materials are prepared in advance of budget meetings," and he had not knowledge "whether guidelines exist for budget meetings." (Tr. (Sargis) at 1162:20-1163:7, 1182:4-7, 1182:20-1183:9, 1183:16-19, 1184:24-1185:25, 1186:14-18, 1187:3-7, 1189:11-15; JX-0170C (Sargis Dep. II) at 28:3-30:4-8, 34:2-34:6, 38:14-39:19, 39:5-19, 40:8-41:20).). Ms. Gaeta and Mr. Sargis may not have had comprehensive institutional knowledge of Rovi's allocation methodology, since both, especially Mr. Sargis, started working at Rovi relatively recently (Ms. Gaeta started in 2014; Mr. Sargis joined in 2017). (Tr. (Gaeta) at 200:10-11; Tr. (Sargis) at 1152:6-11). Nevertheless, their testimony with respect to aspects of the allocation methodology with which they were familiar was credible. Moreover, the areas on which their knowledge was lacking were minor and did not undermine the significance and substantiality of Rovi's overall expenditures given the extent to which Rovi's overall financial information is audited, consistent with general accounting requirements and SEC filing requirements.

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[REDACTED] (Tr. (Sargis) at 1162:4-16); and (ii) incorporated into the segment reporting of Rovi's SEC filings (*id.* at 1160:5-10; CX-0243, CX-0248 to 0251 (Rovi 10-Ks)).

Comcast argued that Rovi's cost center allocations should not be used to satisfy the economic prong because Rovi failed to provide sufficient transparency. (Tr. (Schoettelkotte) at 1984:8-1985:22, 1989:22-1990:7, 2008:10-2010:13.). For example, Comcast's expert, Mr. Schoettelkotte, testified that the allocations themselves are not subject to outside auditing or SEC reporting, and are thus unreliable. (Tr. (Schoettelkotte) at 1989:4-21, 2049:8-20.).

However, as discussed above, Mr. Sargis provided testimony, which Mr. Schoettelkotte did not rebut, that [REDACTED]
[REDACTED]. (Tr. (Sargis) at 1154:3-1156:16, 1158:6-15, 1159:2-13, 1165:14-1166:13; Tr. (Putnam) at 1231:24-1232:12; Tr. (Schoettelkotte) at 2041:12-16.).

Furthermore, consistent with Commission precedent, Rovi is not required to structure its business in any particular manner, and no rigid formula or precise accounting is necessary to satisfy the domestic industry requirement. *See, e.g., Stringed Instruments*, Comm'n Op. at 26 ("A precise accounting is not necessary, as most people do not document their daily affairs in contemplation of possible litigation."); *Certain Table Saws Incorporating Active Injury Mitigation Tech. & Components Thereof*, Inv. No. 337-TA-965, Initial Determination at 12 (Mar. 22, 2016) ("*Table Saws*") (recognizing that "parties may not keep [a] precise record of how their costs are incurred," "[a] precise accounting is not necessary") (internal quotations and citation omitted); *Certain Liquid Crystal Displays and Prods. Containing Same*, Inv. No. 337-TA-631, Order No. 18 (Sept. 23, 2008) ("The Commission has adopted a flexible and market-oriented

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approach in determining the existence of a domestic industry.” (“LCDs”).

Comcast’s expert, Mr. Schoettelkotte, did not refute this.

Q. And you understand that no precise accounting is necessary for the ITC; right?

A. I understand in general that the ITC does not look to at least a level of precision that I can define, if you will.

* * *

Q. You understand that neither Rovi nor any publicly traded company needs to structure its financials just to align with Commission rules; right?

A. Yes, I don’t disagree with that.

(Tr. Schoettelkotte) at 2050:4-19.).

Comcast also contended that because the data Rovi produced did not set out specific activities associated with the cost center expenditures from each cost center manager, there is no way to verify independently Rovi’s allocations. (RRBr. at 94 (citing Tr. (Sargis) at 1183:3-6, 1191:15-1193:9; JX-0170C (Sargis Dep. Tr. (Apr. 23, 2018)) at 66:4-10; CX-0924C.). To the contrary, as Rovi’s fact witnesses and expert explained, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (Tr. (Sargis) at 1158:6-1162:16; Tr. (Gaeta) at 201:3-12,

227:5-229:10; Tr. (Putnam) at 1225:15-1226:21, 1230:5-1231:23, 1380:11-1381:18.).

Rovi produced [REDACTED]

[REDACTED]. (CX-0920C (Tab, “Dept List New,” Columns F, M, & V); Tr. (Sargis) at 1157:4-

1158:5.). Rovi also provided [REDACTED]

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[REDACTED]. (Tr. (Sargis) at 1163:21-1164:10, 1166:6-13; CX-0924C (Cost Center Expenditures)). Rovi produced its public SEC financial reports. (See, e.g., CX-0243; CX-0248-CX-0251.). In addition, Rovi's employees provided testimony describing [REDACTED] [REDACTED]. (See, e.g., Tr. (Sargis) at 1158:6-1162:16, 1213:1-25; Tr. (Gaeta) at 201:3-12, 227:5-229:10.). Based on this information, Dr. Putnam verified, quantified, and classified Rovi's domestic industry investments. He also produced schedules explaining how he performed those calculations. (See CDX-0017C; Tr. (Putnam) at 1225:15-1227:11.).

Mr. Schoettelkotte could have examined the reliability and accuracy of the allocations himself, but he chose not to do so. (Tr. (Schoettelkotte) at 2042:11-2046:24, 2065:6-14.). For example, he could have confirmed Rovi's allocations by "tracking back from the 10-K reports to the expenditures," a question which was raised during the Hearing. (Tr. (Schoettelkotte) at 2065:6-14 ("JUDGE MC NAMARA: Did you ask any questions of Rovi about that tracking back from the 10-K reports to the expenditures? THE WITNESS: I did not ask questions of Rovi. JUDGE MC NAMARA: Okay. Did you request any additional information to see whether or not the spreadsheets tracked to the 10-K reports? THE WITNESS: I did not -- excuse me. I did not request any additional information on that score.")). As Mr. Schoettelkotte's testimony indicates, he made no such effort. (*Id.*).

Additionally, Comcast pointed out that of the [REDACTED] known managers, Dr. Putnam's staff interviewed only [REDACTED]. (Tr. (Putnam) at 1351:25-1352:17.). Comcast also disparaged the fact that while Dr. Putnam chose cost centers that he testified made up [REDACTED] of the DI expenditures for [REDACTED], he and his staff only interviewed the *current* managers of those cost centers. (RRBr. at 95.). Accordingly, Comcast asserted that expenditures for the years

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supervised by managers who were not interviewed should not be included as part of the [] because “there is no transparency into how the non-interviewees performed their allocations.” (*Id.*).

Again, Comcast’s arguments are misguided. Rovi was not under any obligation to interview *all* the cost center managers [] or even those managers who oversaw the claimed [] of the relevant DI expenditures during that timeframe. Tellingly, Mr. Schoettelkotte declined to adopt Comcast’s position with regard to this issue. (Tr. (Schoettelkotte) at 2053:11-16 (“Q. Is it your testimony that Rovi needed to either call here today these [] other cost center managers that weren’t interviewed or that Mr. Putnam had to interview each of these in order to corroborate the internal records of Rovi? A. No, that’s not my testimony.”)).

Furthermore, Comcast was aware of Rovi’s use of cost centers since at least the 1001 Investigation. *See Digital Video Receivers*, ID at 582. Given its knowledge, Comcast could have made detailed inquiries into the responsibilities of the cost center managers during the depositions of three such managers, i.e., Chris Thun, Sarah Gaeta, and James Denney, whom Comcast subpoenaed and deposed in this Investigation, to corroborate Rovi’s allocations that would have provided information from different periods of time, which might have given Comcast a basis for comparison. (CBr. at 109 n.31, 111.). Comcast made no such inquiries. Nor did Comcast seek to depose any of the other cost center owners Rovi identified.¹⁰⁴ (CBr. at

¹⁰⁴ Comcast appeared to suggest that it only deposed three (3) cost center managers “[t]o use the limited number of its depositions efficiently,” and that Comcast relied on Rovi’s interrogatory responses “to identify among [] of cost center managers those vital to Rovi’s DI proffer.” (RRBr. at 97 n.22.). This “suggestion” does not frustrate Rovi’s argument that Comcast could have, and should have, asked at least these individuals about their specific responsibilities, given Mr. Schoettelkotte and Comcast’s contention that Rovi’s cost center allocations lack transparency because Rovi allegedly did not produce records that clearly identified the activities associated with each cost center’s expenditures.

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111.). As noted during the Hearing, the interviews were a point-in-time survey and not intended to generally encompass the allocation methods of prior cost center managers. (*Id.* at 2061:20-2063:16; *see also* CBr. at 110 n.32 (citations omitted).).

Comcast also asserted that certain cost center managers Dr. Putnam interviewed and listed in CX-1346C, [REDACTED] that are not associated with any of the DI Products at issue here. (Tr. (Putnam) at 1352:11-1354:17; CX-1346C; CX-0920C.). Even if, *arguendo*, this is the case, and such expenditures are not counted as part of the [REDACTED], as Comcast suggested, this does not meaningfully undermine the significance and substantiality of Rovi's investments in the DI Products, as discussed in Section XI.D below.

It is telling that during the Hearing, Mr. Schoettelkotte refrained from offering his opinions that Rovi's allocations are *actually* unreliable. Rather, Mr. Schoettelkotte cautiously testified that because Rovi uses cost centers for *internal* management purposes, *he could not opine with respect to their reliability*. His critique was directed to aspects of Rovi's accounting most susceptible to criticism.

Q. Your testimony here today, in sum and part, is that the process Rovi actually relies on to make its investment decisions is not transparent enough to be reliable to the Commission; right?

A. Well, I guess I would maybe modify that just a bit. What I've endeavored to do is identify the allocations that would be relevant to the domestic industry products. Obviously, those allocations would be different than what you might refer to as a financial accounting or reporting to auditors or reporting to the SEC, just because they're internal in nature. *So without that transparency, I'm unable to do that with any degree of certainty. So with that backdrop, I guess that would just be maybe the answer that I would provide you.*

* * *

Q. And your testimony is that that is not sufficient to satisfy the standards of the

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ITC?

A. No, my testimony is is [sic] that I don't have the ability to have an awareness of how those allocations were performed or the reliability of those allocations based upon the evidence produced.

Q. So that's not your opinion, that its internal allocation processes are not sufficient for the ITC?

A. Again, I have not looked at Rovi's controls or how they perform those allocations. I don't know. What I can tell you is is [sic] based upon the information that I have reviewed, *I have been unable to provide or have any level of clarity as to how that happens.*

Q. But you do know that there are people working in the U.S. and spending money; right?

A. That's my understanding.

(*Id.* at 2049:8-22, 2059:4-19 (emphases added).).

Mr. Schoettelkotte's testimony also underscores the fact that he did not identify "a single data point" that he believed was "wrong."

Q. The opinion you gave today is that the data resulting from Rovi's allocations is unreliable; right?

A. The opinion I gave today is that based upon the manner in which it was provided, there's no ability for me to review, test or verify that data, to identify any reliable measure of how those allocations were arrived at or any measure of accuracy, or the ability to identify their reliability.

Q. And based on that, you have actually not pointed to a single number in Dr. Putnam's spreadsheet or Rovi's calculations and said, this number is in actuality wrong?

A. There would be no way of knowing. There's a lack of transparency, and I've discussed that at length.

Q. I'm not asking you why. I'm asking you, have you identified a single data point that you can affirmatively testify is wrong?

A. I'm sorry. You're right, I haven't, for the reasons that I mentioned.

(*Id.* at 2043:13-2044:5.).

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In sum, Comcast failed to present compelling evidence or legal argument to support its claim that Rovi's cost center allocation methodology is unreliable or unreasonable. In this Investigation, Rovi's cost center allocation methodology is the same one it relies on in the ordinary course of business and it is reasonable for purposes of domestic industry. Moreover, Rovi has relied upon this methodology to prove a domestic industry in other investigations before the Commission, which the Commission either affirmed, or determined not to review. *See Interactive Program Guide*, Initial Determination at 305, 312;¹⁰⁵ *Digital Video Receivers*, Initial Determination at 580-84.¹⁰⁶ For these reasons, Rovi's methodology is found to be reliable.

D. Rovi's Investments in Its Domestic Industry Are Significant Under Subsections (A) and (B) and Substantial Under Subsection (C)

1. Classic Guides and Veveo AS&R

a) Rovi's Investment in Plant and Equipment

Rovi's expert, Dr. Putnam, testified that from [REDACTED], Rovi's domestic investments in plant and equipment ("P&E") for i-Guide and Passport totaled approximately [REDACTED] and [REDACTED], respectively. (Tr. (Putnam) at 1241:6-13; CDX-0017C.0005; CDX-0016C.0021).

From [REDACTED], Dr. Putnam confirmed that Rovi made domestic investments in P&E totaling more than [REDACTED] for i-Guide and more than [REDACTED] for Passport. (Tr. (Putnam) at 1241:6-13; CDX-0017C.0005; CDX-0016C.0021). Dr. Putnam also testified that by the end of [REDACTED], Rovi had built up a stock of more than [REDACTED] in P&E allocated to i-Guide and more

¹⁰⁵ The Commission affirmed the ID's finding in Inv. No. 337-TA-845 that Rovi met the economic prong of the DI requirement. (Doc. ID No. 521881 at 4-5 (Nov. 12, 2013).)

¹⁰⁶ The Commission determined not to review the 1001 ID's finding that Rovi satisfied the economic prong of DI requirement. (Doc. ID No. 619655 at 35-36 (Aug. 10, 2017).)

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than [] allocated to Passport. (Tr. (Putnam) at 1240:3-15, 1241:14-1242:2; CX-0243 (10-K); CX-0248 to CX-0251 (10-Ks); CX-0924C (Cost Center Expend.); CDX-0016C.0023; CDX-0017C.0002.).

Dr. Putnam testified that from [], Rovi invested more than [] in P&E for AS&R, with [] of that investment in []. (Tr. (Putnam) at 1253:16-25; CDX-0017C.0005; CDX-0016C.0038; CX-0924C (Cost Center Expend.).¹⁰⁷

Dr. Putnam also gave his opinions, which Mr. Schoettelkotte did not contest, that Rovi's investments with respect to the Classic Guides and AS&R are significant under subsection (A). (Tr. (Putnam) at 1239:10-13, 1241:6-1242:2, 1253:25; Tr. (Schoettelkotte) at 2046:6-24.).

Based on the evidence presented in this Investigation, it is a finding that Rovi's investments in plant and equipment for the Classic Guide and AS&R DI products are significant. Accordingly, Rovi has satisfied the economic prong of the DI requirement under Section 337(a)(3)(A).

b) Rovi's Investment in Labor and Capital

Dr. Putnam testified that from [], Rovi invested more than [] in labor for i-Guide and more than [] for Passport. (Tr. (Putnam) at 1244:1-9; CDX-0016C.0026; CDX-0017C.0006, .9-.10; CX-0918C; CX-0924C.). Dr. Putnam concluded based upon his evaluation and analysis that from [], Rovi's domestic investments in labor exceeded [] for i-Guide and [] for Passport. (Tr. (Putnam) at 1244:1-9; CDX-0016C.0026; CDX-0017C.0006, .9-.10; CX-0918C; CX-0924C.).

Dr. Putnam also testified that from [], Rovi invested more than []

¹⁰⁷ Some of the corresponding investment figures for AS&R are labeled as "FanTV API / Veveo Adv S&R" in CX-0924C. (See Tr. (Sargis) at 1165:6-13; Tr. (Koenig) at 441:3-20.).

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[] in labor related to AS&R, with more than [] invested in [] (Tr. (Putnam) at 1254:1-7; CDX-0017C.0002; CDX-0016C.0039; CX-0924C (Cost Center Expend)).

Dr. Putnam concluded that from [], Rovi spent more than [] of capital on i-Guide and more than [] on Passport. (Tr. (Putnam) at 1250:3-17; CDX-0016C.0032; CDX-0017C.0011; CX-0924C (Cost Center Expend.); CX-0243 (10-K), CX-0248 to CX-0251 (10-Ks)). Dr. Putnam also offered his opinions that Rovi spent more than [] of capital on i-Guide and more than [] on Passport in []. (Tr. (Putnam) at 1250:3-17; CDX-0016C.0032; CDX-0017C.0011; CX-0924C (Cost Center Expend.); CX-0243 (10-K), CX-0248 to CX-0251 (10-Ks)).

With respect to AS&R, Dr. Putnam testified that from [], Rovi invested [] in capital related to AS&R, with [] invested in []. (Tr. (Putnam) at 1254:8-13; CDX-0017C.0011; CDX-0016C.0040; CX-0243 (10-K), CX-0249 to CX-0251 (10-Ks)).

Dr. Putnam also offered his opinions, which Mr. Schoettelkotte did not challenge, that Rovi's investments with respect to the Classic Guides and AS&R are significant under subsection (B). (Tr. (Putnam) at 1239:10-13, 1244:1-9, 1250:3-17, 1254:1-24; Tr. (Schoettelkotte) at 2046:6-24.).

Based on the evidence adduced in this Investigation, it is a finding that Rovi's investments in labor and capital for the Classic Guide and AS&R DI products are significant. Accordingly, Rovi's has satisfied the economic prong of the DI requirement under Section 337(a)(3)(B).

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c) **Rovi's Investment in Exploitation of Its Patents, Based on Engineering, Research and Development**

With regard to the Classic Guides, Dr. Putnam confirmed that from [REDACTED], Rovi invested more than [REDACTED] in R&D and engineering in i-Guide and more than [REDACTED] in Passport. (Tr. (Putnam) at 1250:18-1251:19; CDX-0016C.0035; CDX-0017C.0014; CX-0924C (Cost Center Expenditures)). He testified that in [REDACTED], Rovi invested more than [REDACTED] on i-Guide and more than [REDACTED] on Passport. (Tr. (Putnam) at 1251:11-16; CDX-0016C.0035; CDX-0017C.0014; CX-0924C (Cost Center Expenditures)).

With respect to AS&R, Dr. Putnam testified that from [REDACTED], in the area of R&D and engineering, Rovi invested, on average, more than [REDACTED] a year, totaling [REDACTED] during that period. (Tr. (Putnam) at 1254:14-19; CDX-0017C.0014; CDX-0016C.0041; CX-0924C (Cost Center Expenditures)). He confirmed that from [REDACTED], Rovi invested [REDACTED]. (Tr. (Putnam) at 1254:14-19; CDX-0017C.0014; CDX-0016C.0041)).

Dr. Putnam also offered his opinions, which Mr. Schoettelkotte did not refute, that Rovi's investments with respect to the Classic Guides and AS&R are substantial under subsection (C). (Tr. (Putnam) at 1251:11-19; Tr. (Schoettelkotte) at 2046:6-24.).

Section 337(a)(3)(C) requires substantial investment in the "exploitation" of the asserted patent, which can only be satisfied if a nexus is found to exist between the claimed investment and the asserted patent. *Certain Integrated Circuit Chips*, Inv. No. 337-TA-845, 2013 WL 3463385, at *14. As Rovi asserted, its R&D and engineering investments in the Classic Guides and AS&R exploit the '585 and '011 patents, respectively, because, *inter alia*, the products practice the patents. (See Sections VII.B.3, VIII.B.1.). See *Certain Integrated Circuit Chips & Prods. Containing the Same*, Inv. No. 337-TA-859, Comm'n Op. at 42 (Aug. 22, 2014)

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(“*Certain Circuit Chips*”) (noting that investment in an article that practices a patent “supports the inference that the investment exploits the patented invention”).

Rovi also presented evidence demonstrating that its R&D and engineering investments in the Classic Guides exploit the recording options functionality claimed in the ’585 patent. Dr. Putnam testified that the results of extensive regression testing,¹⁰⁸ lab trial testing, and field trial testing confirm that these products practice the recording options feature. (Tr. (Putnam) at 1259:20-1266:9; CDX-0017C.0025-26; CDX-0016C.0056; *see also* Tr. (Gaeta) at 215:18-

221:9.). Additionally, Ms. Gaeta testified that [REDACTED]
[REDACTED]. (Tr. (Gaeta) at 221:10-225:11.).

Specifically, Ms. Gaeta explained that [REDACTED]
[REDACTED].

(*Id.* at 221:10-223:3.).

With regard to the ’011 patent, Mr. Koenig testified that [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. (Tr. (Koenig) at 439:9-23; JX-0099C (Fennelly Dep. Tr.) at 57:22-59:20; (CDX-0016C.0054-55, 58).).

Based on the evidence presented in this Investigation, it is a finding that Rovi’s investments in engineering and R&D for the Classic Guides and AS&R are substantial and

¹⁰⁸ According to Ms. Gaeta, [REDACTED]
[REDACTED] (Tr. (Gaeta) at 215:18-220:2.). Ms. Gaeta testified that [REDACTED]
[REDACTED]. (*Id.* at 219:15-220:2.).

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exploit the '585 and '011 patents. Accordingly, Rovi's has satisfied the economic prong of the DI requirement under Section 337(a)(3)(C).

2. Next-Gen Platform

a) Domestic Industry for Next-Gen Is In the Process

Domestic industry may also be satisfied for a product in development. An industry is “in the process” if: (i) the patent owner “is taking the necessary tangible steps to establish such an industry in the United States”; and (ii) there is “a significant likelihood that the industry requirement will be satisfied in the future.” H. Rep. 100-40 at 157 (emphasis added); S. Rep. 100-71 at 130; *Stringed Instruments*, Comm’n Op. at 16; *Digital Cameras*, ID at 73.

The statute does not require that a product be in production when the complaint is filed. (See Section VII.B.3(c)). A “production-ready” requirement would effectively eliminate “in the process” cases altogether and provide Section 337 relief for only those that had already exploited their patents in an article. *Digital Cameras*, Initial Determination at 44-47; *Certain Non-Volatile Memory Devices & Prods. Containing Same*, Inv. No. 337-TA-1046, Comm’n Op. at 41-44 (Oct. 26, 2018) (finding that § 337 does not require commercial production for in the process claims).

Additionally, the legislative history and certain Commission precedent strongly suggest that for “in the process of establishing” cases, there is flexibility with regard to the technical DI product, and that a complainant could rely on a prototype that is still in the process of being developed past the time of the filing of a complaint, to the close of fact discovery. *Digital Cameras*, Initial Determination at 48; *Certain Computs. and Comput. Peripheral Devices, and Components Thereof, and Prods. Containing Same*, Inv. No. 337-TA-841, Comm’n Op. at 37, 39 (Jan. 9, 2014) (“*Certain Computer Peripheral Devices*”).

In this Investigation, Rovi filed the Complaint on February 8, 2018, and fact discovery

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closed on June 29, 2018. (Order No. 4 at 3 (Apr. 16, 2018)).¹⁰⁹

i. Tangible Steps Before Filing the Complaint

Rovi presented evidence in this Investigation which demonstrated that prior to filing the Complaint, Rovi took tangible steps toward completing and launching Next-Gen. Rovi's fact witnesses testified that after acquiring Fanhattan and its IP-based guide called FanTV in 2014, and TiVo and its engineers and its hardware and software technology in 2016, [REDACTED]

[REDACTED]. (Tr. (Gaeta) at 235:15-236:4, 236:20-237:24, 239:3-242:8; JX-0101C (Gaeta Dep. Tr.) at 95:8-96:5; JX-0126C (Thun Dep. Tr.) at 11:12-12:4, 16:6-17:19, 46:18-47:9; Tr. (Armaly) at 119:15-25, 122:20-25, 123:15-125:10.).

Testimonial and documentary evidence supports a finding that by January 2018, approximately one (1) month before Rovi filed its Complaint, Rovi's development of Next-Gen was well under way. For example, [REDACTED]

[REDACTED]. (Tr. (Gaeta) at 243:3-244:10; CX-0488C (Product Roadmap) at 7 (showing [REDACTED] [REDACTED])). Mr. Thun, Vice

President of Product Management at TSI, testified that [REDACTED]

[REDACTED]. (JX-0126C (Thun Dep. Tr.) at 99:13-21.).

Moreover, Mr. Thun and Ms. Gaeta confirmed that by this time, [REDACTED]

¹⁰⁹ On October 10, 2018, Comcast filed a motion in which it sought to exclude a new version of source code ([REDACTED]) for Next-Gen that Rovi made available for the time on September 26, 2018, months after the close of fact discovery, and without leave. (Motion Docket No. 1103-047 (Oct. 10, 2018)). On October 15, 2018, Rovi filed an opposition to Comcast's motion. (Doc. ID No. 658912 (Oct. 15, 2018)). In its opposition, Rovi stated that it "expressly notified Comcast that it *did not intend* to offer [the [REDACTED] source code] into evidence," which Comcast also acknowledged in its motion. (Opp'n at 1; Mot. at 2.). During the Hearing, Rovi did not rely upon or enter into evidence the [REDACTED] source code. Thus, this motion is moot as is its subject.

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[REDACTED]

[REDACTED]. (Tr. (Gaeta) at 244:11-245:6; JX-0126C (Thun Dep. Tr.) at 16:6-17:19.). There is also evidence demonstrating that [REDACTED]

[REDACTED]. (Tr. (Gaeta) at 249:15-253:6; CX-0776C (JIRA ticket); CX-0800C (JIRA ticket).).

In addition, Rovi provided evidence that Rovi created marketing presentations describing the features, advantages, and value proposition of Next-Gen. (Tr. (Gaeta) at 254:6-15; CX-0477C.). In January 2018, Rovi announced Next-Gen to the public at the Consumer Electronics Show (CES) 2018 conference. (Tr. (Gaeta) at 245:19-247:25; CX-0823C.0009-10 (Executive Briefing Book).).

Comcast argued that investments associated with Next-Gen before the fall of 2017 should not be considered because the expenditures also supported earlier products, such as [REDACTED]. (RBr at 112, 114; Tr. (Putnam) at 1362:23-1363:16.). However, whether investments benefit other products is irrelevant. *Certain Robotic Vacuum Cleaning Servs. & Components Thereof*, Inv. No. 337-TA-1057, Initial Determination at 367-68 (June 25, 2018) (unreviewed in relevant part) ("*Robotic Vacuum*"). Comcast's contention does not undermine the fact that by the end of [REDACTED], Rovi was spending, monthly, an average of [REDACTED] in P&E, [REDACTED] in labor expenditures, [REDACTED] in capital expenditures, and [REDACTED] in R&D and engineering investments. (CX-0924C (Cost Center Expenditures); CDX-0016C.0047-48, 50.). These investments are significant and substantial. *See, e.g., Digital Cameras*, Initial Determination at 84-85 (finding substantial investments for a developing product based on average monthly investments).

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ii. Tangible Steps Before the Close of Discovery

Subsequent to filing its Complaint and prior to the close of fact discovery, Rovi provided evidence establishing that it had launched the Next-Gen platform, acquired a customer base, began earning revenue, and had continued developing additional features intended to enhance the next release of the Next-Gen. For example, by [REDACTED]

[REDACTED].
(Tr. (Gaeta) at 248:9-249:20; CX-0476C.0002 (STB Roadmap)). Rovi released Next-Gen ([REDACTED]) to its consumer retail business and to its operator market in April 2018. (Tr. (Gaeta) at 248:6-8; JX-0096C (Denney Dep. Tr.) at 63:15-64:24.).

Mr. Denney, Vice President of Product & Strategy at TSI, testified that following the initial release in April 2018, [REDACTED]
[REDACTED]. (JX-0096C (Denney Dep. Tr.) at 73:5-22, 102:17-103:10, 290:2-21; RX-0363C.0027 (Rovi Resp. to Rog. 43); RX-0372C.0040 (Rovi Resp. to Rog. 79); Tr. (Gaeta) at 248:6-253:6.). Rovi also presented evidence showing its continued development of [REDACTED]
[REDACTED]. (Tr. (Gaeta) at 248:6-253:6; CX-0789C (JIRA ticket) (created in 2018, with engineering comments throughout the year); CX-0790C (same); CX-0776C (same); CX-0800C (same)).

Ms. Gaeta testified that by [REDACTED]
[REDACTED]
[REDACTED]. (Tr. (Gaeta) at 249:15-253:6.). Rovi made available to Comcast both the source code and a running instance of the prototype before the close of fact discovery, which Comcast's experts inspected. (Doc. ID

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No. 658912, Rovi Opp'n to Comcast's Mot. to Exclude (Mot. No. 1103-047) at 2, 6 n.4 (Oct. 15, 2018); *see also* n.109, *supra*).

Rovi provided evidence that in addition to its website promotions, Rovi continued to market Next-Gen through licensees by [REDACTED] [REDACTED]. (Tr. (Gaeta) at 253:7-254:15; CX-0235.). Ms. Gaeta also testified that [REDACTED] [REDACTED]. (Tr. (Gaeta) at 254:16-255:13; CX-0926C.).

Mr. Denney confirmed that by the close of fact discovery, for TiVo Bolt hardware users, the April 2018 software release [REDACTED] (JX-0096C (Denney Dep. Tr.) at 232:11-233:10; *see also* Tr. (Gaeta) at 255:14-18.). Record evidence also supports a finding that Rovi licensed the Next-Gen product to [REDACTED] [REDACTED]. (JX-0101C (Gaeta Dep. Tr.) at 213:20-214:16, 216:2-20.). Given these milestones, it is difficult to doubt Rovi's expected revenue growth with respect to this product. (Tr. (Gaeta) at 255:19-256:2.).

In sum, Rovi's evidence and proof support its claims that it has taken tangible steps to establish a domestic industry for this product and that there is a significant likelihood that Rovi will satisfy the domestic industry requirement within a reasonable time in the future. Thus, Rovi has demonstrated that a domestic industry for Next-Gen is in the process of being established. *See, e.g., Stringed Instruments, Comm'n Op.* at 16.

b) Rovi's Investment in Plant and Equipment

Dr. Putnam confirmed that from [REDACTED], Rovi invested [REDACTED] in plant and equipment for Next-Gen, with over [REDACTED] of that investment taking made in [REDACTED]

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[redacted]. (Tr. (Putnam) at 1257:11-15; CDX-0017C.0005; CDX-0016C.0047; CX-0924C (Cost Center Expend.). Dr. Putnam explained that as a result, by the end of [redacted], Rovi had built up a stock of over [redacted] in plant and equipment allocated to Next-Gen. (Tr. (Putnam) at 1257:2-10; CDX-0017C.0003; CDX-0016C.0046); CX-0924C (Cost Center Expend.).

Dr. Putnam also offered his opinions that Rovi's investments are significant under subsection (A), which Mr. Schoettelkotte did not contest. (Tr. (Putnam) at 1257:2-17; Tr. (Schottelkotte) at 2046:6-24.).

Based on the evidence presented in this Investigation, it is a finding that Rovi's investments in plant and equipment for Next-Gen are significant. Accordingly, Rovi's has satisfied the economic prong of the DI requirement under Section 337(a)(3)(A).

c) Rovi's Investment in Labor and Capital

Dr. Putnam testified that from [redacted], Rovi invested more than [redacted] in Next-Gen-related labor (compensation, benefits, and commissions), with more than [redacted] invested in [redacted]. (Tr. (Putnam) at 1257:18-22; CDX-0017C.0006; CDX-0016C.0048; CX-0924C (Cost Center Expend.). Dr. Putnam explained that by the end of [redacted], Rovi had employed [redacted] full-time equivalent employees to work on Next-Gen. (Tr. (Putnam) at 1257:23-1258:2; CDX-0016C.0048.). He also confirmed that from [redacted], Rovi spent [redacted] in U.S. capital to support Next-Gen, [redacted] of which was spent in [redacted]. (Tr. (Putnam) at 1258:3-10; CDX-0017C.0011; CDX-0016C.0049.).

Dr. Putnam offered his opinions that Rovi's investments in labor and capital are significant under subsection (B), which Mr. Schoettelkotte did not refute. (Tr. (Putnam) at 1257:18-1258:11; Tr. (Schottelkotte) at 2046:6-24.).

Based on the evidence adduced in this Investigation, it is a finding that Rovi's

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investments in labor and capital for Next-Gen are significant. Accordingly, Rovi's has satisfied the economic prong of the DI requirement under Section 337(a)(3)(B).

d) Rovi's Investment in Exploitation of Its Patents, Based on Engineering, Research and Development

Dr. Putnam testified that from [redacted], Rovi invested more than [redacted] in R&D and engineering for Next-Gen, over [redacted] of which was made in [redacted]. (Tr. (Putnam) at 1258:11-16; CDX-0017C.0014; CDX-0016C.0050); CX-0924C (Cost Center Expend.)).

Dr. Putnam also offered his opinions, which Mr. Schoettelkotte did not challenge, that Rovi's investments for Next-Gen are substantial under subsection (C). (Tr. (Putnam) at 1258:11-1259:1; Tr. (Schoettelkotte) at 2046:6-24.).

Additionally, Rovi adduced evidence confirming that its investments in R&D and engineering concerning Next-Gen exploit the '011, '585, and '741 patents. For example, Ms.

Gaeta testified that before the close of fact discovery, Rovi's investments included [redacted]

[redacted]

[redacted]

[redacted]. (Tr. (Gaeta) at 244:11-245:6.). Rovi also presented evidence showing that [redacted]

[redacted]

[redacted]. (CX-0776C (JIRA ticket); CX-0789C-CX-

0790C, CX-0800C (JIRA tickets); CX-0476C.0002 (STB Roadmap) (indicating that [redacted]

[redacted]

[redacted]; CDX-0017C.0025.). Ms. Gaeta explained that

[redacted]

[REDACTED]

[REDACTED]. (Tr. (Gaeta) at 244:11-245:6, 252:22-253:6; CX-0476C (STB Roadmap)).

Thus, Rovi has established that a nexus exists between Rovi's R&D and engineering investments in Next-Gen, and the patented features of the '011, '741, and '585 patents, which Next-Gen practices. (Tr. (Putnam) at 1259:20-1267:25; CDX-0017C.0025-26 (Nexus); CDX-0017C.0032 (Cost Center); CDX-0016C.0054-58; Sections VII.B, VIII.B, IX.B.). As Rovi pointed out, none of Comcast witnesses rebutted Rovi's nexus evidence. (CBr. at 108.).

Based on the evidence that Rovi presented in this Investigation, it is a finding that Rovi's investments in engineering and R&D for Next-Gen are substantial and exploit the '011, '585, and '741 patents. Accordingly, Rovi has satisfied the economic prong of the DI requirement under Section 337(a)(3)(C).

E. Licensee TSI'S Investments Satisfy the Economic Prong of the DI Requirement

TiVo Solutions, Inc. ("TSI") has a license from Rovi to practice the Asserted Patents. (Tr. (Armaly) at 129:6-130:8; CX-1424C; JX-0084C; JX-0058C; CX-1374C-1375C (Agreements)). Rovi acquired TSI in 2016, which, in its ordinary course of business, operates differently than Rovi. (Tr. (Sargis) at 1171:10-1172:16; JX-0096C (Denney Dep. Tr.) at 257:18-259:20; Tr. (Putnam) at 1268:2-15; CX-0922C (Hydra/Bolt Expenditures)). Unlike Rovi, [REDACTED]

[REDACTED] 110

110 [REDACTED] (Tr. (Sargis) at 1171:10-23; CX-0922C (Expenditures)). According to Rovi, TSI multiplied the [REDACTED] in the U.S. by [REDACTED] to arrive at the qualifying investments shown in Table 2 (included as DI Attachment 38). (CBr. at 116-17 (citing *Certain Robotic Vacuum Cleaning*

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In the [redacted], [redacted]. (Tr. (Armaly) at 127:9-24.). TSI started developing TiVo Bolt with Experience 4.0 in [redacted], and launched the product in October 2017. (CX-0922C (Summary Tab) (capturing investments for TiVo Bolt going back to [redacted])); JX-0096C (Denney Dep. Tr.) at 190:7-10, 151:11-18; CX-0921C (TiVo Bolt Shipments); Tr. (Sargis) at 1178:1-20.). Mr. Denney, the TiVo Bolt with Experience 4.0 product lead, explained that TiVo Bolt with Experience 4.0 is a physical STB installed with IPG software that practices the '585 and '741 patents. (JX-0096C (Denney Dep. Tr.) at 58:1-59:15.).

1. TSI's Investments in TiVo Bolt with Experience 4.0 Are Significant Under Subsections (A) and (B) and Substantial Under Subsection (C)

Dr. Putnam testified that by the end of [redacted], TSI built up a stock of approximately [redacted], which was allocated to TiVo Bolt with Experience 4.0. (Tr. (Putnam) at 1269:1-6; CX-0253 (10-K); CDX-0017C.0037; CX-0016C.0064.). Additionally, Dr. Putnam testified that from [redacted], TSI invested more than [redacted] in labor related to TiVo Bolt with Experience 4.0. (Tr. (Putnam) at 1269:1-9; CDX-0017C.0038; CDX-0016C.0064.). He also confirmed that from [redacted], TSI invested more than [redacted] in capital related to TiVo Bolt with Experience 4.0. (Tr. (Putnam) at 1269:1-9; CX-0017C.0041; CX-0016C.0064.).

Moreover, Dr. Putnam offered his opinions, which Mr. Schoettelkotte did not refute, that for TiVo Bolt with Experience 4.0, TSI made significant investments in plant and equipment under subsection (A) and labor and capital under subsection (B). (Tr. (Putnam) at 1269:1-13, 1271:5-9; Tr. (Schoettelkotte) at 2046:6-24.).

Servs. & Components Thereof, SEP Inv. No. 337-TA-1057, Initial Determination at 358, 368 (June 25, 2018) (accepting investment calculation based on labor hours).)

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Additionally, Dr. Putnam testified that TSI invested substantially in R&D and engineering to exploit the '585 and '741 patented features of the TiVo Bolt with Experience 4.0 under subsection (C). From [redacted], the evidence shows that TSI invested more than [redacted] [redacted] in R&D and engineering for the TiVo Bolt with Experience 4.0. (Tr. (Putnam) at 1269:1-11; CDX-0017C.0042; CDX-0016C.0064.).

Dr. Putnam offered his opinions that TSI's R&D and engineering investments in TiVo Bolt with Experience 4.0 are substantial, which Mr. Schoettelkotte did not contest. (Tr. (Putnam) at 1269:10-13, 1271:5-9; Tr. (Schoettelkotte) at 2046:6-24.).

Rovi also adduced evidence that TSI's investments in R&D and engineering related to TiVo Bolt with Experience 4.0 exploit the '585 and '741 patents because the product practices the '585 and '741 patents. *Integrated Circuit Chips*, Comm'n Op. at 42. As Mr. Denney

explained, [redacted]

[redacted]. (JX-0096C (Denney Dep. Tr.) at 263:5-16, 285:13-25.). [redacted]

[redacted]

[redacted]. (JX-0096C (Denney Dep. Tr.) at 215:19-219:17; CDX-0017C.0025-26; Tr. (Putnam) at 1269:18-23.). Dr. Putnam interviewed Mr.

Denney to confirm [redacted]

[redacted]. (CDX-0017C.0025-26; Tr. (Putnam) at 1269:10-23.).

Relying upon these interviews and other evidence produced in this Investigation, Dr. Putnam concluded that a nexus exists between TSI's R&D and engineering investments and the patented features of the '585 and '741 patents, which the TiVo Bolt with Experience 4.0

practices. (Tr. (Putnam) at 1269:18-23.). As Rovi observed, none of Comcast's witnesses rebutted this nexus evidence. (CBr. at 119.).

Based on the evidence that Rovi provided in this Investigation, it is a finding that TSI's investments in engineering and R&D for TiVo Bolt with Experience 4.0 are substantial and exploit the '585 and '741 patents. Accordingly, in addition to investments in its own DI Products, Rovi has satisfied the economic prong of the DI requirement under Section 337(a)(3)(A)-(C) through TSI's investments.

XII. RECOMMENDATION ON REMEDY AND BOND

This decision recommends: (1) a Limited Exclusion Order with a standard certification provision and service and repair exception; (2) a Cease and Desist Order with a standard service and repair exception; and (3) no bond during the Presidential Review Period.

A. Legal Standard

Pursuant to Commission Rule 210.42, an ALJ must issue a recommended determination on: (i) an appropriate remedy if the Commission finds a violation of Section 337, and (ii) an amount, if any, of the bond to be posted. 19 C.F.R. § 210.42(a)(1)(ii). When a Section 337 violation has been found, as here, "the Commission has the authority to enter an exclusion order, a cease and desist order, or both." *Certain Flash Memory Circuits and Prods. Containing the Same*, Inv. No. 337-TA-382, Comm'n Opinion on the Issues Under Review and on Remedy, the Public Interest and Bonding, at 26 (June 9, 1997).

Upon a finding of infringement, 19 U.S.C. § 1337(d) provides for a Limited Exclusion Order ("LEO"), directed to the products of named respondents, excluding any articles that infringe one or more claims of the asserted patents. 19 U.S.C. § 1337(d). A Cease and Desist Order ("CDO") is also appropriate when the evidence demonstrates the presence of

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commercially significant inventory in the United States. 19 U.S.C. § 1337(f); *see also Certain Crystalline Cefadroxil Monohydrate*, Inv. No. 337-TA-293, Comm'n Opinion, USITC Pub. No. 2391, 1991 WL 790061 at *30-32 (June 1991). Infringing articles may enter upon the payment of a bond during the sixty-day Presidential Review Period. 19 U.S.C. § 1337(j)(3). The bond is to be set at a level sufficient to “offset any competitive advantage resulting from the unfair method of competition or unfair act enjoyed by persons benefiting from the importation.” *Certain Dynamic Random Access Memories, Components Thereof and Prods. Containing Same*, Inv. No. 337-TA-242, Comm'n Opinion, 1987 WL 450856 at 37 (Sept. 21, 1987).

B. A Limited Exclusion Order Is Warranted

Rovi requested that the Commission issue a LEO, with no certification provision, which would bar the entry of all of the Accused Products found to infringe the Asserted Patents. (CBr. at 121.). Specifically, Rovi requested that the Commission issue a LEO “directed to each named Respondent, their subsidiaries, related companies, agents, affiliates, and suppliers that import the Accused Products on behalf of Comcast, to exclude the entry into the United States of the Accused Products.” (*Id.*). In other words, Rovi seeks an exclusion order that applies against not only Comcast, but also non-parties “ARRIS and Technicolor—the importers of record acting for Comcast.” (*Id.*).

In rebuttal, Comcast argued that the Commission should limit any issued LEO to conduct that actually violates Section 337. (RRBr. at 110.). By this, Comcast apparently means that a LEO should not include within its scope non-parties ARRIS or Technicolor or “products initially imported prior to April 1, 2016, as they were all under license and any Rovi patent rights in them have been exhausted.” (*Id.* at 110-11.). Comcast also contended that a LEO should identify the specific actions found to violate Section 337, such as “re-importation of refurbished devices” or

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“sale after importation through Comcast charging a fee for equipment that was not returned when a customer cancelled service,” as appropriate. (*Id.*) Similarly, in the event of a violation based on infringement of the '585 patent, Comcast requested that a LEO specify “which, if any, specific accused features ... are found to be the infringing ‘options’ required by the claims, so as to inform redesign efforts and assist CBP in appropriate enforcement of any remedial relief.” (*Id.*) Comcast also seeks a carve-out that would exclude from the LEO “STBs imported for use with either of Comcast’s proposed redesigns.” (*Id.* at 112.). Finally, Comcast advocated for “a standard service and repair exception so that Respondents may continue their service and repair of any products sold before the LEO’s date of issuance” and “a standard certification provision for imported products not subject to exclusion,” such as “STBs that are to be used with a system implementing the undisputedly non-infringing redesigns.” (*Id.* at 112-13.).

This Initial Determination recommends the issuance of a LEO directed to Comcast’s products that broadly excludes any articles that infringe one or more claims of the Asserted Patents. A recitation in the LEO of exactly what does or does not infringe is not warranted given that this Initial Determination contains an ample accounting of those details. Instead, it is appropriate for Comcast, the party found to infringe an asserted patent, to navigate the vicissitudes of differentiating infringing and non-infringing STBs by using the recommended certification provision discussed below. Moreover, including non-party ARRIS or Technicolor within the scope of the LEO is contrary to settled law. *Kyocera Wireless Corp. v. Int’l Trade Comm’n*, 545 F.3d 1340, 1356 (Fed. Cir. 2008) (“[I]f a complainant wishes to obtain an exclusion order operative against articles of non-respondents, it must seek a GEO by satisfying the heightened evidentiary burdens of §§ 1337(d)(2)(A) and (B).”). Staff agreed that the LEO should not name non-party ARRIS or Technicolor. (SBr. at 18-19 (“Moreover, Rovi has not

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cited to any precedent in which the Commission has previously named non-respondent parties such as Arris and Technicolor in an LEO, as requested here.”).

A LEO certification provision is warranted because the infringing nature of a STB is not immediately apparent upon inspection by U.S. Customs and Board Protection (“CBP”). *Certain Digital Televisions & Certain Prods. Containing Same & Methods of Using Same*, Inv. No. 337-TA-617, Comm’n Opinion at 11 (Apr. 23, 2009) (“Certification provisions are necessary to minimize the possibility that non-infringing products will be excluded from entry into the United States when CBP is unable to determine readily by inspection whether an imported product violates a particular exclusion order.”). This is because the infringing STBs imported at Comcast’s behest infringe only in the context of the X1 System, in which software on STBs interoperates with Comcast’s server-side software. Notably, both of Comcast’s proposed redesigns, each of which has been found not to infringe, entail modification of server-side software, not STB software. Consequently, with only a STB to examine, and most likely without the benefit of access to software running on Comcast’s servers, CBP would have a difficult time assessing whether a particular STB would infringe when used by a Comcast customer. To assist CBP in making this assessment, the LEO should contain a provision allowing Comcast to certify that certain STBs are not infringing and thus not subject to exclusion.

This Initial Determination also recommends that a LEO include a limited service and repair exception. This type of exception is commonplace in LEOs. *See, e.g., Certain Mobile Devices, Associated Software, and Components Thereof*, Notice of Commission Final Determination at 3 (May 18, 2012) (provided an exception for “service, repair or replacement articles for use in servicing, repairing or replacing mobile devices under warranty or insurance contract”); *Certain Combination Motor and Transmission Sys. and Devices Used Therein, and*

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Prods. Containing the Same, Inv. No. 337-TA-561, Final Initial and Recommended Determinations at 193 (Feb. 13, 2007) (USITC Pub. No. 4130 (any limited exclusion order should not reach third-party customers who had already purchased the accused hybrid vehicles and exempted components for use in repair and replacement of previously purchased vehicles)). Comcast provided un rebutted evidence that Comcast STBs are subject to contractual warranty and repair obligations. (Tr. (Kevin Buniewski)¹¹¹ at 935:3-6.). To protect consumers who use the Accused Products under existing service and warranty contracts against unnecessary disruption caused by a LEO, Comcast should be permitted to continue the service and repair of any products sold before the LEO's date of issuance. Staff agreed. (SBr. at 19.).

C. A Cease and Desist Order Is Warranted

Rovi also requested that the Commission issue a permanent CDO prohibiting Comcast from, *inter alia*, importing, selling for importation, marketing, advertising, offering for sale, offering for lease, selling, leasing, distributing, licensing, using, or otherwise transferring infringing products within the United States. (CBr. at 121-22.). According to Rovi, Comcast has a “significant inventory of infringing products that it could use to circumvent an exclusion order.” (*Id.*).

Comcast rejected the need for a CDO. (RRBr. at 114-15.). Comcast focused on Rovi's purported lack of evidence that Comcast maintained “commercially significant” quantities of Accused Products in the U.S. (*Id.*). Specifically, Comcast asserted that, in his calculation of “commercially significant” quantities, Rovi's expert, Dr. Putnam, included “millions of STBs ...

¹¹¹ When he testified during the Hearing on October 19, 2018, Mr. Kevin Buniewski was the Strategic Account Director at Contec Holdings. (CPSt. at 6.). Rovi identified him as a fact witness to testify generally as to the relationship between Comcast and its set-top box repair vendor Contec, including the re-importation of Accused Products into the United States. (*Id.*).

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that are either (i) located in customers' homes, or (ii) located in warehouses that are controlled by ARRIS or Technicolor” (*Id.*). While Comcast critiqued Rovi’s evidence in support of a CDO, it appears that Comcast did not offer rebuttal evidence of its own.

This Initial Determination recommends a CDO. As shown below in Figure 88, Dr. Putnam testified that, as of May 2018, the inventory of STB Accused Products dedicated to Comcast (i.e., warehoused by Comcast and its STB suppliers) totaled more than 3.5 million units, including 1.58 million STBs at Comcast’s warehouses alone. (Tr. (Putnam) at 1272:3-1273:1; CDX-0016C.0072-73; JX-0124C (Shank Dep. Tr.) at 48:15-49:21; CX-0873C (Comcast On Hand STBs); CX-0939C (Inventory Held By ARRIS); CX-0570C (Inventory Held By Technicolor)). Dr. Putnam estimated the value of this inventory as exceeding \$319 million, with \$143 million worth of inventory housed at Comcast’s facilities alone.¹¹² (Tr. (Putnam) at 1271:16-1275:3; CDX-0016C.0072.). Contrary to Comcast’s assertions, these figures appear to exclude STB Accused Products found in consumer homes, in service trucks, and at repair vendors. (CBr. at 122 (citing Tr. (Putnam) at 1272:3-1273:1; CDX-0016C.0072-73; JX-0124C (Shank Dep. Tr.) at 48:15-49:21; CX-0873C (Comcast On Hand STBs); CX-0939C (Inventory Held By ARRIS); CX-0570C (Inventory Held By Technicolor))). Thus, Rovi has satisfied its burden of proof that Comcast possesses a “commercially significant” inventory of STB Accused Products that Comcast could use to circumvent the LEO. Indeed, Dr. Putnam estimates that

¹¹² It is potentially problematic that neither Rovi nor Dr. Putnam provided a breakdown of these figures by type of STB. This Initial Determination finds that Comcast has violated Section 337 with respect to only one of three (3) Asserted Patents (the '011 patent), which could limit the scope of infringing STBs subject to a CDO and thereby call into question Dr. Putnam’s STB inventory numbers. However, it appears that Accused 011 Products—XG1, XG2, Xi5, and XiD STBs—span all the STBs accused of infringement in this Investigation. Thus, Rovi has dodged the above-mentioned problem because Dr. Putnam’s inventory numbers offer a viable estimate of the number of infringing STBs warehoused by or for Comcast in the U.S.

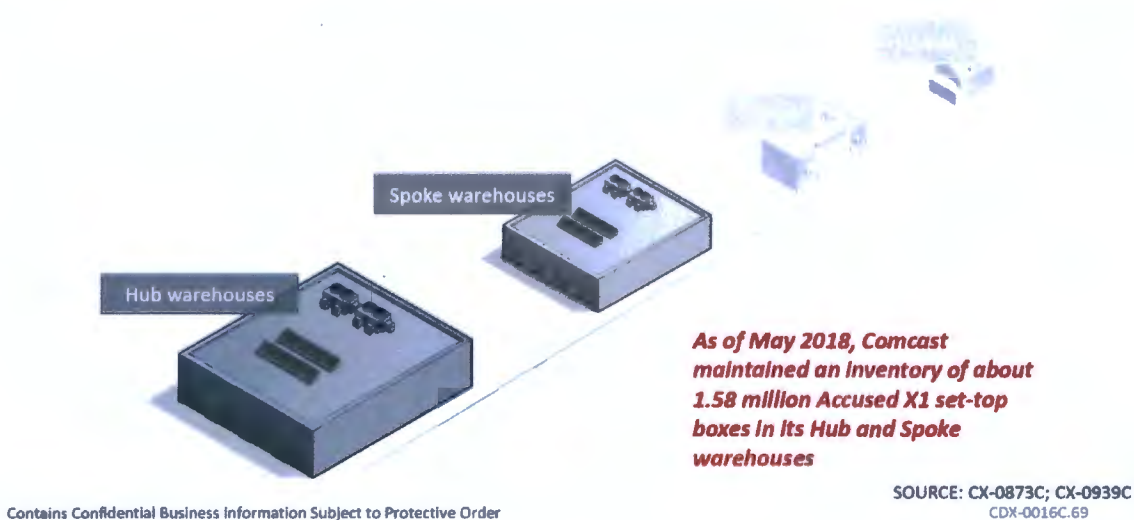
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Comcast could circumvent the LEO for approximately two months. (CDX-0016C.0066.).

Finally, this Initial Determination recommends that the CDO contain a limited service and repair exception. Comcast appears to have requested this exception by asserting that “Any Remedial Relief Should Include Certification Provisions and Warranty and Replacement Part Provisions.” (RRBr. at 112.). This CDO exception is warranted for the same reasons articulated above for the recommended issuance of a LEO. A limited service and repair exception would protect Comcast consumers who use Comcast’s Accused Products under existing service and warranty contracts.

Figure 88: Rovi’s Depiction of Accused Products Warehoused in the U.S.

How Does Comcast Store the Accused Products?



How Does Comcast Store the Accused Products?



(CDX-16C.0069, 71 (introduced during the testimony of Dr. Putnam)).

D. A Bond During the Presidential Review Period Is Not Warranted

Rovi requested a recommendation that the Commission impose a bond during the Presidential Review Period. According to Rovi, it “is harmed by Comcast’s direct competition in the syndication market, where Rovi and Comcast offer IPG software to regional cable providers.” (CBr. at 123 (citing Tr. (Putnam) at 1284:9-19 and Tr. (Armaly) at 149:22-150:25)). Rovi also asserted that Comcast “injures Rovi by failing to pay for the use of Rovi’s patents—royalties that are paid by Comcast’s competitors, including every other major Pay-TV provider.” (*Id.*). Based upon these arguments, Rovi proposed two (2) bond calculations purportedly driven by market conditions: (1) the “imputed” price differential between a domestic industry product and the imported infringing product; and (2) a reasonable royalty rate per subscriber. (*Id.* at 123-24). Alternatively, Rovi has requested a 100% bond. (*Id.* at 125.).

Relying heavily upon the Commission’s Opinion in Inv. No. 337-TA-1001, Comcast

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argued that no bond should issue in this Investigation. (RRBr. at 115 (citing *Digital Video Receivers*, Inv. No. 337-TA-1001, Comm'n Op. at 47 (Nov. 21, 2017))). Comcast argued that a price differential method of calculating bond would be inappropriate because "no pricing information exists by which a reliable price differential can be determined [.]" (*Id.* at 116.). Likewise, Comcast asserted that "because Rovi licenses its patents on a portfolio basis, there is no reasonable royalty rate for the Asserted Patents such that a bond value can be established." (*Id.*).

Comcast also recognized that Commission precedent permits a 100% bond where it is not possible or practical to set bond calculations based on price differential or reasonable royalty rates. (*Id.* at 118.). In essence, Comcast has asserted that Rovi's evidentiary showing was not sufficiently compelling to warrant a bond at any rate. (*Id.*). This argument harkens back to the Commission's Opinion in the 1001 Investigation, where the Commission explained: "Here, no bond should be set because Rovi failed to establish an appropriate rate. See RD at 15-16. Rovi has failed to show that its proposed bond of []/unit reflects the reasonable royalty relevant to the Asserted Patents. At a minimum, Rovi made no effort to show the role, if any, that the Asserted Patents played in the price of the portfolio licenses it submitted as evidence." *Digital Video Receivers*, Inv. No. 337-TA-1001, Comm'n Op. at 47 (Nov. 21, 2017).

Rovi, as Complainant, bears the burden of establishing the need for a bond, including the amount of bond. See, e.g., *Certain Rubber Antidegradants, Components Thereof & Prods. Containing Same*, USITC Pub. No. 3975, Inv. No. 337-TA-533, Comm'n Opinion at 40 (April 2008); *Certain Coenzyme Q10 Prods. and Methods of Making Same*, Inv. No. 337-TA-790, Initial and Recommended Determination (Sept. 27, 2012) (recommending Commission not impose a bond because complainant failed in its burden to demonstrate the appropriate bond

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amount); *Certain Mobile Telephones and Wireless Commc'n Devices Featuring Digital Cameras, and Components Thereof*, Inv. No. 337-TA-703, Recommended Determination (Jan. 24, 2011) (recommending no bond because complainant did not meet its burden in providing evidence on the necessity of a bond); *Certain Liquid Crystal Display Devices and Prods. Containing the Same*, Inv. No. 337-TA-631, Comm'n Opinion at 27-28 (July 14, 2009) (setting zero bond because complainant "simply claimed that it was impossible to conduct a price differential analysis" and "should not benefit from a lack of any effort to identify" relevant pricing information, particularly that which is in its possession).

The Commission frequently sets the bond based on the difference in sales prices between the patented domestic product and the infringing product. *See, e.g., Microsphere Adhesives*, Inv. Comm'n Opinion at 24 (Jan. 1996). In other instances, when a direct comparison between a patentee's product and the accused product is not possible, the Commission has set the bond at a reasonable royalty rate. *See, e.g., Certain Integrated Circuit Telecommunication Chips and Prods. Containing Same, Including Dialing Apparatus*, Inv. No. 337-TA-337, Comm. Opinion at 41-43 (Aug. 3, 1993). Commission precedent allows for a 100 percent bond when it is not practical or possible to set the bond based on price differential. *Certain Voltage Regulators, Components Thereof and Prods. Containing Same*, Inv. No. 337-TA-564, Comm'n Opinion at 79 (Public Version Oct. 19, 2007). The purpose of the bond is to protect the complainant from any injury. 19 U.S.C. § 1337(j)(3); 19 C.F.R. §§ 210.42(a)(1)(ii), 210.50(a)(3).

Here, as in the 1001 Investigation, Rovi has not satisfied its burden of establishing a need for a bond. As Comcast noted, Rovi previously took the position that there is no reliable pricing information by which a bond rate may be set. (*See Rovi Post-Hearing Brief*, Inv. No. 337-TA-1001, Doc ID No. 600479, at 376 (Jan. 9, 2017) ("[B]ecause Rovi does not manufacture or sell

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STBs, calculating a price differential between the Accused Products and the domestic industry products is not feasible.”); Tr. (Schoettelkotte) at 2035:22-2036:4.). To create the appearance of such “pricing information” in this investigation, Dr. Putnam attempted to “impute” a retail price¹¹³ to Comcast’s STBs using a price-to-cost ratio derived from one of Rovi’s domestic industry products, the TiVo Bolt with Experience 4.0 STB sold by Rovi licensee TSI. (CBr. at 123-24.). Rovi did so without citing to precedent in which an ALJ or the Commission similarly applied “imputed” prices to determine a bond. (*Id.*). Moreover, according to Comcast, Rovi erred in relying on the pricing of the TiVo Bolt with Experience 4.0 STB for prospective bond relief because the TiVo Bolt with Experience 4.0 STB is no longer available for sale in the marketplace. (RRBr. at 116.). For these reasons, Rovi has not satisfied its burden of proof that its “imputed” price theory justifies a bond.

Rovi’s reasonably royalty argument fares no better. In the 1001 Investigation, the Commission rejected Rovi’s theory because “Rovi made no effort to show the role, if any, that the asserted patents played in the price of the portfolio licenses it submitted as evidence.” (*Digital Video Receivers*, Inv. No. 337-TA-1001, Comm’n Op. at 47 (Nov. 21, 2017).). As Rovi acknowledged, in that Investigation, “the ALJ and the Commission found Rovi’s reliance on a variety of portfolio license rates to be inadequate because these rates were not tied to the then-asserted patents, and because some licenses included both patents and software.” (CBr. at 124

¹¹³ Dr. Putnam estimated the imputed price by multiplying the price-to-cost ratio of the domestic industry product, TiVo Bolt with Experience 4.0 STB, sold by TSI——by the cost of Comcast’s STBs. (Tr. (Putnam) at 1279:2-20; CDX-0016C.0076.). Dr. Putnam then compared those estimates to the sales price of the TiVo Bolt with Experience 4.0, concluding that the price differential was approximately per STB (depending on whether he used Comcast or ARRIS data). (*Id.*; CDX-0016C.0076-78; CX-0915C (Units Shipped and Net Sales Comcast Total); CX-0921C (Shipment Report by Product); CX-0939C (Inventory Month Ending for Jan-Mar 2018 for Accused Products).).

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n.41 (citing *Digital Video Receivers*, Comm'n Op. at 46-47).).

Rovi attempted to revive its reasonable royalty arguments in this Investigation by arguing now that the “[redacted]” license relied upon by Dr. Putnam covers only patents, and Dr. Putnam specifically explained why using the portfolio rate as the bond is appropriate even for a small subset of patents.” (*Id.* (citing Tr. (Putnam) at 1281:19-1283:24)).¹¹⁴ However, in light of the Commission’s admonition in the 1001 Investigation against relying upon portfolio licenses as evidence of reasonable royalty rates for individual patents, Rovi’s new approach is unavailing.

Once again, Rovi attempted to set a reasonable royalty based upon rates charged for an entire portfolio of patents and has done nothing to parse out what a reasonable royalty rate would look like for only the Asserted Patents at issue in this Investigation. Indeed, Dr. Putnam’s explanation “there is no fair market value estimate of the three asserted patents individually” is tantamount to an admission that Rovi cannot comply with the Commission’s guidance on this issue. (Tr. (Putnam) at 1282:8-11.). This testimony also stands alone on a shaky ground. It lacks any corroborating evidence for the counterintuitive claim the portfolio licensing of the Asserted Patents necessarily stripped those patents of their individual value. Thus, Rovi has not satisfied its burden of proof that its reasonable royalty theory justifies a bond.

Based upon the reasoning and considerations discussed above, this Initial Determination recommends that a bond should not issue during the Presidential Review Period.

XIII. WAIVER OR WITHDRAWAL OF RESPONDENTS’ DEFENSES¹¹⁵

Comcast did not raise in its Pre-Hearing Brief or offer any evidence during the Hearing to

¹¹⁴ Pursuant to that exemplary license, [redacted] for the use of Rovi’s entire patent portfolio. (Tr. (Putnam) at 1281:19-1282:1.).

¹¹⁵ On July 27, 2018, Rovi filed a MSD that Comcast failed to present any contentions, facts, or evidence

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support the following Affirmative Defenses: (1) Fourteenth Affirmative Defense that Rovi's Complaint is improperly directed at systems and methods that are subject to express or implied licenses (Resp. at ¶¶ 77-84); (2) Fifteenth Affirmative Defense of patent exhaustion (*id.* at ¶¶ 85-86); and (3) Seventeenth Affirmative Defense of prosecution history estoppel, prosecution history disclaimer, and prosecution laches (*id.* at ¶ 88).¹¹⁶

Consequently, it is a finding of this decision that Respondent has withdrawn, waived and/or abandoned its Fourteenth, Fifteenth, and Seventeenth Affirmative Defenses consistent with Ground Rules 7.2 and 10.1. *Kinik Co. v. Int'l Trade Comm'n*, 362 F.3d 1359, 1367 (Fed. Cir. 2004).

XIV. FINDINGS OF FACT AND CONCLUSIONS OF LAW: THIS INITIAL DETERMINATION FINDS A SECTION 337 VIOLATION BASED UPON INFRINGEMENT OF U.S. PATENT NO. 7,779,011

1. Jurisdiction and standing requirements are satisfied;
2. Claims 1 and 9 of U.S. Patent No. 7,779,011 are valid and satisfied by the Accused 011 Products;
3. Although claims 1, 8, 11, 15, and 22 of U.S. Patent No. 7,827,585 are found to be

during fact discovery supporting the following defenses Comcast asserted in its Response: (i) subject matter outside the scope of the notice of the investigation (First Affirmative Defense); (ii) prosecution history estoppel, prosecution history disclaimer, and prosecution laches (Seventeenth Affirmative Defenses); (iii) license (Fourteenth Affirmative Defense); and (iv) patent exhaustion (Fifteenth Affirmative Defense). (Motion Docket No. 1103-024 (July 27, 2018) (citation omitted)). On August 8, 2018, Comcast filed an opposition to Rovi's MSD. (Doc. ID No. 652514 (Aug. 8, 2018)). This ID addresses and obviates Rovi's MSD as to Comcast's Fourteenth Affirmative Defense (iii), Fifteenth Affirmative Defense (iv), and Seventeenth Affirmative Defense (ii). (*See* Section XIII.). With regard to Comcast's First Affirmative Defense, Comcast ineffectively argued that because the Notice of Investigation defined the scope of this Investigation as comprising certain "digital video receivers and related hardware and software components," any components of Comcast's XI System outside of the XI STBs are not within the scope of this Investigation. (Opp'n at 4; RRBr. at 4.). Comcast's overly narrow interpretation is unavailing because it improperly excludes components of Comcast's XI System that are critical to the use and function of the accused STBs. (*See, e.g.,* Tr. (Bovik) at 595:25-596:14; Tr. (Kelly) at 1763:19-1764:9.). Thus, Comcast's interpretation has been rejected. (*See, e.g.,* Section VIII.A.4.).

¹¹⁶ *See* n.6, *supra*, regarding Comcast's withdrawal of its Sixteenth Affirmative Defense of unclean hands.

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satisfied by the Accused 585 Products, the claims are invalid;

4. Although claims 1, 8, and 14 of U.S. Patent No. 9,369,741 are valid, the Accused 741 Products do not satisfy claims 1, 8, and 14;
5. Rovi's and TSI's domestic R&D activities with respect to the DI Products are found to satisfy the economic prong of the domestic industry requirement under 19 U.S.C. § 337(a)(3)(A), (B), and (C);
6. At least one of Rovi's DI Products practices one or more claims of U.S. Patent Nos. 7,779,011 and 7,827,585;
7. None of Rovi's DI Products practices the claims of U.S. Patent No. 9,369,741; and
8. Comcast has violated Section 337 of the Tariff Act of 1930, as amended, by importing into the United States, selling for importation, or selling within the United States after importation certain digital video receivers and related hardware and software components by infringing claims 1 and 9 of U.S. Patent No. 7,779,011.

The lack of discussion of any matter raised by the Parties, or any portion of the record, does not indicate that it has not been considered. Rather, any such matter(s) or portion(s) of the record has/have been determined to be irrelevant, immaterial or meritless. Arguments made on briefs, which were otherwise unsupported by record evidence or legal precedent, have been accorded no weight.

XV. CONCLUSION

This Initial Determination on Violation of Section 337 of the Tariff Act of 1930 is certified to the Commission. All orders and documents, filed with the Secretary, including the exhibit lists enumerating the exhibits received into evidence in this Investigation, that are part of the record, as defined in 19 C.F.R. § 210.38(a), are not certified, since they are already in the Commission's possession in accordance with Commission Rules. *See* 19 C.F.R. § 210.38(a). In accordance with 19 C.F.R. § 210.39(c), all material found to be confidential under 19 C.F.R. § 210.5 is to be given *in camera* treatment.


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After the Parties have provided proposed redactions of confidential business information (“CBI”) that have been evaluated and accepted, the Secretary shall serve a public version of this ID upon all parties of record. The Secretary shall serve a confidential version upon counsel who are signatories to the Protective Order (Order No. 1) issued in this Investigation.

Pursuant to 19 C.F.R. § 210.42(h), this Initial Determination shall become the determination of the Commission unless a party files a petition for review pursuant to 19 C.F.R. § 210.43(a) or the Commission, pursuant to 19 C.F.R. § 210.44, orders on its own motion a review of the Initial Determination or certain issues therein.

Within fourteen (14) days of the date of this document, the Parties shall submit to the Office of Administrative Law Judges a joint statement regarding whether or not they seek to have any portion of this document deleted from the public version. The Parties’ submission shall be made by hard copy and must include a copy of this ID with yellow highlighting, with or without red brackets, indicating any portion asserted to contain CBI to be deleted from the public version. The Parties’ submission shall also include an index identifying the pages of this document where proposed redactions are located. The Parties’ submission concerning the public version of this document need not be filed with the Commission Secretary.

SO ORDERED.


MaryJoan McNamara
Administrative Law Judge

APPENDIX A

Accused Products	Comcast's XG1, XG2, XiD, and Xi5 Set-Top Boxes Model numbers: ¹¹⁷ ARRIS XG1v1 MX011ANM, ARRIS XG1v3 AX013ANM, ARRIS XG1v1 MX011ANC, ARRIS XG1v3 AX013ANC, ARRIS XG1v4-A AX014ANM, ARRIS XG1v4-A AX014ANC, 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 Xi5-P PX051AEI, Cisco XiD-C CXD01ANI, Samsung XG2v2-S SX022ANC, and Samsung XG2v2-S SX022ANM
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¹¹⁷ Rovi identified these model numbers in its Complaint. (Compl. at ¶ 52.).

APPENDIX B

DI Products	i-Guide, Passport Guide, Next-Gen Platform, AS&R, and TiVo Bolt with Experience 4.0
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PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **INITIAL DETERMINATION** has been served by hand upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **June 27, 2019**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW, Room 112
Washington, DC 20436

On Behalf of Complainants Rovi Corporation, Rovi Guides, Inc., and Rovi Technologies Corporation, Veveo, Inc.:

Douglas A. Cawley, Esq.
MCKOOL SMITH P.C.
Crescent Court, Suite 1500
Dallas, TX 75201

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: _____

On Behalf of Respondents Comcast Corporation, Comcast Cable Communications, LLC, Comcast Cable Communications Management, LLC, Comcast Business Communications, LLC, Comcast Holdings Corporation, and Comcast Shared Services, LLC:

Bert C. Reiser, Esq.
LATHAM & WATKINS, LLP
555 Eleventh Street, NW, Suite 100
Washington, DC 20004

- Via Hand Delivery
- Via Express Delivery
- Via First Class Mail
- Other: _____

UNITED STATES INTERNATIONAL TRADE COMMISSION

Washington, D.C.

In the Matter of

**CERTAIN DIGITAL VIDEO RECEIVERS
AND RELATED HARDWARE AND
SOFTWARE COMPONENTS**

Inv. No. 337-TA-1103

ORDER NO. 47: INITIAL DETERMINATION GRANTING COMPLAINANT ROVI'S MOTION FOR SUMMARY DETERMINATION OF SALE AFTER IMPORTATION [MOTION DOCKET NO. 1103-031]; DENYING COMCAST'S MOTION FOR SUMMARY DETERMINATION OF NO SALE AFTER IMPORTATION [MOTION DOCKET NO. 1103-020]; GRANTING ROVI'S MOTION FOR SUMMARY DETERMINATION ON IMPORTATION [MOTION DOCKET NO. 1103-023] ¹

(June 3, 2019)

I. INTRODUCTION AND BACKGROUND

On September 6, 2018, I held a hearing (“MSD Hearing”) on three (3) summary determination motions (“MSD”), identified below, in which the parties had the opportunity to fully litigate their issues separately, and before, the evidentiary hearing (“Hearing”). (See MSD Hearing Transcript (“MSD Hr. Tr.”), Doc. ID Nos. 655117 (confidential) and 655116 (public) (Sept. 6, 2018)). The MSD Hearing was held at the request of Respondents Comcast Corporation, Comcast Cable Communications, LLC, Comcast Cable Communications Management, LLC, Comcast Business Communications, LLC (collectively, “Comcast”) at least in part because the summary determination motions involve unsettled issues of law. One

¹ This Order also *grants* Motion Dkt. No. 1103-021, Rovi’s Motion for Leave to Exceed Page Limit for Attachments to Rovi’s Motion for Summary Determination Regarding Importation (Motion Dkt. No. 1103-021 (July 27, 2018)); and Motion Dkt. No. 1103-032, Rovi’s Unopposed Motion for Leave to File Excerpted Replacement Exhibits in Support of Rovi’s Motion for Summary Determination Regarding Importation. (Aug. 29, 2018).

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such issue, i.e., whether Comcast is an “importer” within the meaning of Section 337, is pending in the Federal Circuit. (*See* MSD Hr. Tr. at 10, 11.). The Commission has not yet addressed the second issue on an extensive discovery record, i.e., whether a charge Comcast requires its subscribers to pay if they do not return their set-top boxes (“STB”) constitutes a “sale” within the meaning of Section 337.

On September 10, 2018, the Parties filed “A Stipulation Regarding Unreturned Set-Top Boxes” (“Stipulation”) that sets forth facts that Comcast and Rovi accept as true. (Doc. ID No. 655209 (Sept. 10, 2018); Stipulation at 1-3.). The Stipulation includes Comcast’s acknowledgement that it has imported at least one of each of the set-top box models at issue in this Investigation, within certain pertinent dates, and that at least one subscriber paid a charge (that varied by model) for an unreturned set-top box for each of the models at issue in this Investigation. *Id.* at 1-3.

While I advised the Parties and Staff orally during a pre-evidentiary hearing conference of the decisions I had reached with respect to each of the summary determination motions, this written Order explains the rationale for each decision.

The three (3) summary determination motions are:

- (1) Comcast Respondents’ Motion for Summary Determination of No Sale After Importation with Respect to All Accused Products (“No Sale MSD”) and the accompanying Memorandum in Support (also “No Sale MSD”), with Statement of Undisputed Material Facts (“SMF”), filed on July 27, 2018. (Motion Docket No. 1103-020.);²

² On August 6, 2018, Comcast filed Comcast Respondents’ Notice of Withdrawal of Sections of Its Motion for Summary Determination of No Sale after Importation with Respect to All Accused Products, in which it withdrew Sections IV(A) and IV(C) of its Motion for Summary Determination of No Sale after Importation. (Motion Dkt. No. 1130-020 (Aug. 6, 2019.).

On August 13, 2018, Complainants Rovi Corporation, Rovi Guides, Inc., Rovi Technologies Corporation, and Veveo, Inc. (collectively, “Rovi” and with Comcast, “the Parties”) filed Rovi’s Opposition to Comcast’s Motion for Summary Determination of No Sale after Importation with Respect to All Accused

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- (2) Rovi's Motion for Summary Determination Regarding Importation ("Importation MSD") with an accompanying Memorandum of Law in Support (also "Importation MSD"), and Statement of Undisputed Material Facts ("SMF"), filed on July 27, 2019. (Motion Docket No. 1103-023);³ and
- (3) Rovi's Motion for Summary Determination of Sale after Importation ("Sale MSD"), with accompanying Memorandum of Law in Support (also "Sale MSD"), and with a Statement of Undisputed Material Facts ("SMF"), a cross-motion Rovi filed on August 17, 2019. (Motion Docket No. 1103-031).⁴

The first dispute discussed and decided in this Order, that is, whether Comcast is an "importer" within the meaning of Section 337, was answered in the affirmative in a companion case in which Rovi and Comcast were the parties, and the accused products included many of the

Products ("No Sale Opposition") and an accompanying Memorandum of Law in Support ("No Sale Opposition") with a Response to Comcast's SMF. (Doc. ID No. 652847 (Aug. 13, 2018).

On August 8, 2018, Commission Investigative Staff ("Staff") filed Commission Investigative Staff's Response ("Staff Response") to Comcast Respondents' Motion for Summary Determination of No Sale after Importation with Respect to all Accused Products ("Staff No Sale Resp.") with Staff's Response to Comcast's ("SUMF"). (Doc. ID No. 652481 (Aug. 8, 2018). It should be noted that Staff played a limited role in this investigation. Staff was involved in briefing and arguing the issues addressed in this Order and in briefing the issue of jurisdiction. Because of Staff's limited participation, Staff is not included in the definition of the "the Parties."

³ On August 8, 2018, Staff filed Commission Investigative Staff's Response to Rovi's Motion for Summary Determination Regarding Importation and Rovi's Motion for Leave to Exceed Page Limits for Attachments to Rovi's Motion for Summary Determination Regarding Importation, with accompanying Memorandum of Law ("Staff's Response"), and Staff's Response to Rovi's SMF. (Doc. ID No. 652484 (Aug. 8, 2018).

On August 8, 2018, Comcast filed Respondents' Opposition to Complainants' Motion for Summary Determination Regarding Importation and Request for Oral Argument on Same ("Importation Opposition"), with accompanying Memorandum of Law, and Comcast's Response to Rovi's SMF. (Doc. ID No. 652512 (Aug. 8, 2018).

⁴ On August 21, 2018, Comcast filed Respondents' Opposition to Complainants' Motion for Summary Determination of Sale after Importation with Memorandum of Law in Support ("Sale Opposition") with Comcast's Response to Rovi's SUMF. (Doc. ID No. 653553 (Aug. 21, 2018).

On August 21, 2018, Staff filed Commission Investigative Staff's Response to Rovi's Motion for Summary Determination of Sale after Importation ("Staff's Response"), with a Memorandum of Law, and Staff's Response to Rovi's SUMF. (Doc. ID No. 053538 (Aug. 21, 2018.).

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same accused STBs as in this Investigation.⁵ See *Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-1001 (“1001 Investigation”), Initial Determination (“ID”) at 13-14 (May 26, 2017) (“1001 ID”) (finding that Comcast is an importer for purposes of Section 337.).

The Commission affirmed the 1001 Investigation ID by finding that Comcast is an importer within the meaning of Section 337 because Comcast is “sufficiently involved with the design, manufacture, and importation of the accused products” even though Comcast is not technically the “importer of record.” See *Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-1001, Comm’n Op. at 10 (Nov. 21, 2017).

Although this Order adopts the finding of the 1001 Investigation and the Commission affirmance that Comcast is an “importer” within the meaning of Section 337, the Commission decision is pending before the Federal Circuit. See *Comcast Corp., et al., v. ITC*, 2018-1450, 2018-1653 (Fed. Cir. 2018). Oral argument on Comcast’s appeal to the Federal Circuit was held on March 6, 2019. The Federal Circuit’s ruling will affect the finding of this Order.

The second dispute discussed and decided in this Order is whether Comcast “sells” certain accused STBs after importation within the meaning of Section 337 by charging its customers retail sales prices for unreturned set-top boxes. Comcast collects money above and beyond the price that covers the cost of the equipment that Comcast initially rents to its subscribers, [REDACTED]

⁵ In the 1001 Investigation, the Commission found Comcast to be an importer of at least the following Accused Products that are also accused in this Investigation: XG1, XG2, XiD, and Xi5 STBs. In addition to those identified STBs from the 1001 Investigation, the 1103 Investigation also includes Comcast’s Xi6 STB and the XR11 and XR15 voice remote controls at least for purposes of Rovi’s Importation MSD.

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██████, in exchange for its customers' retention of certain accused STBs. This issue was addressed but not *decided* in the 1001 ID or by the Commission in the 1001 Investigation. (See No Sale MSD at 16; *see also* 1001 Investigation Comm'n Op. at 10 (“[t]he Commission also takes no position on whether Comcast sells the accused products after importation”).). The evidentiary record on this dispute was developed more extensively through discovery in this Investigation than in the 1001 Investigation. Thus, the 1001 Investigation ID on this point is distinguishable, contrary to Comcast's argument.

In a different investigation, i.e., the 1010 Investigation, although Comcast was a party, the disputed issue that was specifically addressed was: “whether the rental of products by Comcast constitutes a sale after importation.” *See In the Matter of Certain Semiconductor Devices, Semiconductor Device Packages, & Prods. Containing Same* (“1010 Investigation”), Order No. 69 (Feb. 27, 2017), *not reviewed*, Comm'n Notice (Mar. 27, 2017). In the 1010 Investigation, the finding was that renting the products at issue is not a sale after importation. (See Sale MSD at 17, 18 (citing *id.* at 2, 5, 7).).

However, the finding in the 1010 Investigation was based almost solely on evidence from the language of the Comcast Subscriber Agreements. The 1010 Investigation did not develop the more extensive evidentiary record as can be found in this Investigation either.

Unlike in either the 1001 or the 1010 Investigations, the evidentiary record in this Investigation includes information such as, *inter alia*: (1) the actions Comcast takes after subscribers do not return their STBs; (2) the additional charges Comcast charges and collects from its subscribers in lieu of the returned STBs; (3) how Comcast invoices its subscribers when a STB is not returned; (4) how Comcast treats the unreturned STBs on its balance sheets; and (5)

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Comcast's actions if at some time later a subscriber asks to re-subscribe with Comcast after having retained, and paid for, an unreturned STB.

As a result, both the 1001 and 1010 Investigations' findings are both limited and distinguishable from the finding in this Investigation.

II. SUMMARY DETERMINATION ON IMPORTATION AND SALE AFTER IMPORTATION

A. Summary Determination Legal Standard

Summary determination under Commission Rule 210.18 is analogous to summary judgement under Federal Rule of Civil Procedure 56, and may be granted only where the evidence shows "that there is no genuine issue as to any material fact and that the moving party is entitled to summary determination as a matter of law." *See* 19 C.F.R. § 210.18(b). "Any party may move with any necessary supporting affidavits for a summary determination in [its] favor upon all or any part of the issues to be determined in the investigation." 19 C.F.R. § 210.18(a); *see also Certain Digital Processors and Digital Processing Sys., Components Thereof, and Prods. Containing Same*, Inv. No. 337-TA-559, 2006 ITC LEXIS 522, at *6, Order No. 13 (Sept. 6, 2006) (collecting cases). The party moving for summary determination bears the initial burden of establishing that there is an absence of a genuine issue of material fact and that it is entitled to judgment as a matter of law. *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986).

If the movant satisfies its initial burden, the burden then shifts to the non-movant to demonstrate specific facts showing that there is a genuine issue for trial. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986). When evaluating a motion for summary determination, the evidence must be examined in a light most favorable to the non-moving party, and all justifiable inferences are to be drawn in its favor. *Anderson*, 477 U.S. at 255 (1986). The non-moving party "must set forth specific facts showing there is a genuine issue of fact." *Certain*

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Agricultural Tractors Under 50 Power Take-Off Horsepower, Inv. No. 337-TA-380, Order No. 40 at 3, (August 8, 1996) (citing *Anderson*, 477 U.S. at 248). Summary determination should therefore be granted when a hearing on the matter at issue would serve no useful purpose and the movant is entitled to judgement as a matter of law. See *Certain Recombinant Erythropoietin*, Inv. No. 337-TA-281, U.S.I.T.C. Pub. No. 2186, Initial Determination at 70 (Jan. 10, 1989).

B. Importation Legal Standard

Section 337 of the Tariff Act of 1930, as amended, declares as unlawful “[t]he importation into the United States, the sale for importation, or the sale within the United States after importation by the owner, importer, or consignee” of articles that infringe valid intellectual property rights. 19 U.S.C. §1337(a)(1)(b). The Commission “has jurisdiction to act if there is some nexus between a respondent’s activities and the importation of the products accused of infringement.” *Certain Cigarettes & Packaging Thereof*, Inv. No. 337-TA-643, Comm’n Op. at 8 (Oct. 1, 2009) (citing *Certain Digital Satellite System (DSS) Receivers and Components Thereof*, Inv. No. 337-TA-392, USITC Pub. No. 3418, Notice of Comm’n. Decision to Terminate the Investigation and to Vacate Portions of Initial Determination at 14 (U.S.I.T.C. April 2001)). A complainant “need only prove importation of a single accused product to satisfy the importation requirement.” *Certain Purple Protective Gloves*, Inv. No. 337-TA-500, Order No. 17 at 5 (Sept. 23, 2004). The importation requirement may be established through a summary determination motion and irrespective of any finding of infringement of the patents-at issue. See *Certain Wireless Commc'ns Equip., Articles Therein, & Prods. Containing Same*, Inv. No. 337-TA-577, Order No. 18 at 3 (Feb. 22, 2007). The importation requirement can also be met by a “sale within the United States after importation” where the “owner, importer, or

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consignee” sells the infringing product. *Suprema, Inc. v. Int’l Trade Comm’n*, 796 F.3d 1338 (Fed. Cir. 2015) (en banc) (“*Suprema*”).

As is discussed in some detail below, I have found, based upon evidence and precedent, that Comcast is an “importer” within the meaning of Section 337. (See Section II.D(1).).

Also, as is discussed in some detail below, I have found, based upon the evidence and precedent, that Comcast sells certain STBs after importation within the meaning of Section 337 when it charges and collects retail sales prices from its customers, and, in exchange, those customers retain possession of the paid-for STBs. (See Section III.B.).

C. Parties’ Statements of Facts

1. Rovi’s Statement of Facts

In its response to the Complaint, Comcast acknowledged that certain Accused Products have been imported into the United States. Specifically, Comcast acknowledged that it imports ARRIS, Technicolor, Samsung and UEI imports, all of whom are Comcast suppliers, and all of whom import into the United States STBs or voice enabled remote controls that provide “video services to certain customers.” (See Comcast’s response to Rovi’s Complaint at ¶¶ 200-201, 204; see also CX-0560C (ARRIS Imports); CX-0899C (Technicolor Imports); CX-0929C (Samsung Imports); CX-0870C (UEI Imports). The STBs are Comcast’s XG1, XG2, XiD, Xi5 and XiT, together with the voice-enabled remote controls XR11 and XR15 (collectively, “Accused Products”).

In its Importation MSD, and during its presentation on September 6, 2018, Rovi noted, with factual support, that ARRIS or companies that work at ARRIS’ direction, is the importer of record of millions of accused ARIS X1 STBs imported into the United States, on or after April 1, 2016. All these X1 STBs were manufactured abroad, came into the United States through

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various ports of entry, and all were made available to Comcast in the United States. (*See* Importation MSD at 4, 5; SMF 3-5; Exh. 1C to MSD on Importation Dep. Tr. (Rouseau) at 77:2-5, 78:7-12, 78:17-79:5, 85:7-12, 92:16-93:14); Exh. 2C (ARRIS0000003); *see also*, e.g. MSD Hr. Tr. at 52:1-57:2; 37:1-44: 25; *see also* Stipulation at 1-3.).

Similarly, Technicolor, Samsung and UEI have the same type of relationship with Comcast as ARRIS, i.e., they are the importers of record of either STBs or voice enable remote controls or they direct the companies that are the importers of record. However, the Technicolor accused STBs were manufactured in China and imported into California either by Technicolor or companies working for it. (*See* Importation MSD at 4; SMF 6-8; Exh. 3C, Dep. Tr. (Moseley) at 21:3-22:8, 37:20-38:16); Exh. 4C to Moseley Dep. Tr., Exh. 5C (TECH-ITC1103-0006869); Exh. 6C Dep. Tr. (Zhang) at 18:13-22).). The Samsung STBs were manufactured in Indonesia and imported into the U.S. by Samsung, or by other companies at Samsung's direction, through multiple entry ports. (*See* SMF 9-11; Exh. 7C, Dep. Tr. (Westrick) at 27:5-9, 92:12-93:18); Exh. 8C at 1 SEA_ITC1103_SUBP0001120).). UEI, or companies working at its direction, imported accused UEI X1 voice remotes that were manufactured in China, and imported into the United States through ports of entry in Texas and California. (*See* SMF 12-14; Exh. 9C, Dep. Tr. (Abitia) at 36:8-10, 41:20-43:3, 46:14-18, 50:12-20); Exh. 10C (UEI0000030); Exh. 11C (UEI0000032); Exh. 13C (UEI0000007).).

Rovi drew upon and quoted from copies of Comcast's "Supply Agreements" for each of the identified suppliers, above, which describe in detail the requirements and specifications by which Comcast's suppliers must abide. (*See* MSD Hr. Tr. at 37:1-44.). Rovi argued that the language in the Supply Agreements proves that Comcast has a different seller/buyer relationship with its suppliers (identified above) than that of an independent contractor with. (*See*

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Importation MSD at 6 (citing SMF 18-21 and identifying each supply agreement exhibit number).). Among the other facts or factors Rovi identified that Rovi argued prove Comcast is in control and, in practice is an “importer” are:

- (1) [REDACTED];⁶
- (2) Comcast’s suppliers [REDACTED];⁷
- (3) Comcast’s RFI’s include hardware requirements for [REDACTED];⁸
- (4) Comcast requires that the Accused Products be designed for Comcast’s X1 system, [REDACTED];⁹
- (5) Comcast requires that its supplier original equipment manufacturers (“OEM”) load [REDACTED]. The Comcast written code was described as

⁶ See Importation MSD at 7 (citations omitted).

⁷ See *id.* at 11 (citing SMF 32; Exh. 1C, Dep. Tr. (Rousseau) at 51:18-52:9, 53:15-54:16); Exh. 54C at 1 (ARRIS0015208); Exh. 55C at 35 (COMC_1001ITC01322517, Section 12.2.8).).

⁸ See Importation MSD at 5 (citing SMF 15; Exh. 14C, Dep. Tr. (Folk) at 29:18-30:4); Exh. 16C at 13-15 (ARRIS0012836); see also MSD at 11

⁹ See Importation MSD at 7 (citing SMF 23-24; Exh. 6C, Dep. Tr. (Zhang) at 23:4-24:8, 31:21-32:6, 83:17-84:20, 86:3-88:13) Exh. 15C, Dep. Tr. (Stockton) at 20:7-24, 33:6-35:17); Exh. 39C, Dep. Tr. (Williamson) at 34:24-35:10, 37:16-38:14); Exh. 40C, Dep. Tr. (Parsons) at 20:11-25); Exh. 14C, Dep. Tr. (Folk) at 145:16-149:1); Exh. 41C).).

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- [REDACTED] 10
- (6) When Comcast is satisfied with the [REDACTED]
[REDACTED] 11
- (7) According to its supply agreements, Comcast also [REDACTED] 12
- (8) Comcast reserves the right to [REDACTED]
[REDACTED] 13
- (9) Comcast suppliers cannot [REDACTED] 14
- (10) Comcast requires that the Accused Products must pass [REDACTED]
[REDACTED]
[REDACTED] 15

¹⁰ See Importation MSD at 8, 9 (citing Exh. 46C, Dep. Tr. (D'Souza) at 14:12-21:14, 23:7-24:4, 27:25-28:25, 31:14-32:4); Exh. 39C (Williamson Dep. 19:12-20:18 34:21-35:5 (Sept. 8, 2016)); Exh. 14C (Folk Dep. 118:10-120:16); Exh. 47C, Dep. Tr. (Robinson) at 10:11-11:21); Exh. 6C, Dep. Tr. (Zhang) at 49:1-51:15, 85:12-19)(other citations omitted).).

¹¹ See Importation MSD at 9 (citing Exh. 41C, Dep. Tr. (Allinson) at 65:25-66:5).).

¹² See Importation MSD at 9 (citing SMF 27; Exh. 50C, Dep. Tr. (Sallas) at 40:9-41:5, 48:7-51:17).).

¹³ See, Importation MSD at 8 (citing *e.g.*, SMF 25; Exh. 18C at 5 (COMC_1001ITC01183624, Sections 2.04 and 2.05); Exh. 44C at 1 (ARRIS0003590) (identifying multiple Accused Products as "Comcast's products"); *see also* Exh. 25C at 3-4 (COMC_1103ITC00642158, Sections 2.04 and 2.05); Exh. 28C (COM-SDNY-9278_00859556, Sections 2.04 and 2.05); Exh. 31C at 3-4 (COMC_1001ITC01435261, Sections 2.04 and 2.05)).

¹⁴ See Importation MSD at 18.

¹⁵ See Importation MSD at 10 (citing SMF 29; Exh. 18C at 32-34 (COMC_1001ITC01183624, Section 9.01); Exh. 19C at 17 (COMC_1001ITC01184245, Section 4.01); Exh. 25C at 32 (COMC_1103ITC00642158, Section 9.01); Exh. 26C at 9-10 (COMC_1103ITC00642387, Section 4.01); Exh. 28C (COM-SDNY-9278_00859556, Section 9.01); Exh. 30C at COMC_1103ITC00640109, Section 4.01); Exh. 31C at 24 (COMC_1001ITC01435261, Section 9.01); Exh. 34C at 5-6 (COMC_1103ITC00597399, Section 4.01); *see also* Exh. 51C, Dep. Tr. (Shank) at 120:17-121:9); Exh. 7C, Dep. Tr. (Westrick) at 52:9-53:9); Exh. 14C, Dep. Tr. (Folk) at 132:5-17); *see also* Exh. 20C at 1-3

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- (11) At all phases of production, [REDACTED]
[REDACTED] 16
- (12) With respect to shipment, Comcast requires [REDACTED]
[REDACTED] 17
- (13) Comcast dictates all [REDACTED] 18
- (14) Comcast specifies the [REDACTED] 19
- (15) For purposes of ensuring timely production in the event of shortages or production problems and delivery, [REDACTED] 20

As Rovi argued, the identified requirements from the Supply Agreements, *supra*, not all of which are replicated here, unequivocally show the degree of control that Comcast exercises over all aspects of manufacture and shipping, leaving its suppliers as little more than “shippers” in name only who have virtually no discretion. Rovi argued that Comcast meets the definition of

(COM-SDNY-9278_00818072, Section 1(i) Notes); Exh. 21C at 1-3; (COMC_1103ITC00000381, Section 1(i) Notes); Exh. 26C at 9 (COMC_1103ITC00642387, Section 4.01(a)).

¹⁶ See Importation MSD at 13; *see also e.g.*, Exh. 14C, Dep. Tr. (Folk) at 74:10-75:5); Exh. 58C at 1-2, 7-9 (ARRIS0017557); Exh. 59C at 2, 10, 12 (COM-SDNY-9278_00993139); Exh. # (TECH-ITC1103-0002955); *see also* SMF 34-35 (other citations omitted).).

¹⁷ See Importation MSD at 14 (citing SMF 38; Exh. 18C at 8-9 (COMC_1001ITC01183624, Section 4.01); Exh. 25C at 7 (COMC_1103ITC00642158, Section 4.01); Exh. 28C (COM-SDNY-9278_00859556, Section 4.01); Exh. 31C at 7 (COMC_1001ITC01435261, Section 4.01)).

¹⁸ See Importation MSD at 14 (citing SMF 39; Exh. 18C at 4, G-1 (COMC_1001ITC01183624, Section 2.02(c) and Exhibit G (other citations omitted)).).

¹⁹ See Importation MSD at 15, 16 (citations omitted).).

²⁰ See Importation MSD at 17 (citing Exh. 19 at 5 (COMC_1001ITC01184245, Section 1.03(vii)); Exh. 26C at 3 (COMC_1103ITC00642387, Section 1.12); Exh. 28C (COM-SDNY-9278_00859556, Section 5.04)).

an “importer.” (*Accord*, Staff Resp. at 8; *see also* Hr. Tr. at 52:1-63:15.).

2. Comcast’s Statement of Facts

Comcast contended that there are material disputes of fact that preclude summary determination. (Importation Opp’n at 1, 15.).²¹ Comcast also contends that Rovi ignored additional facts that Comcast produced and asked that Rovi’s Importation MSD be denied in order to permit the development of a “fulsome record.” (Importation Opp’n. at 1, 4, 15.).

However, a “fulsome record” was created as a result of the September 6, 2018 MSD Hearing.

In a second argument, Comcast contends that Rovi’s “facts,” as identified above, “do not connote Comcast’s control of the importation of the Accused Products, but rather evidences the relationship Comcast has with its suppliers that Comcast says involves standard business activity with a specific intent by the parties that they maintain an independent, non-exclusive relationship.” (*Id.* at 8 (citing Exh. I §§ 14.10, 14.13 (Samsung Agmt.) Exh. J §§ 14.10, 14.13 (ARRIS Agmt.); Exh. K §§ 14.09, 14.12 (Technicolor Agmt.); Exh. L §§ 14.10, 14.13 (UEI Agmt.)).

To that end, Comcast argued that it has provided additional facts, *inter alia*, not all of which are replicated here, which Comcast says counter those facts that Rovi produced, and that preclude summary determination as follows:

- (1) Comcast contends that it does not [REDACTED]; (Importation Opp’n at 17, CSMF No. 55 (citations omitted);
- (2) Comcast contends that its OEM Supply Agreements [REDACTED]

²¹ Comcast filed its own Response to Rovi’s Undisputed Statement of Material Facts (“CSMF”). (See Importation Opp’n at page 28, re-paginated as page 1. Comcast disputes or disputes Rovi’s SMF as follows: 2, 5, 8, 11, 14, 15, 18-29, 31-34, 36-39, 43, and 44. Comcast offers its own SMF as Nos. 45-62. (Importation Opp’n at repaginated 1-16.).

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- [REDACTED]²²
- (3) Comcast says that its [REDACTED]
[REDACTED]²³
- (4) Comcast submits [REDACTED]
[REDACTED]²⁴
- (5) Comcast says the [REDACTED]
[REDACTED]²⁵
- (6) OEM's are *required* to improve the Accused Products *on their own initiative* (emphasis in original);²⁶
- (7) Comcast says its Supply Agreements acknowledge that an OEM [REDACTED]
[REDACTED]
[REDACTED]²⁷
- (8) Comcast says that OEMs [REDACTED]
[REDACTED]
[REDACTED]²⁸

While there are other facts that Comcast offers, they tend to be recitations from additional provisions of Comcast's Supply Agreements with its OEMs that Comcast contends counter Rovi's asserted facts. (*See* Importation Opp'n, SMF at re-paginated 1-16.).

²² Importation Opp'n at 16 (citing Ex. I § 4.10 (Samsung Agmt.); Ex. J § 14.10 (ARRIS Agmt.); Ex. K § 14.09 (Technicolor Agmt.); Ex. I, Ex. F § 2 (d) (Samsung Agmt.).

²³ Importation Opp'n at 15, 16, 18 (citations omitted); *see also* CSMF No. 46,

²⁴ Importation Opp'n at 17, 18, 23 (citations omitted); *see also* CSMF at 47.

²⁵ Importation Opp'n at 16-19 (citations omitted); *see also* CSMF at Nos. 46-49.

²⁶ Importation Opp'n at 18 (citations omitted); *see also* CSMF No. 49.

²⁷ Importation Opp'n at 18 Ex. I § 2.07 (Samsung Agmt.); Ex. J § 2.07 (ARRIS), Ex. K § 2.07 (Technicolor Agmt.); Ex. L § 2.07 (UEI Agmt.).

²⁸ Importation Opp'n at 23 (citations omitted); *see also* CSMF No. 56.

D. Legal Analysis and Discussion

1. Commission, Supreme Court and Federal Circuit Definitions of “Importer” Apply

Rovi and Staff agree that there are no genuine, material facts in dispute and that Rovi is entitled to summary determination that Comcast is an “importer.” (Importation MSD at 1; Staff Resp. at 5.). Comcast disagrees.

However, while there are facts that Comcast says undermine Rovi’s contention that it is importer, and thereby preclude summary determination, the facts and the opposition Comcast offers are largely recitations from provisions of Comcast’s Supply Agreements with its OEMs that do not undermine, or even leave in dispute, Rovi’s SMF. (Importation Opp’n at 15-18; SMF at re-paginated 1-16.).

Instead of revealing the true independence of the relationships, the additional provisions to which Comcast cites in the Supply Agreements with its suppliers are designed to show that Comcast and its suppliers have certain options, which Comcast says supports its description that it has an arms-length relationship with its suppliers. (*Id.*). Comcast appears to use the additional provisions to which it cited to support its contention that it is not an importer and does not have the degree of control or involvement in the manufacture and importation of the Accused Products as Rovi contends.

Comcast has not successfully negated the degree of control Comcast exerts over its suppliers in the design, manufacture, and specification requirements. (*See* Section II.C.1, *supra.*). There is no reason to deviate from the Commission’s determination and finding that Comcast is an importer.

As undisputed facts suggest, [REDACTED]

[REDACTED]

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██████████. (*Id., supra.*). For the most part, Comcast's arguments appear to be based upon its disagreement with Rovi's legal theories and Rovi's interpretation of the facts. (Importation Opp'n at 1, 2, 6, 7, 9, SMF re-paginated pages 1-6). Neither Comcast's arguments, nor its recitation of what it calls disputed facts, nor its interpretation of the undisputed facts, prevails here.

The Commission has found that Comcast is an importer within the meaning of Section 337 in the companion 1001 Investigation based upon the same types of control and importation activity that occurred in the 1001 Investigation that has continued to occur and is the subject of this Investigation. Most of the accused STBs are involved and accused in this Investigation as were involved and accused in the 1001 Investigation. The Supply Agreements are the same. *See Certain Digital Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-1001 ("1001 Investigation"), Comm'n Op. at 10 (Nov. 21, 2017) (the Commission affirmed the ALJ's finding that Comcast is an importer because Comcast is "sufficiently involved with the design, manufacture, and importation of the accused products" even though Comcast is not technically the "importer of record") *affirming Certain Digital Video Receivers*, Inv. No. 337-TA-1001, Initial Determination at 8-12 (May 26, 2017) ("1001 ID") (finding that Comcast is an importer for purposes of Section 337; *accord* Importation MSD at 1; Staff Resp. at 5.).

The Commission's finding in the 1001 Investigation that Comcast is an "importer" applies here. In the 1001 Investigation, Comcast argued, as it has here, that it did "not meet the importation requirement, because 'Section 337 forbids only three types of conduct with respect to 'articles that infringe:' (1) importation into the U.S., (2) sale for importation, and (3) sale after importation, and it does not engage in those activities,'" and because Comcast did "not exercise

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any control over the Accused Products' importation." *Id.* at 10, 12. Administrative Law Judge ("ALJ" or "Judge") Shaw rejected Comcast's arguments as I do here. Judge Shaw cited to extensive evidence that Comcast was heavily involved (or to be exact "sufficiently involved") in the design, manufacture, and importation of the Accused Products in the 1001 Investigation to be considered an importer. *Id.* The Commission affirmed Judge Shaw's ID and his conclusions that Comcast imports the Accused Products into the United States. *See* 1001 Investigation, Comm'n Op. at 10. (*See* MSD Hr. Tr. at 11:1-13:14; 41:1-50:8; 52:1-55:25.).

One of the primary cases upon which Judge Shaw and the Commission relied to find Comcast to be an importer is *Hooven & Allison Co. v. Evatt*, 324 U.S. 652 (1945) ("*Hooven*") in which the Supreme Court held that a party that causes goods to be brought into the United States is an "importer." *Id.* at 658. Rovi and Staff relied upon the same case here.

In *Hooven*, the Supreme Court defined an "importer" as a party who is the "efficient cause of [the] importation," with no requirement that the party be the "importer of record." *See Hooven at* 324 U.S. 658-654 (a U.S. rope maker with a contract to purchase hemp fibers from overseas was "the efficient cause of [the] importation, the purpose and effect of which was [that party's] acquisition of the merchandise," and was therefore deemed to be "the importer"). As Rovi notes, the Court in *Hooven* rejected the argument that the rope maker was a mere "purchaser of the merchandise[] *after* it had been imported into this country." (*See* Importation MSD at 20 (citing *id.* at 659, 664 (emphasis added)). "Performance of the contract[s]," the Court explained, "call[ed] for, and necessarily result[ed] in, importation of the merchandise from its country of origin to the United States." *Id.* at 661. To the Supreme Court, that left "no doubt that the [rope maker] not only cause[d] the importation but that the purpose and necessary consequence of [the importation was] to supply [the rope maker] with the raw material for its

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manufacture of [rope] at its factory in Ohio.” *Id.* Because the rope maker was “the efficient cause of [the] importation, the purpose and effect of which was [that party’s] acquisition of the merchandise,” that party “was the importer.” *Hooven* at 664.²⁹

Similarly, the Federal Circuit has adopted the *Hooven* definition of “importer.” (See Importation MSD (citing *Terry Haggerty Tire Co., Inc. v. United States*, 899 F.2d 1199, 1201 (Fed. Cir. 1990)(“*Terry Haggerty*”) (finding party to be an “importer,” where tires were shipped from abroad by a separate company, pursuant to party’s specific order, because the party was the “inducing cause of the tires being brought to the United States”))

Comcast described Rovi’s reliance upon the ALJ’s ID and the Commission’s Opinion in the 1001 Investigation as “clear error.” (Importation Opp’n at 1-2, 8-9.). Comcast argued that Judge Shaw’s newly articulated “sufficiently involved” standard dramatically expanded what it means to be an “importer” under Section 337 without having support for such an expansion. (See Importation Opp’n at 7.). Comcast argued that “[U]nder Rovi’s extreme interpretation [i.e. in applying the same definition of “importer” as the Commission], it would be difficult for *any* arms-length transaction in which a U.S. entity purchases products to escape the broad brush of “importation” with which the 1001 Investigation paints.” (*Id.* at 8.). Comcast contends now that the new definition completely changes the ordinary meaning of “importer” which contracting parties have relied upon commercially as a standard business practice. (*Id.*). Comcast also contended that the definition of “importer that both Judge Shaw and the Commission adopted in the 1001 Investigation should not be given precedential value because it departs from long-standing Commission precedent. (*Id.* at 1, 2, 3, 8-9.).

²⁹ The Supreme Court later overruled a different holding in *Hooven*. See *Limbach v. Hooven & Allison Co.*, 466 U.S. 353, 360-61 (1984). That did not undermine the fundamental holding applied here.

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Comcast's argument that Judge Shaw and the Commission had little precedent to support their expanded meaning of "importer" is also not quite accurate. (*Id.* at 9.). There is Commission precedent dating back almost 40 years that provides a framework and at times, a similar result if not the same articulation of, the criteria for an "importer" under Section 337. (See Importation MSD at 20, 21 (citing *Certain Cigarettes & Packaging Thereof*, Inv. No. 337-TA-643, Comm'n Op. at 8 (U.S.I.T.C., Oct. 1, 2009) (noting that the Commission has held that it has jurisdiction to act "if there is some nexus between a respondent's activities and the importation of the products accused of infringement"). To be "sufficiently involved in the manufacture and importation" of the infringing product "meet[s] the importation requirement, even if [a third-party] was the importer of record." *Certain Digital SetTop Boxes and Components Thereof*, Inv. No. 337-TA-712, Initial Determination, 2011 ITC LEXIS 1070, at *24 (U.S.I.T.C., May 20, 2011) (considering the purchaser of the products, the party that caused the manufacture and importation, the place where and how the products were repaired, and the place where the accused software was downloaded); *see also* MSD Hr. Tr. at 13; *Interactive Program Guide*, Inv. No. 337-TA-845, Comm'n Op. at 10 (U.S.I.T.C., Dec. 11, 2013) (considering the software at issue and whether it was imported, to whom the accused software functionality was attributable, whether the accused software was simply copied onto the products, and whether the software was modified by others); *Certain Large Video Matric Display Systems and Components Thereof*, Inv. No. 337-TA-75, Order No. 14, 1980 WL 140805, at *1-*2 (U.S.I.T.C., June 30, 1980) (finding that the Milwaukee Brewers baseball club may be found responsible for importing a custom scoreboard manufactured abroad even where the club did not take title to the scoreboard until after importation into the United States); *Certain Plastic-Apped Decorative Emblems*, Inv. No. 337-TA-121, Order No. 11, 1982 ITC LEXIS 26, at *3 (deeming respondent

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“the importer” where he “caused the importation to occur” but was not the importer of record) (U.S.I.T.C., Oct. 1, 1982).

While Comcast rejects the Commission’s affirmance of what Comcast calls Judge Shaw’s newly articulated, “sufficiently involved” test, here Comcast is the “efficient cause” of the importation of the Accused STBs and video remotes at least within the meaning of *Hooven*, and as *Hooven* explains it. The Commission’s application of the term “importer” would apply to Comcast whether it relied on *Hooven* alone or in conjunction with collateral estoppel principles. Clearly, Comcast has an incontrovertible connection to and control over the manufacture, design, and importation of the Accused Products, even if it does not place the accused products onto ships.

Since April 1, 2016, the date a license agreement between the Parties expired (*see* Rovi’s Complaint at 5 fn.2, 67 fn.13), Comcast has continued to control the conception, design, specifications, testing, and the volume of imports before they are imported. Comcast “forecasts” its needs, and while clearly the suppliers have their own forecasts, Comcast receives the STBs or remotes to meet its needs according to its purchase orders and its own forecasts. (Importation MSD at 1, 3, 16-17 (citations omitted)). This aspect of matching forecasts between supply and purchase does not undermine the level of control Comcast has. (*Id.*). Comcast controls the location of importation and the delivery and pick up of the Accused STBs and remotes after they are imported into the United States. Comcast controls the sites to which the goods will be shipped and provides packaging and labels. (Importation MSD at 1, 13, 15, 19, 22-23, 25 (citations omitted); *see also* Section II.C.1.).

As Staff notes, that Comcast requires its suppliers to handle all importation formalities, such as “all fees and documentation necessary to import the Products into the

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United States,” and to deliver the Accused Products to specific “delivery sites” located in the United States does not change the degree of control it exercises, or that it is the “efficient cause” of the importation of the STBs and audio remotes. (See Staff Resp. at 8 (citing SMFs 38-42).).

Comcast did not provide evidence that its relationship with its suppliers, or Comcast’s Supply Agreements have changed since the 1001 Investigation so as to warrant a different finding from that of the 1001 Investigation, i.e. that Comcast is not an “importer.” From the standpoint solely of labeling Comcast as an “importer” under an “efficient cause” or “sufficiently involved” test it is largely irrelevant whether all the STBs and remote controls that were adjudicated in the 1001 Investigation are the same as those litigated in this Investigation. The focus is on the facts involving the degree and type of Comcast’s control and involvement with its suppliers; not on the suppliers or the Accused Products.

2. Issue Preclusion Applies as an Alternative Legal Theory

Rovi argued that “issue preclusion” applies here in view of the Commission’s finding in the 1001 Investigation that Comcast is an importer. (Importation MSD at 27; *see also*, MSD Hr. Tr. at 11, 12.). As Rovi noted, correctly, issue preclusion applies to administrative agencies. (*Id.*, citing *MaxLinear, Inc. v. CF CRESPE LLC*, 880 F.3d 1373, 1376 (Fed. Cir. Jan. 25, 2018); *see also B&B Hardware, Inc. v. Hargis Indus., Inc.*, 134 S. Ct. 1293, 1303 (2015).) “Under the doctrine of issue preclusion, also called collateral estoppel, a judgment on the merits in a first suit precludes relitigation in a second suit of issues actually litigated and determined in the first suit.” *In re Freeman*, 30 F.3d 1459, 1465 (Fed. Cir. 1994). As Rovi also noted, when the same claim or issue is litigated in two cases, the first to reach judgment may give rise to preclusion in

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the second, “even while an appeal of the first judgment is pending.” (Importation MSD at 27 (quoting *Certain 3G Mobile Handsets and Components Thereof*, Inv. No. 337-TA-613, Comm’n Op, at 12 (Sept. 21, 2015) (citing *SSIH Equipment S.A. v. United States Int’l Trade Comm’n*, 718 F.2d 365, 370 (Fed. Cir. 1983)). Moreover, the Commission has recognized that, under Federal Circuit law, the doctrine of issue preclusion applies when: “(1) the issue is identical to one decided in the first action; (2) the issue was actually litigated in the first action; (3) resolution of the issue was essential to a final judgment in the first action; and (4) the [parties] had a full and fair opportunity to litigate the issue in the first action.” (*Id.* at 27.).

Comcast argued that it could not have anticipated that what it thought was its “arms-length” relationship with its suppliers reflected more indicia of control over them and the importation of the Accused Products, than Comcast thought or as its contracts with its suppliers seemed to specify. (Importation Opp’n at 1, 2, 8.). Or, to state the argument another way, Comcast says it could not have anticipated Judge Shaw’s test, a test that had yet to exist. (*Id.*). Thus, according to Comcast, collateral estoppel cannot serve as a basis to grant Rovi’s motion, because there is not an “identity of issues,” and Comcast did not have “a full and fair opportunity to litigate the issues” in the 1001 Investigation. Staff and Comcast disagree. (*Id.* at 2, 5, 7, 8; *but see contra*, MSD Hr. Tr. at 12:8-13:14, 15:1-16:20, 46:18-63:25.).

Comcast argued that to the extent that Rovi invokes the application of collateral estoppel or issue preclusion here, that there “would have been no way for Comcast to know it should develop evidence to defend itself under such previously unarticulated criteria” between the 1001 Investigation and this Investigation. (Importation Opp’n. at 2, 4.). In these circumstances, Comcast argued, that collateral estoppel cannot apply as a theory here. (*Id.* at 5 (citing *Certain Network Devices, Related Software, and Components Thereof (II)*, Inv. No. 337-TA-945, Order

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No. 10 at 9-10 (Jan. 18, 2018).). Rovi and Staff disagree. (See MSD Hr. Tr. at 12:8-13:14, 15:1-16:20, 46:18-63:25.). Moreover, Comcast also argued that that it is incontrovertible that the Xi6 set-top boxes and voice remotes accused in this Investigation were not accused in the 1001 Investigation. (*Id.* (citing Mem. at 3 fn.1.); Exh. H, Dep. Tr. (Mosley) at 25:26:2 (other citations omitted).). Thus, according to Comcast, there is not an identity of issues between the 1001 and this Investigation.

While Comcast has legitimate points with respect to the likely surprise it may have experienced from Judge Shaw's application of a "sufficiently involved" standard, Comcast says that it has developed additional facts in this Investigation that it did not establish in the 1001 Investigation, and that these should be litigated fully. (*Id.* at 2.). However, the facts introduced in this Investigation also have been aired or litigated fully. (See MSD Hr. Tr, generally at 11:1-13:14, 49:15-51:24, 95:8-109:25.).

Judge Shaw and the Commission *defined* (or redefined) Comcast's relationship with its suppliers differently than Comcast expected or as Comcast defined that relationship. Judge Shaw's decision applied law to established facts. He and the Commission apparently found Comcast's description of its relationship with its suppliers to be legally erroneous in view of the facts.

The Supply Agreements that Comcast has with its suppliers are largely the same in this Investigation as they were, apparently, in the 1001 Investigation. The suppliers appear to be the same except for one. Many of the Accused Products are the same, even if not all. (See n. 4, *infra.*). While Comcast argued that the lack of "identity of issues," would preclude the application of collateral estoppel, Comcast does not spell out in any detail in a point by point comparison between the two (2) Investigations just which *issues* are different. (Importation

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Opp'n at 8.). Indeed, while the patents in the 1001 Investigation and this Investigation may be different as are the infringement and invalidity contentions, Comcast's methods of designing the Accused Products, or how it specifies design, manufacture and importation apparently have not changed between the 1001 and this Investigation. The extent of Comcast's involvement with and control over its suppliers does not appear to have changed. Comcast's supplier requirements apparently have not changed, or at least Comcast did not point to any such changes. Again, it is on the facts with respect to Comcast's relationship with its suppliers that leads to a finding here that Comcast is an importer.

E. Conclusion and Order

For the foregoing reasons, Rovi's Motion for Summary Determination that Comcast is an importer within the meaning of Section 337, Motion Docket 1103-021, is *granted*.

III. SUMMARY DETERMINATION ON SALE AFTER IMPORTATION

A. Comcast's Accused Products Are Imported

As noted in Section II.B, above, under Section 337(a)(1)(C), a complainant "need only prove importation of a single accused product to satisfy the importation requirement." *See Sale MSD at 9, 10 (citing 19 U.S.C. 19 U.S.C. § 1337(a)(1)(C)) as cited in Certain Purple Protective Gloves, Inv. No. 337-TA-500, Order No. 17 at 5 (Sept. 23, 2004); 19 U.S.C.*

§ 1337(a)(1)(C); Certain Integrated Circuits, Processes for Making Same, & Prod. Containing Same, Inv. No. 337-TA-450 Order No. 15 at 6 (Nov. 2, 2001); Certain Trolley Wheel Assemblies, Inv. No 337-TA-161, Comm'n Op. at 7-8, USITC Pub. 1605 (Nov. 1984).

Alternatively, a complainant may prove just a single sale for importation, or sale within the United States after importation. *Certain Crawler Cranes and Components Thereof, Inv. No.*

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337-TA-887, Comm'n Op. at 10-14 (Apr. 16, 2015). Comcast has acknowledged that it imports, or as Comcast describes it, works with its suppliers to import Comcast's XG1, XG2, XiD, and Xi5 set-top boxes. (See Section II.C.1; see also Stipulation at 1-3.). Comcast has acknowledged that it has charged and collected at least one, unreturned equipment fee for each of the unreturned Accused Products that is Comcast's XG1, XG2, XiD, and Xi5 STBs. (See Sale MSD at 10 (citing SMF Nos. 12-17; see also Stipulation at 1-3.).³⁰ Comcast also did not dispute that many of its customers did not later return the Comcast equipment for which they paid. (*Id.* (citing SMF Nos. 13-17.)).

While Comcast did not have data for the entire United States at the time it produced the information that was required by a discovery-related Order, in the areas of Pennsylvania and other states that are part of Comcast's Keystone region alone, Comcast subscribers made some [REDACTED] payments in unreturned equipment fees for the unreturned, accused STBS in a [REDACTED]. (See Sale MSD at 6-7 (citing SMF Nos. 27-28); see also Confidential Telephonic Management Conference at 44, 50-51 (July 17, 2018)).

B. Rovi Is Entitled to Summary Determination on Its Cross-Motion That Comcast Sold Certain Accused, Unreturned Set Top Boxes [Motion Docket No. 1103-031]

Although Comcast objected and filed its own motion for summary determination that it does not sell and title does not pass for its STBs,³¹ this Order substantiates the oral finding that there is no genuine dispute that Comcast has sold, either contractually or through conversion, certain imported, accused unreturned STBs to its customers in the United States after the

³⁰ As noted above, Comcast has produced invoices it issued to its customers for unreturned accused XG1, XG2, Xi5 and XiD STBs. containing a sales charge in lieu of the return of the STBs.

³¹ See p. 2, *supra*.

subscribers paid for their unreturned STB, paid the retail price of the equipment, and terminated their rental service with Comcast.³² (See Section III.B(1)-(5).).

This Order simply applies the law of “sale” and “conversion” to facts Comcast could not refute reasonably and resolves Rovi’s Sale MSD and Comcast’s No Sale MSD.

Accordingly, it is a finding that Comcast has sold the following unreturned accused STBs as follows: Comcast’s XG1, XG2, XiD, and Xi5 set-top boxes. This finding does not include either the Xi6 STB model, or to the XR11 and XR15 voice remote controls which Rovi did not include in its No Sale MSD.

1. STBs That Its Customers Do Not Return Are Construed Here as “Sales”

The Federal Circuit concluded that with respect to the term “sale” that “Congress intended to give the term its ordinary meaning, thereby making an explicit definition unnecessary.” *Enercon GmbH v. ITC*, 151 F.3d 1376, 1381 (Fed. Cir. 1998)(“*Enercon*”). The Federal Circuit in *Enercon* explicitly rejected attempts to “restrict[] . . . the term ‘sale’” to require the “delivery of title and control of the goods to the buyer” despite Comcast’s argument. (*Id.* at 1382; accord Sale MSD at 10, 11, 15; Staff Resp. at 6, 7; see also *contra*, MSD Hr. Tr. at 75:15-77:14.). The Commission has adopted the *Enercon* holding stating that a sale “includes those situations in which a contract has been made between two parties who agree to transfer title and possession of specific property for a price.” See *Certain Prods. Containing Interactive*

³² In the 1001 Investigation, Rovi accused Comcast’s XG1, XG2, RNG150, Xi3, XiD, and Xi5 STBs of infringing certain Asserted Patents. In this Investigation, Rovi initially accused Comcast’s XG1, XG2, RNG150, Xi3, XiD, Xi5, and Xi6 STBs, as well as Comcast’s XR11 and XR15 voice remote controls, of infringing certain Asserted Patents. On August 1, 2018, Rovi filed a Notice of Withdrawal of Certain Accused Products, in which it withdrew the RNG150 and Xi3 STBs as Accused Products. (Doc. ID No. 651870 (Aug. 1, 2018)). Therefore, the remaining Accused Products are Comcast’s XG1, XG2, XiD, Xi5, and Xi6 STBs, as well as the XR11 and XR15 voice remote controls.

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Program Guide & Parental Control Tech., Inv. No. 337-TA-845, Comm'n Op., at 10 (Dec. 11, 2013) (citing *Enercon GmbH v. Int'l Trade Comm'n*, 151 F.3d 1376, 1382 (Fed. Cir. 1998)).

The Uniform Commercial Code defines a “sale” as “the passing of title from the seller to the buyer for a price.” Uniform Commercial Code § 2-106. (Staff Resp. at 6.). Black’s Law Dictionary defines sale as a “transfer of property or title for a price.” (See Sale MSD at 11 (citing *Sale*, Black’s Law Dictionary (9th ed. 2009)).). Because the term “sale” is not limited to a transfer of title, a sale can occur where there is a “transfer of property or title for a price.” (See Sale MSD at 11 (citing *Sale*, Black’s Law Dictionary (9th ed. 2009)).).

2. Evidence Reflects That Comcast’s Customer Payments for Unreturned STBs Are Sales

It is undisputed that the Comcast’s STBs are manufactured overseas and then imported into the United States within the meaning of Section 337. (See Section II.C(1)). When subscribers want certain services with Comcast, they enter into what Comcast calls a “Subscriber Agreement” for the STBs they receive. (Sale Opp’n at 2, 10.). The Comcast Subscriber Agreement applies to the Accused Products at issue here: Comcast’s XG1, XG2, XiD, and Xi5 STBs. As Comcast describes it, Comcast’s business model is to “rent” the STBs to subscribers. (*Id.* at 2, 3.). The initial Subscriber Agreement is styled as a “lease agreement.” (See Sale Opp’n at 2, 8 (citing Comcast’s CSMF Nos. 20, 25, 32)).).

According to Comcast’s Subscriber Agreement, when a customer’s cable services are terminated, the customer is required to return the STB to Comcast. In those instances in which customers do not return the STBs, Comcast charges those customers an “unreturned equipment fee” for the customers’ violation of their Subscriber Agreement to return the leased STBs. (See Sale Opp’n at 2, 8.).

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According to Comcast, its Subscriber Agreement is “clear that Comcast retains title to the accused STBs provided to Comcast’s subscribers.” (*Id.* at 2, 3 (citing Exh. A to Sale Opposition at § 6(a) (Comcast’s Agreement for Residential Services (“Subscriber Agmt.”)) (“[A]ll Xfinity Equipment belongs to [Comcast] or other third parties,” *see also, id.* citing Exh. F to Sale Opposition, Neil Shank Rebuttal Witness Statement at Q/A 63 (337-TA-1001) (Comcast “maintains ownership of CPE (customer premises equipment including set-top boxes and voices remotes) rented to customers, including set-top boxes, and [Comcast] specifically retains title to such equipment); *see also* Exh. E, Dep. Tr. (Shank) at 93:15-17) (“Q. Does [Comcast] retain title even when it goes to the customers? A. Yes.)).

Comcast’s description of its relationship to its subscribers is not completely accurate. Neither Comcast’s description of its Subscriber Agreement nor the fees it charges match what happens or the way Comcast treats subscriber fees in fact.

This is another instance (as with the importation requirements with its suppliers) in which Comcast relied upon documents it created to try to call its relationship with its subscribers one thing by contract, while what happens, in fact and legally is something else.

It is what the Comcast “unreturned equipment fee” represents legally, and what happens if the subscriber later returns the STB it initially kept that is the focus of Rovi’s MSD, and Comcast’s SDM of “No Sale” After Importation.

Comcast has acknowledged that it transfers physical possession of the accused products (defined in fn. 32, *infra*) to its customers when they sign up for the Comcast cable services and equipment described in Comcast’s “Subscriber Agreement.” (*See* Sale MSD at 12 (citing SMF No. 4.). Comcast produced invoices after being ordered to do so that reflects how customers are charged. (*See* Exhs. 7C-19C (Invoices) to Sale MSD).

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When Comcast customers terminate their cable service, Comcast then charges and collects a specific fee, over and above the rental fee, or a “retail price”³³ for the unreturned STBs from customers who do not return them. The separate charge is the price Comcast subscribers pay for keeping the equipment rather than returning it to Comcast. (See Sale Opposition at 8; see also Sale MSD at 5 (citing SMF No. 6; see also, e.g., Exh. 5 at 6 (Subscriber Agreement, Section 9(d)(3)); Ex. 6C, Dep. Tr. (Bernard) at 193:5-20 (payments are in lieu of returning equipment); Exh. 26C, Dep. Tr. (Simon) at 49:3-6 (Comcast is entitled to payments or equipment); see also SMF No. 6; see also Exhs. 7C-19C (Invoices) to Sale MSD).).

Rovi described at length the various places in Comcast’s Subscriber Agreement specifically where it warns Comcast subscribers that “[Y]ou will be charged the retail price for a new replacement.” (See *id.* at 4 (citing Exh. 6C, Depo. Tr. (Bernard II) at 193:5-20; see also explanations of similar Comcast Subscriber Agreement provisions advising Comcast customers what they must pay if they retain the equipment at Sale MSD at 7, 8, 11, 13-5, 21-22).).

Comcast’s Subscriber Agreement also warns that the “retail payment” is “a fee that you may pay in lieu of returning your equipment.” (See Sale MSD at 4 (citing Exh. 26C, Depo. Tr. (Simon) at 49:3-6

_____ ; see also Sale MSD at 8, 12, 14).).

After a Comcast subscriber pays the unreturned equipment charge to purchase an unreturned STB from Comcast, the subscriber does not continue to pay a monthly leasing or

³³ “Retail” is defined as the “sale of goods or commodities to ultimate consumers, as opposed to the sale for further distribution or processing.” (See Sale MSD at 11, fn.7 (citing *Retail*, Black’s Law Dictionary (9th ed. 2009)); accord, Staff Resp. at 7-9.). “Price” is defined as “the cost at which something is bought or sold.” *Price*, Black’s Law Dictionary (9th ed. 2009). (See Sale MSD at 11, fn.7.). As Rovi states: “together, Comcast’s decision to define the charge by reference to the ‘retail price’ for accused set-top boxes that are already in customers’ possession shows that it views the transaction as a sale. (See Sale MSD at 11, fn. 7.).

rental fee for the Comcast equipment she has kept. (See Sale MSD at 12 fn.8 (citing Exh. 10C (Invoice) at 2) (showing that pre-paid leasing fee for “TV Box” refunded after customer disconnects service, but unreturned equipment charge added).

As Rovi argued, and as Staff agreed, and contrary to Comcast’s argument, any Comcast customer who pays the retail fee for the STB and then retains possession of the STB after it pays the fee has engaged in a “sale” within the Black letter law definition of a “sale.” (See Sale MSD at 12; see also Rovi SMF Nos. 4, 6 and 7; Staff Resp. at 7, 8.). At that point, there is transfer of property of the unreturned STBs from Comcast to its customers in exchange for the customer’s payment of the price Comcast charges. (*Id.*). At that point, also, the subscriber no longer pays a “lease” fee. (See Sale MSD at 12, fn.8.).

3. The “Retail Price” Comcast Charges Is the Paid-Up Price of the Equipment Plus

The “retail price” Comcast charges includes its cost for the unreturned STB and equipment. It may also include up to a [REDACTED] that the FCC allows and which the FCC calls a “reasonable profit.” (See Sale MSD at 12 (citing Rovi’s SMF Nos. 8 and 9; and Comcast’s Opposition to Rovi’s Motion to Compel, Motion No. 1103-011, Doc. No. 650648, at 5 (July 18, 2018); see also MSD Hr. Tr. at 37:1-44:25).). This is so regardless of the age of, or the depreciation on the unreturned STBs Comcast takes on, the unreturned STBs. (See Sale MSD at 6.). Additionally, as Rovi noted, Comcast records the money it receives from the unreturned STBs as an [REDACTED] (See Sale MSD at 6 (citing SMF Nos. 10, 12; see also Exh. 23C to Sale MSD (Comcast Equipment Charge Schedule).).

According to the pertinent FCC regulation, “A cable operator may sell customer premises equipment to a subscriber. The equipment price shall recover the operator’s cost of the

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equipment . . . plus a reasonable profit.” (See Sale MSD at 12 citing 47 CFR 76.923(i); *Cost Order*, 9 FCC Rcd. 4527, 4540-41 (1994) (prescribing under the Cable Act of 1992 “an overall cost of capital of 11.25%” to provide “cable operators the opportunity to earn ‘a reasonable profit’” while “protecting subscribers” from a lack of “effective competition”).

Comcast argued that the permission granted for pricing is not required and the FCC regulation does not describe the up-charge or retail price it charges as necessarily part of a sale. (Sale Opp’n at 13.). Comcast also argued that the collection of additional money from its subscribers to cover the cost of its equipment does not transform that retail charge transaction into a sale. (*Id.*; see also MSD Hr. Tr. at 69:1-75:15.). Comcast considers the charge to be the cost of equipment, and basically, as recovery for “bad debt.” (See Sale Opp’n at 15.). Moreover, Comcast explained that if the subscriber re-subscribes, Comcast returns the charge for the previously unreturned STB and recommences a lease arrangement. (*Id.* (citations omitted); see also MSD Hr. Tr. at 113:2-116-4.). While Comcast may not recognize the transaction as a sale does not mean it is not. (See MSD Hr. Tr. at 115:2-8; 116:3-4.).

Comcast’s explanation does not undermine the finding that the charge for an unreturned STB is a sale. If viewed according to the definition of a sale consistent with Black’s Law Dictionary or the UCC, the facts of the transaction, together with at least one explicit provision of the Comcast Subscriber Agreement, indisputably demonstrate that Comcast has sold the unreturned STBs in the United States after importation. Pursuant to the Subscriber Agreement, Comcast no longer owns the equipment once the customer pays the retail price: “You agree that ***except for . . . equipment purchased by you from us***, all Xfinity Equipment belongs to us” (See Staff Resp. at 8 (citing Rovi SMF No. 5; Exh. 5 to Sale MSD at 4 (Section 6(a), Xfinity Equipment (emphasis added).).

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Rovi argued that once a subscriber pays the up-charge or retail price for the STB, and then keeps the STB, [REDACTED]. (See Sale MSD at 13 (citing SMF Nos. 23-26 (other citations omitted)). Comcast disputed that point. Comcast said that [REDACTED]. At that point, Comcast noted that it is a business decision that it does not wish to take the time or make the effort to retrieve the STB. (See MSD Hr. Tr. at 112:16-113:9). That may be a dispute, but it is a minor one. Comcast admitted that it [REDACTED]: the dispute is over when Comcast [REDACTED], not if it does so. (See *Id.*).

There are other indicia that reflect that a sale has occurred with respect to the unreturned STBs. Comcast does not [REDACTED]. (See Staff Resp. at 9 (citing Rovi SMF Nos. 23-26; see also Exh. 20C, Depo. Tr. (Bernard I) at 151:7-15 (Comcast does not attempt to [REDACTED]; Exh. 6C, Depo. Tr. (Bernard II) at 213:15-21 (Comcast knows its set-top boxes are being [REDACTED]); Exh. 27C, Depo. Tr. (Shank) at 129:5-130:10 (Comcast does not include [REDACTED]); Exh. 28 (2016 Comcast SEC Form 10-K) at 94 (reporting that Comcast removes the cost of equipment it sells and recognizes a gain and impairs or writes down equipment that it can no longer recover)).

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Moreover, as Rovi noted, after a Comcast subscriber pays the unreturned equipment charge, that Comcast (now former) subscriber does not [REDACTED] [REDACTED]. (See Sale MSD at 12, n. 8 (citing Exh. 10C (Invoice) at 2 [REDACTED]; [REDACTED] [REDACTED]). In other words, the transactions between Comcast and its subscribers that involve the unreturned STBs, including invoicing and the payment of a separate charge, reflect concrete changes from the original rental price and agreement.

The final zero balance invoices that Comcast sends to its former subscribers is silent on whether Comcast retains legal title to the equipment or that the subscriber is still required to return the equipment. (See Staff Resp. at 8-9 (citing Rovi SMF Nos. 19, 20)). Comcast also admits that many of its subscribers or customers [REDACTED] [REDACTED]. (See Staff Resp. at 8-0; see also Rovi SMF Nos. 13-17). Comcast's actions, and its documents, support a finding that Comcast no longer owns certain unreturned STBs. (See Rovi SMF No. 5). Given these indisputable facts, it as an appropriate finding that there is a sale after importation of certain accused, unreturned STBs under Section 337.

4. The Subscriber Payments for the Unreturned STBs Are Not Liquidated Damages

Comcast attempted to characterize the unreturned equipment charge as a "liquidated damage." (See Sale Opp'n at 9, 10 (other citations omitted, including references to CSMF); see also MSD Hr. Tr. at 83:2-84:16; 93:2-95:3; 95:16- 101:25;113:10-116:4.). As Rovi pointed out, Comcast cites to a completely different and unrelated contractual clause which explicitly discusses liquidated damages, and identifies the dollar amounts, and when they apply. The

existence of a separate liquidated damages provision that does not apply to the unreturned STBs undermines Comcast's theory. (*See* Sale MSD at 20 (citing Sale Opp'n at 3-4, 10).).

The liquidated damages provision in the Subscriber Agreement that Comcast cites deals with damages "for tampering with any XFINITY Equipment or any other part of our cable network or for receiving unauthorized Service(s)," not the charge for unreturned equipment. (*Id.* (citing SMF Nos. 29-30); compare Exh. 5 to Sale Opp'n at 4-5 (Subscriber Agreement, Section 6(b)(3), No Unauthorized Devices or Tampering) (noting liquidated damages in "No Unauthorized Devices or Tampering" Section)) *with id.* at 6 (Section 9(d)(3), Your Obligations Upon Termination) (noting that customer is charged "retail price" for unreturned equipment).). Moreover, as Rovi pointed out, the unreturned equipment charge provision in the Subscriber Agreement is in an entirely different section of the Subscriber Agreement that does not label the charge as a "liquidated damage," and does not recite comparable introductory clauses. (*See* Sale MSD at 21, 22 (citing Exh. 5 to Sale MSD at 6 (Section 9, Termination of This Agreement) (demonstrating that Section 9 does not reference liquidated damages)).

Because Comcast includes an explicit liquidated damages provision in another provision of the Subscriber Agreement that does not deal with unreturned STBs or other equipment, it is evident that Comcast knew how to include a liquidated damages provision when it wanted to and chose not to include such a provision in the section concerning unreturned equipment charges. There is no other language or support to which Comcast can cite for its liquidated damages theory.

Finally, the unreturned equipment charge is contained in invoices that do not describe the charge as liquidated damages. (*See* Sale MSD at 21, 22 (citing Rovi's SMF Nos. 6, 10 and 31; Exhs. 7C-19C); *see also* MSD Hr. Tr. at 109:11-110:13.). Interestingly, if a subscriber who

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has kept and paid for equipment re-subscribes with Comcast, Comcast does not keep [REDACTED]

[REDACTED]. Instead, Comcast returns the money it charged for the retail price of the STB to the subscriber and commences a new Subscriber Agreement. Comcast then starts recharging a lease fee. A new Subscriber Agreement reinstates the property as Comcast's. (See MSD Hr. Tr. at 117:2-120:1).

5. Even If a Sale Does Not Occur, a Conversion Does Occur

Even if a voluntary "sale" does not occur in the transactions described above, arguably, as both Rovi and Staff argued, a "forced sale" governed by the law of conversion, does occur. (Accord Staff Resp. at 9, 10; see also Sale MSD at 14-15 (citing Restatement (Second) of Torts § 222A comment c. (Am. Law Inst. 1965) (noting that when a conversion takes place, "title to the chattel passes [to the converter], so that he is in effect required to buy it at a forced judicial sale").).³⁴

Conversion is the "intentional exercise of dominion and control over personal property or a chattel that so seriously interferes with the right of another to control that property that the tortfeasor may justly be required to pay the other the full value of the property." 18 Am. Jur. 2d *Conversion* § 1. And "[t]he law regards a conversion as a forced sale of the converted property. Once conversion occurs, title passes to the converter, whose continued possession thereafter is entirely lawful."³⁵ (See Staff Resp. at 10, 11 and Sale MSD at 14-15 (citing *Duggan v. Keto*,

³⁴ The point was made during the MSD Hearing that Rovi was not asserting, and does not assert, that it has standing to a *recovery* on a theory of conversion. However, Rovi does have standing to raise the issue that conversion occurs by operation of law. (See MSD Hr. Tr. at 120:7-14.).

³⁵ The point was made during the MSD Hearing that the discussion of "title" or passing of title was used in two (2) different respects. One meaning (of course) is when a piece of paper passes to show that ownership as well as title to the ownership of the good in question has passed. However, the word title was also used in another sense. An analogy was made to a purchase at a store such as Best Buy, when a

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554 A.2d 1126, 1138 (D.C. App. 1989)(citation omitted); *see also Baram v. Farugia*, 606 F.2d 42, 46 (3rd Cir. 1979) (“On receipt by Dr. Baram of the \$3,000 from Fredella, and acknowledgment that this sum reflected the true value of the horse, a common law forced sale was effected, passing title from the legal owner to the converter at the time and place of the original conversion.”); *Wilkinson v. United States*, 564 F.3d 927, 932 (8th Cir. 2009) (noting that conversion is “the equivalent of a forced sale”); *Iglesias v. United States*, 848 F.2d 362, 365 (2d Cir. 1988) (noting that, when payment has been made, “title vests in [the converter] as of the time of the conversion”); Restatement (Second) of Torts § 222A comment c. (noting that, when a conversion takes place, “title to the chattel passes [to the converter], so that he is in effect required to buy it as a forced judicial sale”).).

Since Comcast’s Subscriber Agreement is governed by the law of Pennsylvania, the authority from the Third Circuit, applying Pennsylvania law, would apply here. (*See supra*). In this case, whether called a voluntary sale or a forced sale through conversion, it is evident that once a subscriber pays the charge for the unreturned Comcast equipment, the equipment in the possession of the subscriber belongs to the subscriber and Comcast ceases all interactions with the subscriber. As Rovi noted, the transfer of the rights in the property, including title, passes

customer buys an item, pays for it, leaves the store with the item and the receipt, but there is no piece of paper that says that title has passed. It is presumed by the facts that the individual has the purchased item and the receipt for the purchased item. (*See MSD Hr. Tr. at 120:19-121:12.*). It is the latter example that applies here.

For another example, Staff used the analogy of the “bull in the china shop” as an application of the law of conversion that applies here. Comcast is analogized as the store owner, while the Comcast Subscriber Agreement is the sign in the owner’s store that reminds the customer, “Mr. Bull,” that if he handles and break the china bowl, Mr. Bull must pay for it. Mr. Bull picks up a china bowl and drops it. It breaks. Even if broken, the broken china bowl belongs to Mr. Bull. (*See MSD Hr. Tr. at 96:4-98:7.*). Mr. Bull is required to pay the price for the china even though the china is useless. Nonetheless, title passed. *Id.* So too, once a Comcast subscriber pays the Comcast charge for the unreturned STB, it belongs to the now former subscriber even though, as Comcast argued, the STB is “dead” and can no longer be used. (*See MSD at 111:24-112:19.*). The subscriber has paid for the STB.

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from Comcast to the subscriber. (See Sale MSD at 15 (citing Baram, 606 F.2d at 46; *Wilkinson*, 564 F.3d at 932; *Duggan*, 554 A.2d at 1138).). This constitutes a “sale” within the ordinary meaning of the term “sale” as used in Section 337. See *Enercon*, 151 F.3d at 1381-82; *Sale*, Black’s Law Dictionary (10th ed. 2014). (*Accord*, Staff Resp. at 6, 7; Sale MSD at 15.).

C. Conclusion and Order

For the foregoing reasons, Rovi’s Motion for Summary Determination that the fee Comcast charges its subscribers for unreturned (accused) STBs and equipment constitute sales after importation within the meaning of Section 337, Motion Docket 1103-021, is *granted*.

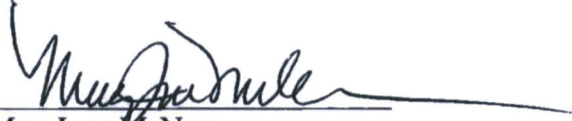
For the same reasons, Comcast’s Motion for Summary Determination that the fee that Comcast charges its subscribers for unreturned (accused) STBs and equipment do not constitute sales after importation, Motion Docket No. 1103-20, is *denied*.

Within fourteen (14) days of the date of this document, Rovi, Comcast and Staff shall submit to the Office of Administrative Law Judges a *joint* statement whether they wish to have any portion of this document deleted from the public version. The Parties’ submission shall be made by hard copy and must include a copy of this ID with *yellow highlighting*, with or without red brackets, indicating any portion asserted to contain CBI to be deleted from the public version. The submission shall also include a chart that: (i) contains the page number of each proposed redaction; and (ii) states (next to each page number) every sentence or phrase, listed separately, that the party proposes be redacted; and (iii) for each such sentence or phrase that the party proposes be redacted, a citation to case law with an explanation as to why each proposed redaction constitutes CBI consistent with case law. Any proposed redaction that is not explained may not be redacted after a review.

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The Parties' submission concerning the public version of this document need not be filed with the Commission Secretary.

SO ORDERED.

A handwritten signature in black ink, appearing to read 'MaryJoan McNamara', written over a horizontal line.

MaryJoan McNamara
Administrative Law Judge

PUBLIC CERTIFICATE OF SERVICE

I, Lisa R. Barton, hereby certify that the attached **INITIAL DETERMINATION** has been served by hand upon the Commission Investigative Attorney, **John Shin, Esq.** and the following parties as indicated, on **June 27, 2019**.



Lisa R. Barton, Secretary
U.S. International Trade Commission
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Washington, DC 20436

**On Behalf of Complainants Rovi Corporation, Rovi Guides,
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**On Behalf of Respondents Comcast Corporation, Comcast
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